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ADDENDUM No. 01

Date: February 12, 2019

Number of Pages: 54

This Addendum varies the Contract Documents entitled:

Coaldale Government Building

Project No.: 9030

This Addendum forms part of the Contract Documents and is to be read, interpreted and coordinated with all other parts. The cost of all work contained herein is to be included in the Contract sum. The following revisions supersede the information contained in the original drawings and specifications issued for the above named project to the extent referenced and shall become part thereof. Acknowledge receipt of this Addendum by inserting its number and date on the Tender form. Failure to do so may subject bidder to disqualification.

ADDENDUM NO. 01

Addendum Includes: Architectural Addendum No. 01, Structural Addendum S1, Mechanical Addendum M1

.1 SPECIFICATIONS

.1 Section 01 21 00 - Allowances

- .1 Delete 1.1.1 Article in its entirety.
- .2 Section 04 05 00 Common Work Results for Masonry
 - .1 Add 1.1.2 "Section 04 05 19 Masonry Anchorage and Reinforcing"
 - .2 Add 1.1.6 "Section 04 70 00 Stone Veneer"
- .3 Section 04 05 12 Masonry Mortar and Grout
 - .1 Add 1.1.2 "Section 04 05 19 Masonry Anchorage and Reinforcing"
 - .2 Add 1.1.5 "Section 04 70 00 Stone Veneer"
- .4 Section 04 05 19 Masonry Anchorage and Reinforcing
 - .1 Add 1.1.5 "Section 04 70 00 Stone Veneer"

.5 Section 04 22 00 – Concrete Unit Masonry

- .1 Article 2.1.3
 - Add 2.1.3.5 "Vents: Brick veneer weep vents, size to correspond with brickwork, with integral front grill for pest control. Locate at top and bottom of veneer at 600mm on centre maximum spacing."

.6 Section 04 70 00 – Stone Veneer

- .1 Add 1.1.3 "Section 04 05 19 Masonry Anchorage and Reinforcing"
- .2Revise
To read"2.2.1Fasteners"
and carry through new numbering to 2.2.4.3Add 2.2.5"Vents: New construction stone veneer weep vents, size to correspond
with stonework, featuring integral front grill for pest control. Locate at top
and bottom of veneer at 600mm on centre maximum spacing."
- .4 Revise 3.3.1 "Install flashings as shown on Drawings." To read "Install flashings in accordance with Section 07 62 00 – Sheet Metal Flashing and Trim."

.7 Section 08 33 13 – Coiling Counter Doors

.1 Replace in its entirety with attached Section 08 33 13R – Coiling Counter Doors

.8 Section 08 36 13.02 – Sectional Metal Doors

1	Revise 2.8.5.1.1	"Remote pushbutton station: NEMA 1, flush mounted, adjacent to each door, with "OPEN-STOP-CLOSE" "SECURITY LOCKOUT" designations on pushbuttons in English. 24V"
	To read	"Remote pushbutton station: NEMA 1, flush mounted, adjacent to each door, with "OPEN-STOP-CLOSE" "SECURITY LOCKOUT" designations on pushbuttons in English. Key operated Model Camden CI-1KX. Abloy CY 403 Cylinder to be provided in accordance with Section 08 71 00 – Hardware."

- .2 Delete 2.8.6 in its entirety.
- .3 Add "2.9 MANUAL OPERATION
 - .1 Manual Lift: Provide lifting handles and pull ropes for raising and lowering door.
 - .2 Chain Hoist: Side mounted unit complete with hot-dip galvanized continuous steel chain. Gear reduction of 3.1.
 - .3 Location: Out Building, overhead door OH001."

.9 Section 08 81 00 – Glass and Glazing

.1	Revise 2.4.6.1.3	"Interior Lite: 3mm Clear annealed glass, translucent PVB 0.76 mm interlayer, 3 mm clear annealed glass."
	To Read	"Interior Lite: 3 mm 100% Etch Clear annealed glass, translucent PVB 0.76 mm interlayer, 3 mm clear annealed glass."
.2	Revise 2.4.6.2.2 To Read	"Solar Heat Gain Coefficient (SHGC): 0.50" "Solar Heat Gain Coefficient (SHGC): 0.30"
.3	Revise 2.4.6.2.3	"Visible Light Transmission (Tvis): 45" "Visible Light Transmission (Tvis): 17"

.4	Revise 2.4.6.2.6	"Basis-of-Design Materials: Solarcool on Solarbonze 6 mm on surface 1 +		
		13 mm air space + Clear 3 mm, Etch PVB interlayer, Clear 3 mm. "		
	To Read	"Basis-of-Design Materials: Solarcool on Solarbonze 6 mm on surface 1 +		
		13 mm air space + 3 mm 100% Etch (3) Clear_030PVB _ 3mm Clear"		

.10 Section 09 51 13 – Acoustical Panel Ceilings

.1 Replace in its entirety with attached Section 09 51 13R – Acoustic Panel Ceilings.

.11 Section 09 80 00 – Acoustic Treatment

- .1 Revise 2.1.2.1.2 "Fabric Finish: As indicated."
 - To Read "Fabric Finish: Maharam Messenger 046, Ice."

2. DRAWINGS

.1 A3.1 – Exterior Elevations

- .1 Revise Abbreviation List "TG Translucent Privacy Glazing" To read "PG Privacy Glazing"
- .2 Revise Elevation 2/A2.2 Replace all instances of "TG" to "PG".

.2 A4.1 – Building Sections A-A, B-B, C-C, D-D, E-E, and F-F

.1 Revise Elevation marker to the right of gridline 'F' on Section C-C from 107.015 to read 107.200.

.3 A6.1 – Door and Window Elevations and Schedule

- .1 Revise Main Floor Door Schedule:
 - .1 Door OH154, Width to read "3400 x 3600"
 - .2 Door 182B, Hardware Function to read "F14"
- .2 Revise Abbreviation List "FR Fritted Glazing" To read "PG Privacy Glazing"

.4 A8.2 – Interior Elevations

.1 Delete detail A/A8.2. Refer to detail 4/A2.3 on drawing A2.3.

.5 A9.2 – Large Scale Reception Plan Elevations and Details

.1 Revise 9/A2.2 "...wood blocking above – refer to detail 21/A9.2" To read "...wood blocking above – refer to detail 22/A9.2"

.6 A10.1 – Main Floor Finish Plan

.1 Revise Abbreviations: "AP Acoustic Ceiling Panel (T-Bar Ceiling)" To read: "ACP Acoustic Ceiling Panel (T-Bar Ceiling)

ATTACHMENTS: Section 08 33 13R – Coiling Counter Doors Section 09 51 13R – Acoustic Panel Ceilings Structural Addendum S1 Mechanical Addendum M1

END OF ADDENDUM NO. 01

Part 1 General

1.1 REFERENCE STANDARDS

- .1 American Architectural Manufacturers Association (AAMA)
 - .1 AAMA 609/610-15, Cleaning and Maintenance Guide for Architecturally Finished Aluminum.
- .2 ASTM International
 - .1 ASTM A167-99(R2009), Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip.
 - .2 ASTM A276-17, Standard Specification for Stainless Steel Bars and Shapes.
 - .3 ASTM A480/480M-18, Standard Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet and Strip.
- .3 Underwriters Laboratories of Canada (ULC)
 - .1 CAN/ULC-S104-10, Standard Method for Fire Tests of Door Assemblies.
 - .2 CAN/ULC-S105-09, Standard Specification for Fire Door Frames.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Shop Drawings:
 - .1 Submit drawings indicating each type of coiling counter door, arrangement of hardware, track with fasteners, operating mechanism, electrical connections to building systems and required clearances.

1.3 CLOSEOUT SUBMITTALS

- .1 Submit in accordance with Section 01 78 00- Closeout Submittals.
- .2 Operation and Maintenance Data: submit operation and maintenance data for incorporation into manual.

1.4 QUALITY ASSURANCE

- .1 Regulatory Agency Approvals:
 - .1 Fabricate and install fire rated coiling metal counter doors in accordance with NFPA 80 and listed in UL directory, to suit fire protection rating required.
- .2 Certifications: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section with manufacturer's written instructions and 01 61 00 Common Product Requirements.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials indoors, in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect coiling counter doors from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.
- .4 Develop Construction Waste Management Plan.

Part 2 Products

2.1 MATERIALS

- .1 Coiling doors:
 - .1 Slat configuration:
 - .1 Stainless Steel: Interlocked flat-faced slats, 38 mm high x 13 mm deep, minimum 22 ga, #4 finish stainless steel with stainless steel bottom bar 6mm foam, astragal.
 - .2 End locks attached to ends of alternate slats to maintain curtain alignment and prevent lateral slat movement.
- .2 Guides:
 - .1 Stainless Steel: minimum 12 gauge formed shapes, #4 finish, Stainless Steel.

2.2 COILING COUNTER DOORS

- .1 Rivet continuous end locks to slat ends.
- .2 Assemble coiling counter door curtain of interlocking slat sections.
- .3 Provide bottom bar of extruded aluminum section angles.
- .4 Form guides for face wall installation.
- .5 Construct counterbalance assembly consisting of torsion spring with 25% overload factor. Enclose spring in steel pipe to support door curtain and counterbalance mechanism with maximum deflection of 1/360th of opening width. Provide ball bearings at rotating points. Provide spring tension adjusting wheel, accessible for setting.
 - .1 Enclose spring in steel pipe to support door curtain and counterbalance mechanism with maximum deflection of 1/360th of opening width.
 - .2 Use ball bearings at rotating points.
 - .3 Use spring tension adjusting wheel, accessible for setting.
- .6 Counterbalance

- .1 Support counterbalance assembly on 5 mm minimum thickness steel plate brackets, forming end enclosures.
- .2 Enclose counterbalance assembly with stainless steel sheet formed hood.
- .3 Helical torsion spring type.

2.3 **OPERATION**

- .1 Automatic Closure: Fire release mechanism with battery back-up, 120V AC, connected to the closest two smoke detection devices. Based on overhead door fire sentinel fail-safe device.
- .2 Install fusible link activated automatic closing device to cause door to close at controlled slow even speed in case of fire.

Part 3 Execution

3.1 INSTALLATION

- .1 Install coiling counter door in accordance with manufacturers' printed instructions.
- .2 Adjust operable parts for correct function and smooth operation.
- .3 Test coiling counter doors for proper operation by activating fusible link.
 - .1 Test shutters in presence of Consultant and Owner.

3.2 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11- Cleaning.
 - .1 Leave Work area clean at end of each day.
 - .2 Remove traces of primer, caulking; clean doors and frames.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11- Cleaning.
- .3 Waste Management: separate waste materials in accordance with Section 01 74 21-Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.3 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by coil counter door installation.

END OF SECTION

Part 1 General

1.1 SUMMARY

- .1 Section Includes:
 - .1 Materials and application of acoustical units for direct application or for application and installation within a suspended ceiling.
 - .2 Sustainable requirements for construction and verification.

1.2 RELATED REQUIREMENTS

.1 Section 09 21 16 – Gypsum Board Assemblies

1.3 REFERENCES STANDARDS

- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM C423-17, Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method
 - .2 ASTM E1264-14, Standard Classification for Acoustical Ceiling Products.
 - .3 ASTM E1477-98a(2017), Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.
 - .4 ASTM C636/C636M-13, Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
 - .5 ASTM E580/E580M-17, Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay -in Panels in Areas Subject to Earthquake Ground Motions.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-51.34-M86, Vapour Barrier, Polyethylene Sheet, for Use in Building Construction and Amendment No. 1 1988.
 - .2 CAN/CGSB-92.1-M89, Sound Absorptive Prefabricated Acoustical Units.
- .3 Canadian Standards Association (CSA International)
 - .1 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.
- .4 Department of Justice Canada (Jus)
 - .1 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
 - .2 Transportation of Dangerous Goods Act (TDGA), 1992, c. 34.
- .5 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .6 Underwriter's Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102-2003, Surface Burning Characteristics of Building Materials and Assemblies.
- .7 South Coast Air Quality Management District (SCAQMD), California State:

.1 SCAQMD Rule 1168, June 2006, Adhesives and Sealants Applications

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 Submittal Procedures.
- .2 Product Data: Submit WHMIS MSDS in accordance with Section 02 81 01 Hazardous Materials.
- .3 Samples: Submit duplicate samples of each type acoustical units.
- .4 Sustainable Design Submittals:
 - .1 Construction Waste Management:
 - .1 Submit project Waste Management Plan highlighting recycling and salvage requirements in accordance with Section 01 74 21 Construction/Demolition Waste Management and Disposal.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Protect on site stored or installed absorptive material from moisture damage.
- .2 Store extra materials required for maintenance, where directed by Departmental Representative
- .3 Waste Management and Disposal:
 - .1 Separate waste materials in accordance with Section 01 74 21 Construction /Demolition Waste Management and Disposal.
 - .2 Remove from site and dispose of packaging materials at appropriate facilities.
 - .3 Collect and separate for disposal paper, plastic, and corrugated cardboard packaging material in accordance with Waste Management Plan.
 - .4 Place materials defined as hazardous or toxic in designated containers in accordance with Section 01 35 43 Environmental Procedures.
 - .5 Handle and dispose of hazardous materials in accordance with Regional and Municipal, regulations.
 - .6 Fold up metal and/or plastic banding, flatten and place in designated area for recycling.

1.6 ENVIRONMENTAL REQUIREMENTS

- .1 Permit wet work to dry before beginning to install.
- .2 Maintain uniform minimum temperature of 15°C and humidity of 20% before and during installation.
- .3 Store materials in work area forty-eight (48) hours prior to installation.

1.7 EXTRA MATERIALS

- .1 Provide extra materials of acoustic units in accordance with Section 01 78 00 Closeout Submittals.
- .2 Provide acoustical units amounting to 2% of gross ceiling area for each pattern and type required for project.

- .3 Ensure extra materials are from same production run as installed materials.
- .4 Clearly identify each type of acoustic unit, including colour and texture.
- .5 Deliver to Owner, upon completion of the work of this Section.

Part 2 Products

2.1 MATERIALS

- .1 Acoustic units for suspended ceiling system: to ASTM E1264.
 - .1 Type ACP-1. Based on Armstrong, Ultima, 1941 OR CGC, USG, MARS CLIMAPHIS, HIGH-NRC/HIGH-CAC:
 - .1 Class: A Fire Rating.
 - .2 Ecolabel: certified mineral fibre with minimum 68% + recycled content
 - .3 Textures: smooth, fine.
 - .4 Flame spread rating: 0.25 or less, in accordance with CAN/ULC-S102.
 - .5 Smoke developed: 50 or less, in accordance with CAN/ULC-S102.
 - .6 Noise Reduction Coefficient (NRC): 0.80.
 - .7 Ceiling Attenuation Class (CAC) rating: 35, in accordance with ASTM E1264
 - .8 Light Reflectance (LR) range: 0.87 to ASTM E1477.
 - .9 Edge type: tegular.
 - .10 Colour: white.
 - .11 Size: 610 x 610 x 24 mm thick.
 - .12 Surface coverings: Ecolabel certified paint low VOC paint.
 - .2 Type ACP-2: Based on CertainTeed, Theatre Black F with foil backing, Room 156.
 - .1 Class: A Fire Rating.
 - .2 Material: Fibreglass *or mineral fibre (as per Addendum 1)*.
 - .3 Textures: matte.
 - .4 Flame spread rating: 25 or less, in accordance with ASTM E84 and CAN/ULC-S102
 - .5 Smoke developed: 50 or less, in accordance with ASTM E84 and CAN/ULC-S102
 - .6 Noise Reduction Coefficient (NRC): 0.75.
 - .7 Ceiling Attenuation Class (CAC) rating: 25 or less. (as per Addendum 1)
 - .8 Edge type: Trim.
 - .9 Colour: black panel and grid.
 - .10 Size: 610 x 610 x 24 mm thick.
 - .3 Acceptable manufacturers are Armstrong, and CertainTeed, and Roxul and Rockfon. (as per Addendum 1)
- .2 Adhesive: low VOC type recommended by acoustic unit manufacturer.

- .3 Staples, nails and screws: to CSA B111 non-corrosive finish as recommended by acoustic unit manufacturer.
- .4 Suspension Ceiling System by acoustic unit manufacturer, *to ASTM E580, C636, for seismic Design Category D:*
 - .1 Minimum 2" wall molding
 - .2 Suspension system must be attached to two adjacent walls opposite walls must have a ³/₄" clearance
 - .3 Ends of main beams and cross tees must be tied together to prevent their spreading
 - .4 *Heavy-duty suspension system*
 - .5 Ceiling areas over 1,000 SF must have horizontal restraint wire or rigid bracing
 - .6 Ceiling areas over 2,500 SD must have seismic separation joints or full height partitions
 - .7 Ceilings without rigid bracing must have 2" oversized trim rings for sprinklers and other penetrations
 - .8 Changes in ceiling plane must have positive bracing
 - *.9 Cable trays and electrical conduits must be independently supported and braced*
 - .10 Suspended ceilings will be subject to special inspection
 - .11 Perimeter support wires within 8" (as per Addendum 1)

Part 3 Execution

3.1 EXAMINATION

.1 Do not install acoustical panels and tiles until work above ceiling has been reviewed by Consultants.

3.2 INSTALLATION

- .1 Install acoustical panels and tiles in ceiling suspension system.
- .2 Cut edges of partial tegular tiles to fit into suspension system and paint edges of tiles to match.

3.3 APPLICATION

- .1 Install acoustical units parallel to building lines with edge unit not less than 50% of unit width.
- .2 Scribe acoustic units to fit adjacent work. Butt joints tight.

3.4 INTERFACE WITH OTHER WORK

.1 Co-ordinate ceiling work to accommodate components of other sections, such as light fixtures, diffusers, speakers, sprinkler heads, and gypsum bulkheads to be built into acoustical ceiling components.

3.5 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 Cleaning.
 - .1 Leave Work area clean at end of each day.
 - .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 Cleaning.
- .2 Waste Management: separate waste materials for recycling in accordance with Section 01 74 21 Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.6 **PROTECTION**

.1 Protect installed products and components from damage during construction.

END OF SECTION



STRUCTURAL ADDENDUM

Project:	Coaldale Protective Services Building	File No.	841-004
Client:	Stephens Kozak – ACI Architects and Planners	Addendum No.	S1
Copy:		Date:	February 12, 2019

1. **REVISION TO DRAWINGS**

.1 Drawing S0.1 General Notes

.1.1 Revise Masonry Lintel Schedule as clouded on SSK-013.

.2 Drawing S0.4 Typical Details

.2.1 On Typical Exterior Door Stoop, add '15Mx300 LG Dowel @ 400 Into Sidewalks Where Applicable' as per SSK-017.

.3 Drawing S1.2 Foundation Plan

.3.1 Revise dimension of column locations along gridline 12 between gridlines F and G as clouded

on SSK-001

- .3.2 Along gridline 10 near gridline D, revise dimension '1390' to read '1380' and move opening accordingly.
- .3.3 Add sawcuts to apron slab at gridline L between gridline 1-5 as clouded on SSK-016.
- .3.4 Add sawcuts to apron slabs at gridline L between gridline 8 (+1260) and 12 (-1832) as clouded on SSK-016.
- .3.5 Add column C2 and baseplate BP10 at location clouded on sketch SSK-029.
- .3.6 Revise column dimension along gridline L, east of gridline 8 '1140' to read '1114' as clouded on SSK-016.
- .3.7 Revise column dimension along gridline L, west of gridline 9 '342' to read '255' as clouded on SSK-016.
- .3.8 Revise column mark 'C1' to read 'C3' located along gridline 1 between gridlines J and K.

.4 Drawing S1.4 Roof Framing Plan

.4.1 Revise beams as clouded on sketch SSK-030.

.5 Drawing S1.5 Mechanical Room and Clerestory Roof Framing Plan

.5.1 Revise Mechanical Roof Framing Plan as per SSK-014.

.6 Drawing S1.6 Canopy Plans

- .6.1 On North Canopy Upper Framing Plan' extend arrow of W310x39 (Sloped) 120 east of gridline 7 as clouded on SSK-002.
- .6.2 On North Canopy Upper Framing Plan add new section mark 7/S3.5 as clouded on SSK-002.
- .6.3 On North Canopy Upper Framing Plan revise beam W200x27 (north-south) to read W200x19 near gridline B between gridlines 7 and 8 and revised W200x19 (east-west) to read 'C200x28 (Sloped)' and revise dimension as clouded on SSK-002.
- .6.4 On North Canopy Framing Plan, revise dimension '375' to read '440' as clouded on SSK-023.

Revise 'U/S Deck' to read 'T.O. Steel' as clouded on SSK-023.

.6.5 On South-East Canopy Framing Plan, along gridline A revise dimension '375' to read '625' as clouded on SSK-024.

Revise dimension of canopy along gridline 12 '375' to read '625' as clouded on SSK-024.

Add canopy dimension '440' along gridline 12 between gridlines G and G' as per SSK-025.

Revise canopy dimension '495' along gridline H (+1235) to read '745' as clouded on

SSK-025.

Revise dimension '1925' to read '2000' at south of gridline L as clouded on SSK-025.

- .6.6 On South Canopy Framing Plan along gridline L between gridlines 5 and 7, revise canopy dimension '375' to read '440' and revise U/S Deck to read T.O. Steel and revise dimension '2004' east of gridline 7 to read 2007 as clouded on SSK-026.
- .6.7 Revise South-West Canopy Framing Plan as per SSK-027.
- .6.8 Add beam elevation bubble '103.250' under W200x27 near gridline B and west of gridline 8 as clouded on SSK-023.
- .6.9 On North Canopy Framing Plan, add shear connection symbol (Schoch Isokorb S22) on W410x79 along gridline B, east of gridline 5.
- .6.10 Add shear connection symbol (Schock Isokorb S22) on W200x22 along gridline B east of gridline 7.

.6.11 Add moment connection symbol (Fabreeka) on C200x17 at gridline A/9.

.7 Drawing S1.7 Outbuilding Plans, Sections and Details

- .7.1 On 'Outbuilding Roof Framing Plan' revise W150x22 to read W150x24 as clouded on SSK-003.
- .7.2 On 'Outbuilding Roof Framing Plan' revise C310 to read C310x31 as clouded on SSK-003.
- .7.3 On Section 5 and Section 6, add elevation mark to underside of canopy beam W150x24 to read U/S STEEL EL. 103.640.

.8 Drawing S3.1 Roof Sections Sheet 1

.8.1 On section 5, add axial forces of 75 kN in horizontal, vertical and diagonal braces (HSS 102x102x6.4).

Revise note 'Bent PL 6 Cont.' to read 'Bent PL 6 Cont. Weld to C310x31'. Revise canopy steel dimension 375 to read 440 as clouded on SSK-020. Delete U/S Girt elevation.

.8.2 On section 6, add axial forces of 75 kN in horizontal, vertical and diagonal braces (HSS 102x102x6.4).

Revise note 'Bent PL 6 Cont.' to read 'Bent PL 6 Cont. Weld to C310x31' .

Delete deck inside canopy.

Revise canopy steel dimension 375 to read 440 as clouded on SSK-020.

Delete 'U/S Girt' elevation.

- .8.3 On section 10, add axial forces of 75 kN in horizontal and diagonal braces (HSS 102x102x13). Delete 'U/S Girt' elevation.
- .8.4 On section 1, delete L51x51x6.4 and add L127x76x6.4 as clouded on SSK-004.
- .8.5 On section 2, delete L51x51x6.4 and add L127x76x6.4 as clouded on SSK-005.
- .8.6 On section 10, delete L51x51x6.4 and add L127x76x6.4 as clouded on SSK-006.
- .8.7 On section 8, revise note 'Bent PL 6' to read 'Bent PL 6 Weld to C310x31.

Add note 'Shim to Suit Deck Slope' at deck counter slope as per SSK-015.

Delete deck inside canopy as per SSK-015.

Add dimension string 625 and 75 as clouded SSK-015.

Revise beam W360x33 to read W460x52 as clouded on SSK-015.

.8.7 On section 9, revise note 'Bent PL 6' to read 'Bent PL 6 Weld to C310x31' as per SSK-015. Add note 'Shim to Suit Deck Slope' at deck counter slope as per SSK-015. Delete deck inside canopy as per SSK-015.

Add dimension string 625 and 75 as clouded on SSK-015.

Revise note 'W360x33 Beyond' to read 'W460x52 Beyond' as clouded on SSK-015.

.8.8 On section 11, revise note 'Bent PL 6' Cont. to read 'Bent PL 6 Cont. Weld to C310x31'.
 Delete deck inside canopy.
 Revise canopy steel dimension 375 to read 440 from gridline L.

Revise canopy steel C200 to read W200x22.

.8.9 Revise section 13 as per SSK-022.

.9 Drawing S3.2 Roof Sections Sheet 2

- .9.1 On section 15, delete L51x51x6.4 and add L127x76x6.4 as clouded on SSK-007.
- .9.2 Revise sections 16, 17, 18, 25, and 26 as clouded on SSK-018.
- .9.3 On section 20, revise canopy steel dimension 375 to read 625.

Revise canopy U/S Deck to read T.O. Steel.

'Bent PL 6' to read 'Bent PL 6 Weld to C310x31' .

Revise note 'Embed Plate c/w 8-16 dia. Hilti HAS Rod with HIT-HY 200 Adhesive Embed 150' to read 'Embed Plate PL 25....' .

.10 Drawing S3.3 Roof Sections Sheet 3

.10.1 On section 11, revise canopy steel dimension 375 to read 440.

Revise note'Bent PL 6 Cont.'to read'Bent PL 6 Cont. Weld to C310x31'Revise canopy steel'T.O. Steel EL. 103.267'to read'EL. 103.217'

- .10.2 On section 12, revise note 'Embed plate c/w 8-16 dia. Hilti HAS Rod...' to
 read 'Embed plate PL 25 c/w 8-16 dia. Hilti HAS Rod with HIT-HY 200 adhesive. Embed 150.
 Revise dimension of canopy steel '375' to read '625'.
- .10.3 On section 3, delete 'AESS 3' after the note 'W410x39 Beyond' .
- .10.4 On section 8, add bent plate PL 6 at end of sloped W310x39 beam as clouded on SSK-008.

.11 Drawing S3.4 Roof Sections Sheet 4

.11.1 On section 1, add axial forces of 75 kN in horizontal, vertical and diagonal braces.

Revise canopy steel dimension 375 to read 440.

Revise note 'Bent PL 6 Cont.' to read 'Bent PL 6 Cont. Weld to C310x31.

- .11.2 On section 2, delete L51x51X6.4 and add L127x76x6.4 as clouded on SSK-009.
- .11.3 On section 2, add axial forces of 75 kN to diagonal and horizontal braces (HSS 102x102x13).
- .11.4 On section 3, delete L51x51x6.4 and add L127x76x6.4 as clouded on SSK-010.
- .11.5 On section 4, delete L51x51x6.4 and add L127x76x6.4 as per section 3.

.12 Drawing S3.5 Roof Sections Sheet 5

- .12.1 Add new section 7/S1.6 as shown on SSK-011.
- .12.2 Revise section 4 as per SSK-019.

.13 Drawing S4.1 Wall Elevations Sheet 1

- .13.1 On Elevation A the O/H door between gridlines 1 and 2 is lowered to 3600 high.
- .13.2 Revise Elevation D as clouded on SSK-012.

.14 Drawing S4.2 Wall Elevations Sheet 2

.14.1 For all Elevations, revise all reference drawing number 'S1.1' to read 'S1.2' .

.15 Drawing S4.3 Outbuilding Elevations

.15.1 For Elevations C, D, G, and H, add elevation mark to underside of canopy beams to read

'U/S Steel = EL. 103.640'

.16 Drawing S5.1 Miscellaneous Details

.16.1 On Section 4, add note '15Mx300 LG Dowel @ 400 Mid Depth', as clouded on SSK-021.

BPTEC ENGINEERING LTD. – General Partner Per:

Noel Minimo Drafting Technologist

Enclosures:

SSK-001, SSK-002, SSK-003, SSK-004, SSK-005, SSK-006, SSK-007, SSK-008, SSK-009, SSK-010, SSK-011, SSK-012, SSK-13, SSK-014, SSK-15, SSK-016, SSK-017, SSK-018, SSK-019, SSK-020, SSK-021, SSK-022, SSK-023, SSK-024, SSK-025, SSK-026, SSK-027, SSK-028, SSK-029, SSK-030.

End of Addendum No S1

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BPTEC Engineering







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COALDALE PROTECTIVE SERVICES BUILDING				
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NM	FEB. 12, 2019	841-004	SSK-004	

STEPHENS KOZAK ACI ARCHITECTS

PROJECT :

REFERENCE DRAWING: S3.1





PROJECT:	STEPHENS KOZAK ACI ARCHITECTS COALDALE PROTECTIVE SERVICES BUILDING					
DRG. TITLE :	REVISED SECTION 2					
DRAWN:	DATE :	FILE No. :	SKETCH No.:			
NM	FEB. 12, 2019	841-004	SSK-005			

PROJECT :

REFERENCE DRAWING: S3.1





DRG. TITLE :	REVISED SECTION 10				
DRAWN :	DATE :	FILE No. :	SKETCH No. :		
NM	FEB. 12, 2019	841-004	SSK-006		

PROJECT :

STEPHENS KOZAK ACI ARCHITECTS COALDALE PROTECTIVE SERVICES BUILDING

REFERENCE DRAWING: S3.1















REFERENCE DRAWING: S0.1





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REFERENCE DRAWING: S1.5

STEPHENS KOZAK ACI ARCHITECTS COALDALE PROTECTIVE SERVICES BUILDING **REVISED MECH. ROOF FRAMING PLAN** DATE : FILE No. : SKETCH No.: FEB. 12, 2019 841-004 SSK-014





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This addendum forms part of the Bid and Contract Documents and modifies them as follows:

SPECIFICATIONS

1. Section 21 13 13 – Wet Pipe Sprinkler Systems

- **ADD:** Add item 2.3.4.2 as follows: "Hangers, supports, and anchor bolts to withstand seismic events as specified in Section 23 05 49"
- REVISE: Revise item 2.5 to indicate "Alarm/Zone Check Valves".
- **REVISE:** Add item 2.10.5.1 to indicate "Provide minimum 1.2mm thick ductile iron or galvanized steel sleeves."

2. Section 22 42 00 – Commercial Plumbing Fixtures

REVISE: Revise SK-4 bowl to be Single compartment size of 812mm x 457mm x 203mm, Overall size 889mm x 609mm x 203mm, Type 304 stainless steel, self-rimming bowl with under coating, 3 holes drilled in ledge back, complete with under deck clamps, ARB-2435-A-GR-T. Trim: J-1174-KS Faucet: Concealed mixing faucet with 140mm reach, PVD chrome swivel gooseneck, 5.7L/min aerator, 100mm wrist blade handles with hot and cold index, J-35-SSF Drain

3. Section 23 05 00 – Common Work Results for HVAC

Add: Add Danfoss as an acceptable manufacturer for Variable Frequency Drives.

4. Section 23 05 29 – Hangers and Supports for HVAC Piping and Equipment

Add: Add item 2.1.6 as follows: "Hangers, supports, and anchor bolts to withstand seismic events as specified in Section 23 05 49"

5. Section 23 05 49 – Seismic Restraints for Mechanical

Add: Add section 23 05 49 as per attached.

6. Section 23 09 30 – EMCS Points Schedules

Add: Add low temperature alarm points for Rooms 001 and 002 in the East Out-Building.

7. Section 23 31 13 – Metal Ducts

Revise: Revise item 2.10.1 as follows: "Hangers and Supports: in accordance with Section 23 05 29 – Hangers and Supports for HVAC Piping and Equipment and Section 23 05 49 – Seismic Control for Mechanical"

8. Section 23 64 00 - Chillers

ADD: Add the following to Item 2.1: Chiller manufacturer to provide structural steel engineering and fabrication costs if revisions to structural steel are required due to differences in weight, size, and/or support locations of supplied chiller with respect to specified chiller.

DRAWINGS

1. Drawing M1.0

- ADD: Add detail 2 to drawing M1.0 as per attached sketch M1.0-MSK-01.
- **ADD:** Add two more FEXs in east Out-Building as per sketch M1.0-MSK-01. All FEXs in out-buildings to be rated -40C operation.

GOVERNMENT OF CANADA Coaldale Protective Services Building

Coaldale, AB Project No.: 9030 / WEC 33966.00

2. Drawing M5.0

REVISE: Keynote 10 to read: "Sprinkler piping to rise up in clerestory wall to high level recessed side wall sprinkler head. Refer to architectural wall sections. Pipe riser, recessed sprinkler head, and connection to recessed sprinkler head to fit in 174mm stud space."

ADD:Add the following fire extinguisher type legend to M5.0:Fire Extinguisher TypeSymbol4.5kg Multi-Purpose with wall hookFEX22.5kg Carbon Dioxide with wall hookFEX-CO24.5kg Multi-Purpose with recessed cabinetFEX-R4.5kg Multi-Purpose with semi-recessed cabinetFEX-SR4.5kg Multi-Purpose with fire-rated recessed cabinetFEX-SR

3. Drawing M9.0

ADD: Add UH-8 and UH-9 to the Unit Heater Schedule as follows:

Tag	<u>UH-8</u>	<u>UH-9</u>
Make	Modine	Modine
Model	HDS-60	HDS-30
Location	Outbuilding	Outbuilding
Туре	Gas-Fired, Non-Condensing	Gas-Fired, Non-Condensing
Capacity (In/Out)	17.6kW/14.4kW	8.8kW/7.2kW
Electrical	120V/1Ph/60Hz	120V/1Ph/60Hz
Notes:	High Altitude Kit	High Altitude Kit
	Separate Combustion	Separate Combustion
	Concentric Venting	Concentric Venting

ATTACHMENTS: Sketch M1.0-MSK-01, Spec Section 23 05 49

END OF ADDENDUM M1

Part 1 General

1.1 SCOPE

- .1 Seismic force resisting systems (SFRS) for statically supported and vibration isolated equipment and systems; including but not limited to fume hoods, fire protection, piping, ductwork, cable trays, HVAC equipment, plumbing equipment.
- .2 Seismic force resisting systems (SFRS) shall meet the requirements of the Alberta Building Code for Post Disaster Buildings.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CSA G40.20/G40.21, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .3 Alberta Building Code of Canada (ABC) 2014

1.3 DEFINITIONS

.1 SFRS: acronym for Seismic Force Resisting System.

1.4 GENERAL REQUIREMENTS

- .1 SFRS fully integrated into, and compatible with:
 - .1 Noise and vibration controls specified elsewhere.
 - .2 Structural, mechanical, electrical design of project.
- .2 The contractor is to provide the services of a registered Professional Structural Engineer who specializes in seismic force resisting systems. The structural engineer, herein referred to as the seismic engineer, shall provide all required engineering services related to seismic force resisting systems, seismic restraints, and anchorage for all mechanical equipment and systems.
- .3 The SFRS is to be designed to permit the mechanical systems to continue to function in the event of a seismic event.
- .4 The seismic engineer shall review the completed installation and shall submit a statutory declaration to the consultant stating that the complete SFRS installation is installed in accordance with the SFRS design intent and that it complies with the NFPA and Alberta Building Code Post-Disaster Building requirements.
- .5 The seismic engineer shall aid the contractor as necessary during the course of the SFRS installation.
- .6 Submit Alberta Building Code Schedule B-1, B-2, and C-2 for seismic restraint of mechanical systems.

GOVERNMENT OF CANADASection 23 05 49COALDALE GOVERNMENT BUILDINGSeismic Controls for MechanicalPROJECT NO.: 9030Page 2						
1.5		SUBMITTALS				
	.1	Submit shop drawings of each factory fabricated component.				
	.2	Shop drawings to be stamped by professional engineer registered or licensed in Province of Alberta, Canada.				
	.3	Submit design data including:				
		.1 Full details of design criteria.				
		.2 Design calculations (including restraint loads resulting from seismic forces in accordance with Alberta Building Code, detailed work sheets, tables).				
		.3 Separate shop drawings for each SFRS and devices for each system, equipment				
		.4 Identification of location of devices.				
	.5 Schedules of types of SFRS equipment and devices.					
		.6 Details of fasteners and attachments to structure, anchorage loadings, attachment methods.				
		.7 Installation procedures and instructions.				
	.4	Submit additional copy of shop drawings and product data to Structural Engineer for review of connection points to building structure.				
Part 2		Products				
2.1 SRS MANUFA		SRS MANUFACTURER				
	.1	SRS from one manufacturer regularly engaged in SRS production.				
2.2 GENERAL		GENERAL				
	.1	SRS to provide gentle and steady cushioning action and avoid high impact loads.				
	.2	SRS to restrain seismic forces in every direction.				
	.3	Fasteners and attachment points to resist same load as seismic restraints.				
	.4	SFRS to be fully integrated into, and compatible with:				
		1 Noise and vibration controls specified elsewhere				
		.2 Structural, mechanical, electrical design of project.				
	.5	SRS of Piping systems compatible with:				

- .1 Expansion, anchoring and guiding requirements.
- .2 Equipment vibration isolation and equipment SRS.
- .6 SRS utilizing cast iron, threaded pipe, other brittle materials not permitted.
- .7 Attachments to structure:
 - .1 Use high strength mechanical expansion anchors.
 - .2 Drilled or power driven anchors not permitted.
- .8 Wet pipe sprinkler systems: refer to Section [21 13 13 Wet Pipe Sprinkler Systems].
- .9 Seismic control measures not to interfere with integrity of firestopping.

2.3 SFRS FOR STATIC EQUIPMENT, SYSTEMS

- .1 Floor-mounted equipment, systems:
 - .1 Anchor equipment to equipment supports.
 - .2 Anchor equipment supports to structure.
 - .3 Use size of bolts scheduled in approved shop drawings.
 - .4 Ensure house-keeping pads, if being used to anchor equipment, are anchored to the floor.
- .2 Suspended equipment, systems:
 - .1 Use one or combination of following methods:
 - .1 Install tight to structure.
 - .2 Slack cable restraint system.
 - .3 Cross-brace in every direction.
 - .4 Brace back to structure.
 - .2 SFRS is to be designed to meet or exceed force/deflection requirements as indicated in the Alberta Building Code.
 - .3 SFRS to prevent sway in horizontal plane, "rocking" in vertical plane, sliding and buckling in axial direction.
 - .4 Hanger rods to withstand compressive loading and buckling.

2.4 SFRS FOR VIBRATION ISOLATED EQUIPMENT

- .1 Floor mounted equipment, systems:
 - .1 Use one or combination of following methods:
 - .1 Vibration isolators with built-in snubbers.
 - .2 Vibration isolators and separate snubbers.
 - .2 SFRS to resist complete isolator unloading.
 - .3 SFRS not to jeopardize noise and vibration isolation systems. Provide 4-8 mm clearance between seismic restraint snubbers and equipment during normal operation of equipment and systems.
 - .4 Cushioning action: gentle and steady by utilizing elastomeric material or other means in order to avoid high impact loads.
- .2 Suspended equipment, systems:
 - .1 Use one or combination of following methods:
 - .1 Slack cable restraint system.
 - .2 Brace back to structure via vibration isolators and snubbers.

2.5 SLACK CABLE RESTRAINT SYSTEM (SCS)

- .1 Use elastomer materials or similar to avoid high impact loads and provide gentle and steady cushioning action.
- .2 SCS to prevent sway in horizontal plane, "rocking" in vertical plane, sliding and buckling in axial direction.
- .3 Hanger rods to withstand compressive loading and buckling.

2.6 SERVICE UTILITIES ENTRANCE INTO BUILDING AND UNDERGROUND PIPING

.1 Provide hangers/support to prevent breakage in the event of seismic activity .

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

3.2 INSTALLATION

- .1 Attachment points and fasteners:
 - .1 To withstand same maximum load that seismic restraint is to resist and in every direction.
- .2 Slack Cable Systems (SCS):
 - .1 Connect to suspended equipment so that axial projection of wire passes through centre of gravity of equipment.
 - .2 Use appropriate grommets, shackles, other hardware to ensure alignment of restraints and to avoid bending of cables at connection points.
 - .3 Piping systems: provide transverse SCS at 10 m spacing maximum, longitudinal SCS at 20 m maximum or as limited by anchor/slack cable performance.
 - .4 Small pipes may be rigidly secured to larger pipes for restraint purposes, but not reverse.
 - .5 Orient restraint wires on ceiling hung equipment at approximately 90 degrees to each other (in plan), tie back to structure at maximum of 45 degrees to structure.
 - .6 Adjust restraint cables so that they are not visibly slack but permit vibration isolation system to function normally.
 - .7 Tighten cable to reduce slack to 40 mm under thumb pressure. Cable not to support weight during normal operation.
- .3 Install SFRS at least 25 mm from equipment, systems, services.
- .4 Miscellaneous equipment not vibration-isolated:
 - .1 Bolt through house-keeping pad to structure.
 - .2 Provide steel support above centre of gravity anchored back to structure.
- .5 Co-ordinate connections with other disciplines.
- .6 Vertical tanks:
 - .1 Anchor through house-keeping pad to structure.
 - .2 Provide steel support above centre of gravity anchored back to structure..
- .7 Horizontal tanks:
 - .1 Provide at least two straps with anchor bolts fastened to structure.

3.3 FIELD QUALITY CONTROL

- .1 Manufacturer's Field Services:
 - .1 Arrange with manufacturer's representative to review work of this Section and submit written reports to verify compliance with Contract Documents.
 - .2 Manufacturer's Field Services: consisting of product use recommendations and periodic site visits to review installation, scheduled as follows:
 - .1 Upon completion of installation.
 - .3 Submit manufacturer's reports to Consultant within 3 days of manufacturer representative's review.
- .2 Inspection and Certification:
 - .1 SFRS: inspected and certified by Seismic Engineer upon completion of installation.
 - .2 Provide written report to Consultant with certificate of compliance.

END OF SECTION



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