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ADDENDUM No. 02

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Number of Pages: 25

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. 02

Addendum Includes: Architectural Addendum No. 02

.1 SPECIFICATIONS

.1 Section 04 70 00 – Stone Veneer

- .1 Revise 2.1.1.1 “Size: 90 mm veneer x random heights and lengths.”
To read “Size: 90 mm veneer x 50 mm to 150 mm (2” to 6”) heights, and random lengths.”
- .2 Revise 2.1.1.2 “Colour: Prairie Black”
To read “Colour: Black”

.2 Section 07 21 13 – Board Insulation

- .1 Revise 2.1.3.3 “ Size: 405 x 1220.”
To read “Size: 405 x 1220mm.”
- .2 Add 2.1.3.2 “Polyisocyanurate to CAN/ULC-S704-03, HCFC-Free
 - .1 Type: 2
 - .2 Class: 3
 - .3 Thickness: Overall Thickness as noted. Multiple panels can be used to meet overall thickness.
 - .4 Size: 1200 x 1200mm.

.5 Edges: Square"

.2 Section 07 26 00 – Vapour Retarders

- .1 Revise 2.2.2.6 "Water Vapour Permeance: to ASTM E96 Procedure B, 0.23 ng/Pa*s*m2."
 To read "Water Vapour Permeance: to ASTM E96 Procedure B, 0.23 ng/Pa*s*m2 maximum"
- .2 Revise 2.2.2.7 "Air permeability: to ASTM E283 (75 Pa), no measurable air leakage; to ASTM E2178, <0.001 L/s*m2."
 To read "Air permeability: to ASTM E283 (75 Pa), no measurable air leakage; to ASTM E2178, <0.001 L/s*m2. maximum"
- .3 Revise 2.2.3.4 "Water Vapour Transmission: to ASTM E96/E96M, 2.1 ng/Pa*s*m2 (<0.037 perm)."
 To read "Water Vapour Transmission: to ASTM E96/E96M, 2.1 ng/Pa*s*m2 (<0.037 perm) maximum."
- .4 Revise 2.2.3.5 "Air Permeability: to ASTM E2178, < 0.0005 L/s*m2."
 To read "Air Permeability: to ASTM E2178, < 0.0005 L/s*m2 maximum."

.3 Section 07 27 00 – Air Barriers

- .1 Revise 2.2.2.4 "Water Vapour Permeance: to ASTM E96 methods A and B, 629 ng/Pa*s*m2 911 perm) and 972 ng/Pa*s*m2 (17 perm)"
 To read "Water Vapour Permeance: to ASTM E96 methods A and B, 629 ng/Pa*s*m2 911 perm) and 972 ng/Pa*s*m2 (17 perm) maximum"
- .2 Revise 2.2.2.5 "Air permeability at 75 Pa: to ASTM E2178, 0.0025 L/s*m2."
 To read "Air permeability at 75 Pa: to ASTM E2178, 0.0025 L/s*m2 maximum."

.4 Section 07 52 00 – Modified Bituminous Membrane Roofing

- .1 Replace in its entirety with attached Section 07 52 00R – Modified Bituminous Membrane Roofing.

.5 Section 08 81 00 – Glass and Glazing

- .1 Revise 3.5.1.4 "Insulating double, fritted glass units: 6, bronze tinted, tempered exterior lite: 6mm clear annealed glass 30% black frit to #3 surface: rooms 134 and 135."
 To Read "Insulating double, etched glass units: 6, bronze tinted, tempered exterior lite: 6mm clear annealed glass, 100% etch to #3 surface: rooms 134 and 135."

.6 Section 09 80 00 – Acoustical Treatment

- .1 Revise 2.1.3.4 "Pre-approved manufacturer: Tectum"
 To read "Pre-approved manufacturer: Tectum. Acceptable substitution: Acoustex-Plank"
- .2 Add 2.1.3.5 "All joints in panels to be caulked with epoxy sealant to stop damage to panels."

.7 Section 10 80 00 – Miscellaneous Specialties

- .1 Revise 2.1.2 "Quantity: Two (2) required."
 To read "Quantity: Four (4) required."

.2	Add Article	"2.11	PRECAST CONCRETE PARKING CURBS
		.1	Heavy Duty Curb
		.1	Curb: 2400mm long x 160mm high x 75mm wide, precast concrete with bevelled edges, 30mPa minimum. Quantity: 1 per parking stall
		.2	Anchors: Two (2) 403mm long x 15mm diameter galvanized anchor pins, fastened into asphalt."
.3	Add 3.3.11		"Fasten curbs at all parking stalls. Location: of curbs within the stalls to be verified on site."
.8	Section 10 51 13 – Metal Lockers		
.1	Revise 2.1.6.6 To read		"Acceptable Substitution: Shanahan's Apex three Tier Locker." "Acceptable Manufacturer: Shanahan's Apex Three Tier Locker, or accepted substitution."
.2	Revise 2.1.7.6 To read		"Acceptable Substitution: Shanahan's Apex Four Tier Locker." "Acceptable Manufacturer: Shanahan's Apex Four Tier Locker, or accepted substitution."
.3	Revise 2.1.8.6 To read		"Acceptable Substitution: Shanahan's Apex Double Tier Locker." "Acceptable Manufacturer: Shanahan's Apex Double Tier Locker, or accepted substitution."
.4	Revise 2.1.9 To read		"Locker: Lockers:....." "Lockers:....."
.5	Add 2.1.9.6		"Supplied by: Storage Solutions Alberta, 780-414-0625, www.sotragesolutionsalberta.ca, Contact: Marcus Worger."
.6	Revise 2.1.10.6 To read		"Acceptable Substitution: Shanahan's Apex Six Tier Locker." "Acceptable Manufacturer: Shanahan's Apex Six Tier Locker, or accepted substitution."
.7	Revise 2.1.11 To read		" Type L7 – Lockers: Model EDHGS-10 635 mm wide x 816 mm high x 165 mm deep (25" x 32" x 6") surface mounted installation, recessed ten (10) door unit c/w locks, as manufactured by Spacesaver. (1-800-2555-8170)" " Type L7 – Lockers: Model EDHGS-10 635 mm wide x 816 mm high x 165 mm deep (25" x 32" x 6") surface mounted installation, ten (10) door unit c/w locks, as manufactured by Spacesaver. (1-800-2555-8170)"
.8	Revise 2.1.12 To read		" Type L8 – Lockers: Model EDHGE-04 635 mm wide x 358 mm high x 165 mm deep (25" x 14" x 6") flush installation, recessed four (4) door unit c/w locks, as manufactured by Spacesaver. (1-800-2555-8170)" " Type L8 – Lockers: Model EDHGE-04 635 mm wide x 358 mm high x 165 mm deep (25" x 14" x 6") flush installation, four (4) door unit c/w locks, as manufactured by Spacesaver. (1-800-2555-8170)"
.9	Section 12 21 23 – Roll-Down Blinds		
.1	Revise 2.1.9 To read		" Standard of Acceptance: Solarfective Teleshade or accepted substitution." "Standard of Acceptance: Solarfective Teleshade or accepted substitution. Accepted Substitution: Altex – Moduline Lite-Lift Dual 140."

.7 A4.4 – Wall Sections

- .1 Wall Sections 6/A2.3 and 7/A2.3
Add elevation marker “105.125” to underside of stucco wall.

.8 A4.6 – Wall Sections

- .1 4/A4.6 – SECTION DETAIL
 - .1 Fill parapet stud with batt insulation.
 - .2 Roof deck to stop at top flange of steel beam, left of gridline “B”.
 - .3 Provide 150 x 150 x 7.6 bent metal angle at outside corner joint of roof gypsum board and wall gypsum board.
- .2 5/A4.6 – CANOPY TRANSITION SECTION DETAIL
 - .1 Change: “Z bars at 600 o.c.”
To read: “Steel Studs at 600 o/c”
 - .2 Add: “Continuous 16mm plywood to face of the continuous brake shaped angles.”
- .3 2/A4.8 – WALL SECTION
 - .1 The door frame along gridline “B” should be a wrap around frame.
- .4 3/A4.8 – WALL SECTION
 - .1 Delete: “dimension of 5200 at Room 101”.

.9 A4.7 – Wall Sections

- .1 1/A4.8 – WALL SECTION
 - .1 Delete: Spray foam insulation at the five beams shown.
 - .2 The exterior door frame to be a wrap around frame.
 - .3 Refer to 6/A4.6 for detail of Room 190 ceiling to wall detail.
- .2 3/A4.8 – WALL SECTION
 - .1 Revise: steel stud at sloped roof from “64 engineered steel stud deck at 600 o.c.”
To read: “92 engineered steel stud deck at 600 o.c”.
- .3 5/A4.6 – HIGH PARAPET SECTION DETAIL
 - .1 Roof make-up revise: “positive slope polyisocyanurate insulation”
To read: “ Roof insulation (as per specification)”
 - .2 Revise: “membrane cap sheet”
To read: “Extend 2 ply roof membrane up the wall”

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

- .1 Aluminum Window frame W3:
Change: “1000”
To Read: “1270”

.11 A7.1 – Plan Details

- .1 2/A2.2 – PLAN DETAILS
Add: “The dimension of the front face is 450 and 515 from grid line A to outside face of pre-finished aluminum.

.12 A7.3 – Section Details

- .1 4/A4.6 – NORTH WALL (ROOM 100 ONLY) – SECTION
Add note: “Apply wall air/vapour barrier to outside face of stud wall and extend from anti-rotational channel down wall to face of foundation.”
 - .2 4/A4.6 – NORTH WALL (ROOM 100 ONLY) – SECTION
Add: :Semi-rigid insulation between exterior sheathing with air/vapour barrier and Rundel Stone Sill.
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Coaldale Government Building
Addendum No. 02

.13 **A8.1 – Secure Area Interior Elevations and Millwork**

- .1 Clarification: Interior elevations 10, 12 & 13: Width of Acoustic Wall Panel is 1200mm from 1300mm above finished floor. Length is full length of wall. Tectum Panel edge as per detail 4/A5.2 is on all exposed edges.

ATTACHMENTS:

Section 07 52 00R – Modified Bituminous Membrane Roofing.

AASK-1.1

AASK-1.2

AASK-3

AASK-4

AASK-5

AASK-6

END OF ADDENDUM NO. 02

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 07 61 00 – Sheet Metal Roofing
- .2 Section 07 62 00 – Sheet Metal Flashing and Trim

1.2 REFERENCE STANDARDS

- .1 ASTM International Inc.
 - .1 ASTM 1177/C1177M-17, Standard Specification for Glass Mat Gypsum Substrate for use as sheathing.
 - .2 ASTM D41-05/D41M-11(2016), Standard Specification for Asphalt Primer Used in Roofing, Damp-Proofing, and Waterproofing.
 - .3 ASTM D6162/D6162M-16, Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fibre Reinforcements.
 - .4 ASTM D6163/D6163M-16, Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.
 - .5 ASTM D6164/D6164M-16, Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.
- .2 Alberta Roofing Contractors Association (ARCA)
 - .1 ARCA Roofing Specifications Manual-1997.
- .3 Canadian Standards Association (CSA International)
 - .1 CSA A123.21-14, Standard Test Method for the Dynamic Wind Uplift Resistance of Membrane-Roofing Systems
 - .2 CSA A231.1-14/A231.2-14, Precast Concrete Paving Slabs/Precast Concrete Pavers.
 - .3 CSA O121-17, Douglas Fir Plywood.
 - .4 CSA O151-17, Canadian Softwood Plywood.
- .4 Factory Mutual (FM Global)
 - .1 FM Approvals - Roofing Products.
- .5 Health Canada / Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .6 Underwriters Laboratories' of Canada (ULC)
 - .1 CAN/ULC-S701-11, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
 - .2 CAN/ULC-S704-11, Standard for Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced.

(as per Addendum 2)

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00- Submittal Procedures.
- .2 Product Data:
 - .1 Provide electronic copy of most recent technical roofing components data sheets describing materials' physical properties and include product characteristics, performance criteria, physical size, finish and limitations.
 - .2 Provide two copies of WHMIS MSDS in accordance with Section 01 35 43 - Environmental Procedures, and indicate VOC content for:
 - .1 Primers.
 - .2 Sealers.
- .3 Provide shop drawings:
 - .1 Indicate tapered insulation, flashing and control joints, details.
 - .2 Provide layout for tapered insulation.
- .4 Manufacturer's Certificate: certify that products meet or exceed specified requirements.
- .5 Manufacturer's Installation Instructions: indicate special precautions required for seaming the membrane.
- .6 Warranty: Provide warranty as noted in article 1.8.

1.4 QUALITY ASSURANCE

- .1 Installer qualifications: company or person specializing in application of modified bituminous roofing systems approved by manufacturer.

1.5 FIRE PROTECTION

- .1 Fire Extinguishers:
 - .1 Maintain one stored pressure rechargeable type with hose and shut-off nozzle,
 - .2 ULC labelled for A, B and C class protection.
 - .3 Size as indicated on roof per torch applicator, within 6m of torch applicator.

1.6 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store and handle materials in accordance with manufacturer's written instructions, Section 01 61 00- Common Product Requirements.
- .2 Storage and Handling Requirements:
 - .1 Safety: comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of asphalt, sealing compounds, primers and caulking materials.
 - .2 Provide and maintain dry, off-ground weatherproof storage.
 - .3 Store rolls of membrane in upright position. Store membrane rolls with salvage edge up.
 - .4 Remove only in quantities required for same day use.

(as per Addendum 2)

- .5 Place plywood runways over completed Work to enable movement of material and other traffic.
- .6 Store sealants at +5 degrees C minimum.
- .7 Store insulation protected from weather and deleterious materials.
- .3 Packaging Waste Management: remove for reuse and return by manufacturer of packaging materials in accordance with Section 01 74 21- Construction/Demolition Waste Management and Disposal.
 - .1 Collect and separate plastic, paper packaging and corrugated cardboard in accordance with Waste Management Plan.
 - .2 Fold up metal banding, flatten and place in designated area for recycling.

1.7 SITE CONDITIONS

- .1 Ambient Conditions
 - .1 Do not install roofing when temperature remains below -18°C for torch application.
 - .2 Minimum temperature for solvent-based adhesive is -5°C.
- .2 Install roofing on dry deck, free of snow and ice, use only dry materials and apply only during weather that will not introduce moisture into roofing system.

1.8 WARRANTY

- .1 Provide the Owner, through ARCA a written five (5) year ARCA Warranty stating that the roofing system has been constructed in accordance with the plans and specification and that the workmanship has followed the requirements of the membrane manufacturer.
- .2 The certificate must state that the roofing system will remain weather tight and free from imperfections for a minimum of five (5) years from the date of construction completion certificate and that any and all damage resulting from failure to provide above stated performance shall be repaired to the satisfaction of the Owner at no additional cost.
- .3 Provide the Owner, through the Membrane Manufacturer, an additional five (5) year material guarantee stating this roofing system shall remain watertight and free from material defects for a total of ten (10) years after the final completion date and that all repairs and/or replacement shall be carried out at no additional cost to the Owner.
- .4 Non-ARCA member bidders must include proof of fire-safety training, including successful completion of the roofer certification program for crew members.
- .5 Non-ARCA member bidders must supply a five (5) year Bond worth 20% or \$500,000, whichever is less, of the value of the project for five (5) years upon completion of deficiency stage of contract. The bond must come complete with a total of two (2) inspections by ARCA Warranty Ltd. accredited roofing inspector at two (2) year and four (4) year marks. The costs of the bond and inspections are the responsibility of the contractor and shall be added to the value of the bond. The bond must be responsible for any deficiencies or warranty work immediately following the inspections. The bond must be continuous for five (5) years. Two (2) year bonds with options to renew will not be acceptable.

(as per Addendum 2)

1.9 DESCRIPTIONS OF ROOFS

- .1 System R1: Provide roof assembly on metal deck.
 - .1 Auxiliary leveling surface
 - .2 Self-adhering vapour retarder
 - .3 Insulation
 - .4 Urethane adhesive
 - .5 Insulation cover panels (Soprasmart Board 180)
 - .6 Primary membrane
 - .7 Accessories
 - .8 Fire Guard membrane, self -adhering
- .2 System R3: Provide roof assembly on metal deck.
 - .1 Deck covering.
 - .2 Self-adhering vapour barrier
 - .3 Sloped Insulation
 - .4 Urethane Adhesive
 - .5 Insulation cover panels (Soprasmart Board 180)
 - .6 Primary membrane

Part 2 Products

2.1 PERFORMANCE CRITERIA

- .1 Roof membranes must be by same manufacturer as air barriers and vapour retarder membranes.
- .2 Compatibility between components of roofing system is essential. Provide written declaration to Consultant stating that materials and components, as assembled in system, meet this requirement. Roof membranes must be by same manufacturer as air barrier and vapour retarder membranes.
- .3 Roofing System: to CSA A123.21 for wind uplift resistance.

2.2 DECK COVERING

- .1 Glass mat Gypsum board sheathing: to ASTM C1177/C1177M, 12.7 mm thick.

2.3 DECK PRIMER

- .1 Asphalt primer: to CGSB 37-GP-9Ma.

2.4 VAPOUR RETARDER

- .1 SBS Modified Bitumen Membrane, to CGSB 37-GP-56, 0.8mm thickness, tri-laminated woven polyethylene facer, underface with silicone release film.
- .2 Soprema SopraVap R or IKO MVP, fully adhered with primer.

(as per Addendum 2)

2.5 ADHESIVE

- .1 Adhesive for securing overlay board and insulation: two-component unit, polyurethane adhesive, low rise. Soprema Duotack or acceptable substitute.

2.6 FLEXIBLE FLASHING AND AIR SEAL MEMBRANE

- .1 Provide Sopralene Flam Stick or accepted substitution, 3.0 mm self-adhesive base sheet membrane with SBS Modified Bitument reinforced with a composite or polyester and glass reinforcement.

2.7 POLYISOCYANURATE INSULATION

- .1 To CAN/ULC-S704-03, Type 2, Class 3, thickness 150mm, HCFC-free construction; minimum LTTR of 1.04 RSI (5.6 R) value per 25mm thickness; with inorganic fibre-reinforced facer; minimum 138kPa compression strength. Less than 500 unrated.

2.8 EXPANDED POLYSTYRENE INSULATION (BACKSLOPES AND CRICKETS)

- .1 Expanded polystyrene (EPS) insulation to CAN/ULC-S701, Type 2, thickness as required for 2% backslopes, square edges.

2.9 TAPERED SUMP INSULATION AT DRAINS

- .1 Provide the following:
 - .1 Polyisocyanurate: to CAN/ULC S704-03, Type 2, Class 3; HCFC-free construction; minimum LTTR of 0.99 RSI (5.6R) value per 25mm thickness; with inorganic fibre-reinforced facer; minimum 138 kPa compression strength.

2.10 LAMINATED PRIMARY MEMBRANE BASE SHEET

- .1 Soprema SopraSmart Board 180, 1/8" thick, or accepted substitution.
- .2 Install over insulation to provide torch safe surface.

2.11 CAP SHEET:

- .1 Soprema Sopraply Traffic Cap 560 or accepted substitution.

2.12 FLEXIBLE FLASHING AND AIR SEAL MEMBRANE (TRANSITION/BASE SHEET FLASHING)

- .1 Provide minimum 2.5 mm thick, SBS modified bitumen pre-manufactured sheet, with manufacturer's standard internal reinforcement, compatible with substrates. Sopremalene Flam Stick or accepted substitution.

2.13 SEALERS

- .1 Plastic cement: Rubberized asphalt as per ARCA Requirements

2.14 WALKWAYS

- .1 Walkways to consist of SBS modified bitumen traffic cap sheet, 1 m wide x 4 mm thick, with thermofusible plastic film underface, heat welded application. Based on Soprema

(as per Addendum 2)

Sopraply Traffic Cap 560. Colour to be different from field membrane as selected by Consultant.

2.15 CARPENTRY

- .1 Refer to Section 06 10 00.01- Rough Carpentry.

2.16 FASTENERS

- .1 Covering to steel deck: No. 10 flat head, self tapping, Type A or AB, cadmium plated screws. Recommend FM Approved screw and plate assemblies.

Part 3 Execution

3.1 QUALITY OF WORK

- .1 Do examination, preparation and roofing Work in accordance with Roofing Manufacturer's Specification Manual, ARCA Roofing Specification Manual.
- .2 Do priming in accordance with manufacturers written recommendations.
- .3 The interface of the walls and roof assemblies will be fitted with durable rigid material plywood providing connection point for continuity of air barrier.
- .4 Assembly, component and material connections will be made in consideration of appropriate design loads, with reversible mechanical attachments.

3.2 EXAMINATION OF ROOF DECKS

- .1 Verification of Conditions:
 - .1 Review with Consultant deck conditions including parapets, construction joints, roof drains, plumbing vents and ventilation outlets to determine readiness to proceed.
- .2 Evaluation and Assessment:
 - .1 Prior to beginning of work ensure:
 - .1 Decks are firm, straight, smooth, dry, free of snow, ice or frost, and swept clean of dust and debris. Do not use calcium or salt for ice or snow removal.
 - .2 Curbs have been built with vapour retarder below.
 - .3 Roof drains and overflow drains have been installed at proper elevations relative to finished roof surface.
 - .4 Plywood and lumber nailer plates have been installed to deck, walls and parapets as indicated.
 - .3 Do not install roofing materials during rain or snowfall.

3.3 PROTECTION OF IN-PLACE CONDITIONS

- .1 Cover walls, walks and adjacent work where materials hoisted or used.
- .2 Use warning signs and barriers. Maintain in good order until completion of Work.

(as per Addendum 2)

- .3 Clean off drips and smears of bituminous material immediately.
- .4 Dispose of rain water off roof and away from face of building until roof drains or hoppers installed and connected.
- .5 Protect roof from traffic and damage.
- .6 At end of each day's work or when stoppage occurs due to inclement weather, provide protection for completed Work and materials out of storage.
- .7 Metal connectors and decking will be treated with rust proofing or galvanization.

3.4 DECK SHEATHING

- .1 Mechanically fasten to steel deck Glass Mat Gypsum Board with screws reversible mechanical attachments to steel deck's upper rib surfaces, spaced 400mm on centre each way, in accordance with FM190.
- .2 Place with long axis of each sheet transverse to steel deck ribs, with end joints staggered and fully supported on ribs.

3.5 PRIMING AUXILLARY LEVELING SURFACE

- .1 Apply deck primer to gypsum board roofing substrate at the rate recommended by manufacturer.

3.6 INSTALLATION OF VAPOUR RETARDER ON GYPSUM BOARD SHEATHING- TORCH APPLIED

- .1 Install fireguard tape to exposed joints in gypsum board sheathing, including joints between it and up-stands.
- .2 Prime existing surfaces prior to installing new vapour retardant. Let the primer flash prior to installing the membrane.
- .3 Torch apply the new membrane to the existing vapour retardant.

3.7 FLEXIBLE FLASHING AND AIR SEAL MEMBRANE INSTALLATION

- .1 Install flexible flashing as indicated on detail drawings.
- .2 Fully adhere air seal membrane and flexible flashing to substrates and seal laps with adjoining roof vapour retarder assemblies and wall sheet membrane air and vapour seals.
- .3 Lap joints minimum 150 mm and seal laps.

3.8 (EXPOSED) CONVENTIONAL MEMBRANE ROOFING (CMR) APPLICATION

- .1 Insulation: fully adhered, adhesive application:
 - .1 Adhere insulation to laminated vapour barrier using foam adhesive.
 - .2 Place boards in parallel rows with ends staggered, and in firm contact with one another.
 - .3 Cut end pieces to suit.
 - .4 Apply adhesive in accordance to Manufacturer and ARCA
 - .5 Separate the membrane and insulation with a drainage layer or slip-sheet.

(as per Addendum 2)

- .2 Tapered insulation application:
 - .1 Adhere insulation to vapour retarder and top layer of insulation to bottom layer with polyurethane adhesive in 13-19mm wide continuous strips.
 - .2 Install tapered insulation as first insulation layer, accept as detailed otherwise, in accordance with shop drawings. Stagger joints between layers 150 mm minimum.
- .3 Laminated Primary Membrane Base Sheet Overlay Board: adhesive application:
 - .1 Adhere overlay board to insulation with foamable adhesive at the rate of 1 litre per m².
 - .2 Place boards in parallel rows with end joints staggered. Cap joints approximately 25 mm.
 - .3 Cut ends to suit and apply adhesive in continuous ribbons at 300 mm on centre.
- .4 Cap sheet application:
 - .1 Starting at low point on roof, perpendicular to slope, unroll cap sheet, align and reroll from both ends.
 - .2 Unroll and torch cap sheet onto base sheet taking care not to burn membrane or its reinforcement.
 - .3 Lap sheets 75 mm minimum for side laps and 150 mm minimum for end laps. Offset joints in cap sheet 300 mm minimum from those in base sheet.
 - .4 Application to be free of blisters, fish mouths and wrinkles.
 - .5 Do membrane application in accordance with manufacturer's recommendations.
- .5 Flashings:
 - .1 Complete installation of flashing base sheet stripping prior to installing membrane cap sheet.
 - .2 Install base sheet onto substrate in 1 metre wide strips.
 - .3 Lap flashing base sheet to membrane base sheet minimum 150 mm and seal by or torch welding.
 - .4 Lap flashing cap sheet to membrane cap sheet 250 mm minimum and torch weld.
 - .5 Provide 75 mm minimum side lap and seal.
 - .6 Properly secure flashings to their support, without sags, blisters, fishmouths or wrinkles.
 - .7 Do work in accordance with manufacturer's recommendations and Section 07 62 00 - Sheet Metal Flashing and Trim.

3.9 WALKWAYS

- .1 Install walkway membrane in accordance with manufacturer's instructions as indicated.
 - .1 Apply primer to cap sheet membrane and torch apply, ensuring selvage edge is removed.
- .2 Install pavers on insulation at rainwater leaders, level on insulation pads, and for ice fall protection as indicated on drawings.

(as per Addendum 2)

3.10 FIRE SAFETY

- .1 Inform Owner of unforeseen fire hazards and obtain instructions before proceeding or continuing with torch application.
- .2 An onsite safety person shall be employed by the Contractor and be on site at all times during the roofing process and shall remain on site four (4) hours after torching has stopped. During this period, the safety person shall scan perimeter and roof penetration details with a hand held infrared gun. Localized hot spots to be investigated for potential fire hazards by cut tests.
- .3 The safety person shall ensure and enforce all safety requirements of the site, as required by Workers' Compensation safety department. Before proceeding with the work, advise the local fire authority of the nature of the work to be undertaken and dates of construction.
- .4 There shall be one fire extinguisher per torch system used on the roof. Failure to provide or not having one available will result in immediate job shut-down.
- .5 Keep suitable fire extinguishers within 10 m of each torch in use.
- .6 Do not use torches near wall cladding
- .7 Take additional precautions against fire as needed to provide adequate fire safety.
- .8 Install fire protection tape over cracks, voids and openings in substrate where a torch applied membrane will be installed.

3.11 FIELD QUALITY CONTROL

- .1 Inspections:
 - .1 Inspection and testing of roofing application will be carried out by a third-party inspection agency certified to perform ARCA inspections.
 - .2 Third-party inspector to be scheduled for up to seven (7) inspections in different phases of construction from start to finish.
 - .3 Inspection costs to include travel, living allowance, site inspections, testing and reports. Refer to section 01 21 00 – Allowances.
 - .4 Contractor to schedule inspections with inspection agency according to construction schedule and so all areas of the roof are inspected.
 - .5 If additional inspections and testing are required Contractor to send request in writing to Owner prior to the final two (2) inspections are completed.

3.12 CLEANING

- .1 Remove bituminous markings from finished surfaces.
- .2 In areas where finished surfaces are soiled caused by work of this section, consult manufacturer of surfaces for cleaning advice and complying with their documented instructions.
- .3 Repair or replace defaced or disfigured finishes caused by work of this section.
- .4 Waste Management: separate waste materials in accordance with Section 01 74 21- Construction/Demolition Waste Management and Disposal.

(as per Addendum 2)

- .1 Place materials defined as hazardous or toxic in designated containers.
- .2 Clearly label location of salvaged material's storage areas and provide barriers and security devices.
- .3 Ensure emptied containers are sealed and stored safely.
- .4 Divert unused aggregate materials from landfill to local facility for reuse as reviewed by Consultant.
- .5 Unused coating material must be disposed of at official hazardous material collections site.
- .6 Unused adhesive, sealant and asphalt materials must not be disposed of into sewer system, into streams, lakes, onto ground or in other location where it will pose health or environmental hazard.
- .7 Dispose of unused adhesive material at official hazardous material collections site.
- .8 Dispose of unused sealant material at official hazardous material collections site.
- .9 Dispose of unused asphalt material at official hazardous material collections site.
- .10 Divert unused gypsum materials from landfill to recycling facility.

3.13 FIRE SAFETY PROCEDURE FOR THE PROTECTION OF COMBUSTIBLE SUBSTRATE VOIDS

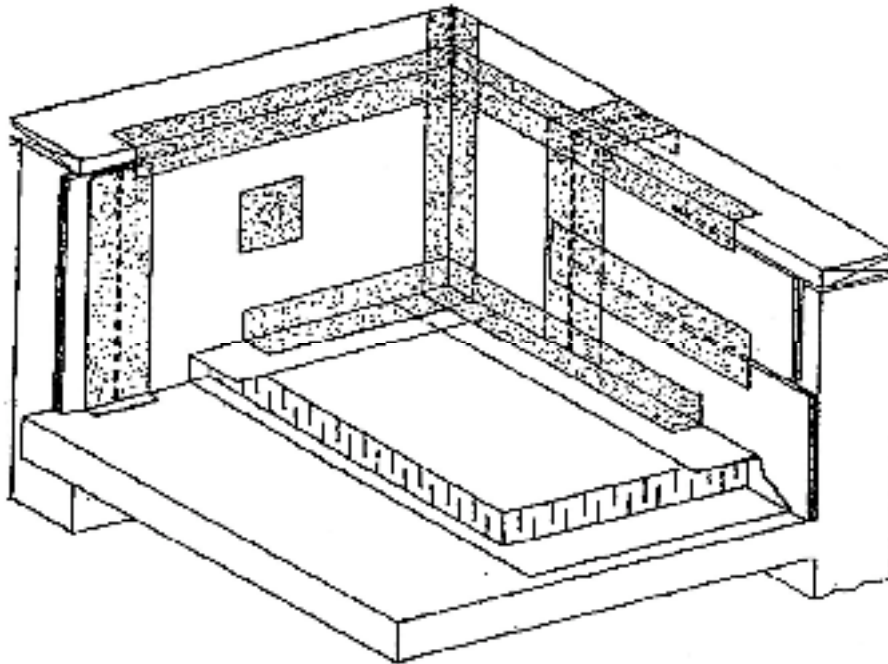


FIG. 1

(as per Addendum 2)

- .1 Self-adhering S.B.S. modified bitumen fire prevention tape can significantly reduce the risk of flame entering at building elements. Fire safety procedures are to be followed to ARCA Standards.
- .2 Fire prevention tape must be adhered to combustible substrate gaps, cracks, joints and openings prior to the torch application of any modified bitumen membrane. The self adhering tape shall be centered over voids and formed at the angle transitions located at the bases and corners of parapets, curbs, roof/wall junctions and other roof penetrations, see Fig. 1. Leave nothing to chance, always cover all voids prior to lighting the torch. It is recommended that the membrane flashing base sheet be applied the same day as the primary membrane base sheet.
- .3 Self-adhering fire prevention tape be used for every torch adhered modified bitumen project.

3.13 BASE FLASHING INSTALLATION PROCEDURE WITH FIRE PREVENTION
TAPE

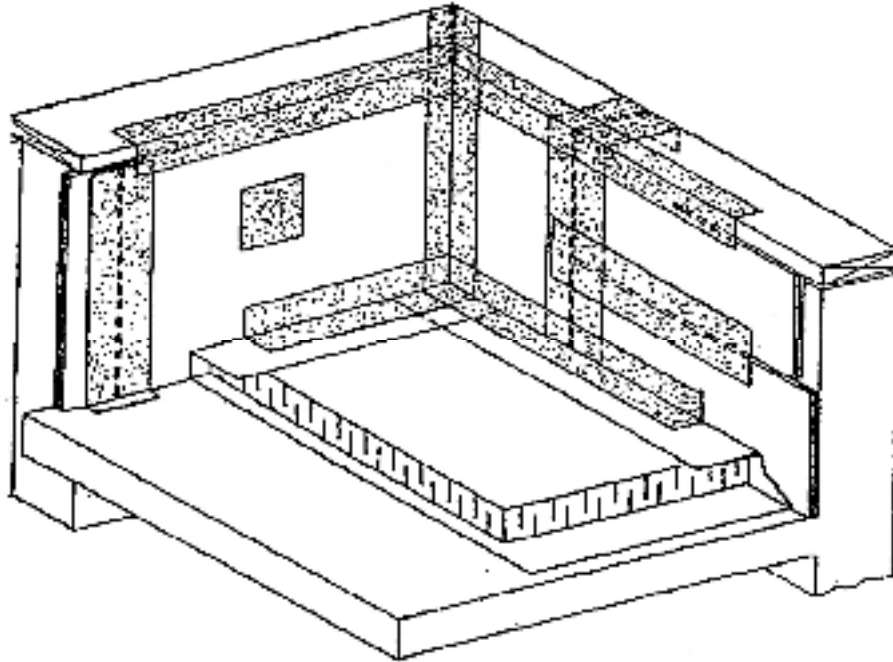


FIG. 2

- .1 The vapour retarder membrane shall wrap the exposed insulation edges at vertical junctions found at parapets, curbs, walls and roof openings. The vapour retarder wrap shall extend a sufficient horizontal distance to permit the primary membrane base sheet to be fully adhered to it. The vapour retarder extension shall be fully adhered to the top surface of the insulation.
- .2 Prior to application of primary membrane base sheet, protect all angle transitions with the vertical substrate by applying a minimum 150mm (6") wide strip of a self adhering fire prevention tape centered over the angle transition.
- .3 Adhere the primary membrane base sheet by overlapping the fire prevention tape at the base of the vertical transition.
- .4 Cover all substrate gaps, cracks, joints or openings at corners and penetrations with self-adhering fire prevention tape prior to torch adhering flashing base sheet.
- .5 Adhere flashing base sheet to vertical substrate and across the top of the wood blocking. Do not torch adhere flashing base sheet to exterior face of the blocking. At the exterior face turn the flashing base sheet down dry to cover the top of the wall finish and mechanically fasten it to the wood blocking.
- .6 Install cap sheet membranes.

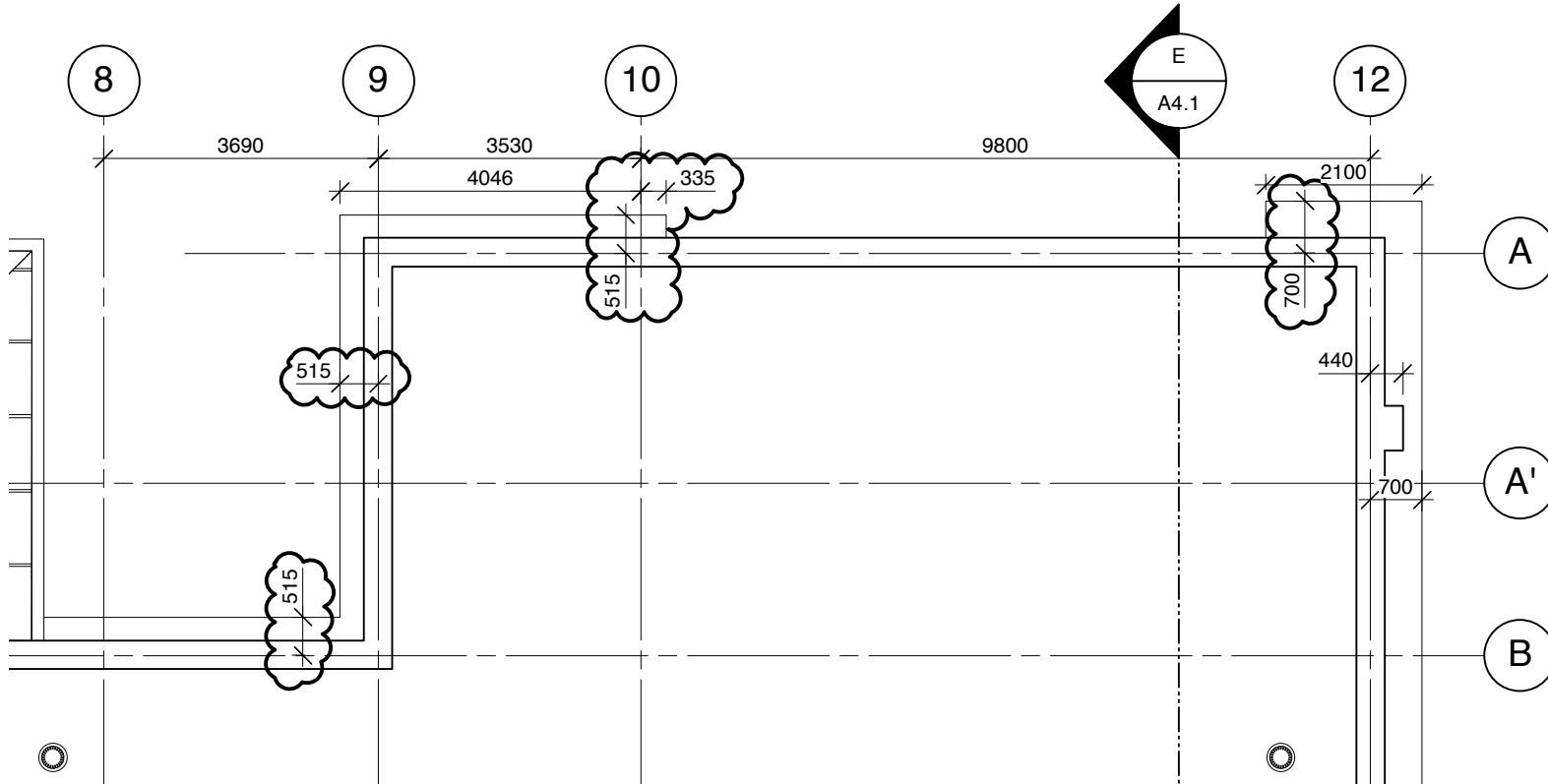
(as per Addendum 2)

END OF SECTION

(as per Addendum 2)

REVISIONS:
1. CANOPY DEPTHS TO BE CHANGED WHERE
CLOUDED. REFER TO SECTION DETAILS
1/AASK1.3 AND 7/A4.5 FOR ROOF TYPE.

- Notes:
- Do not scale drawing
 - It is the responsibility of the appropriate Contractor to check and verify all dimensions on site and report all errors and/or omissions to the Architect or Engineer
 - It is the responsibility of the appropriate Contractor to comply with all Codes and Regulations applicable to the performance of their work.
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1 PARTIAL ROOF PLAN
A2.6 Scale: 1:100

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Project
**COALDALE
PROTECTIVE
SERVICES BUILDING**

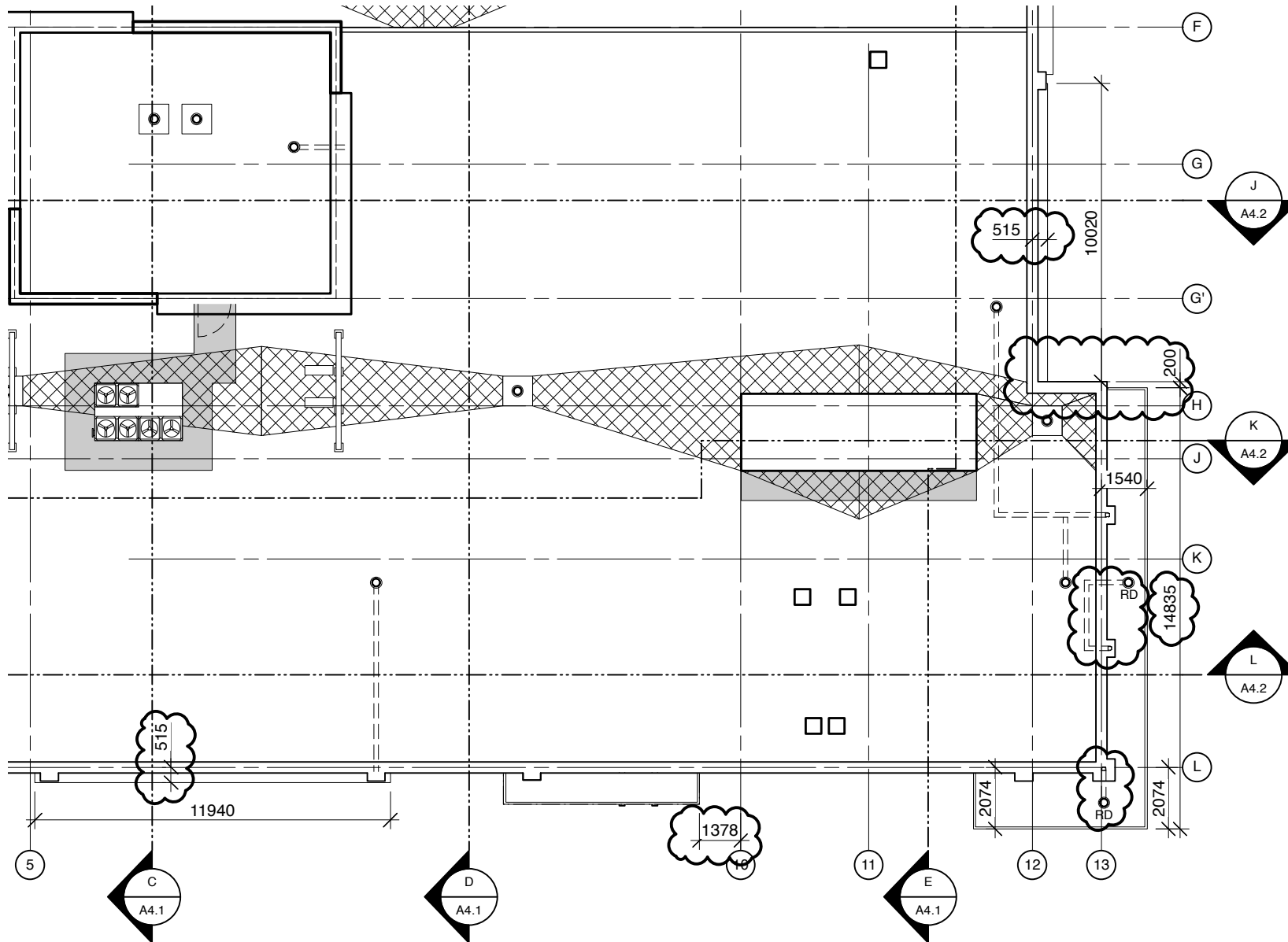
Scale	AS NOTED	Designed By	KT
Project No.	9030	Drawn By	KC
Date	FEB 19, 2019	Checked By	MT

Drawing Title
**PARTIAL NORTH
ROOF PLAN**

Drawing No.

AASK1.1

REVISIONS:
1. CANOPY DEPTHS TO BE CHANGED WHERE CLOUDED. REFER TO SECTION DETAILS 1/AASK1.3 FOR ROOF TYPE.
2. ROOF DRAINS ADDED.



Notes:

- Do not scale drawing
- It is the responsibility of the appropriate Contractor to check and verify all dimensions on site and report all errors and/or omissions to the Architect or Engineer
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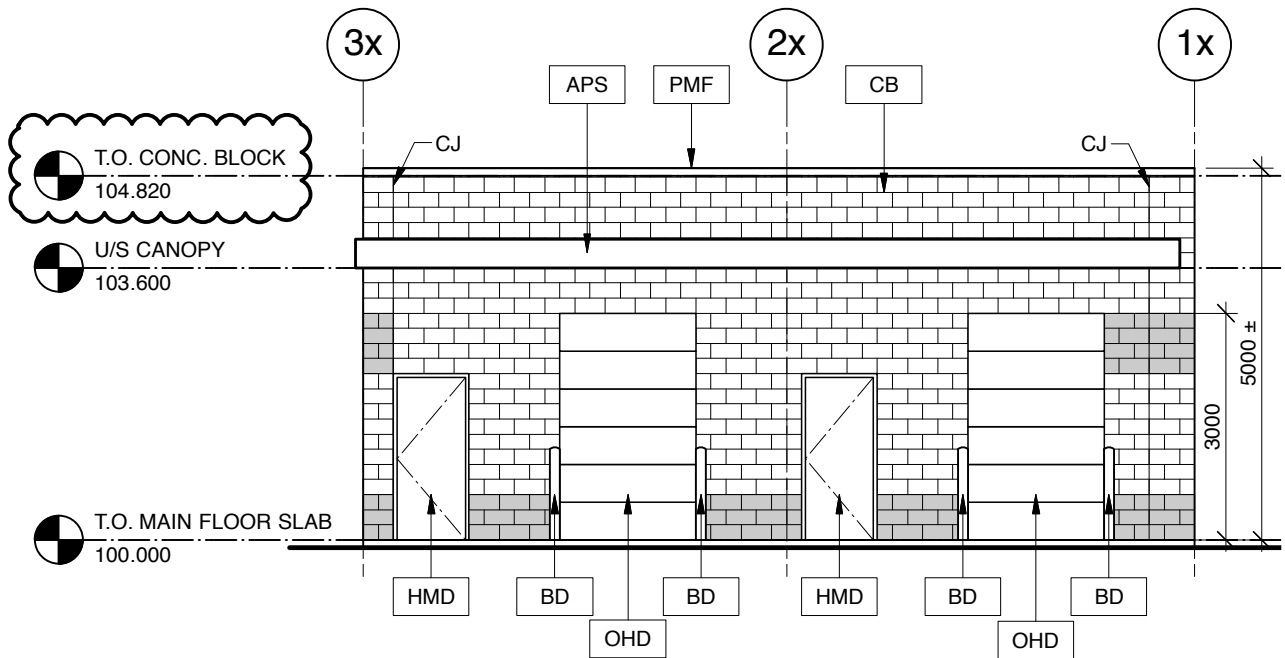
Scale	AS NOTED	Designed By	KT
Project No.	9030	Drawn By	KC
Date	FEB 19, 2019	Checked By	MT

Drawing Title
**PARTIAL SOUTH
ROOF PLAN**

Drawing No.

AASK1.2

 **1** PARTIAL ROOF PLAN
 A2.6 Scale: N.T.S.



5 NORTH ELEVATION
 A2.8 Scale: 1:100



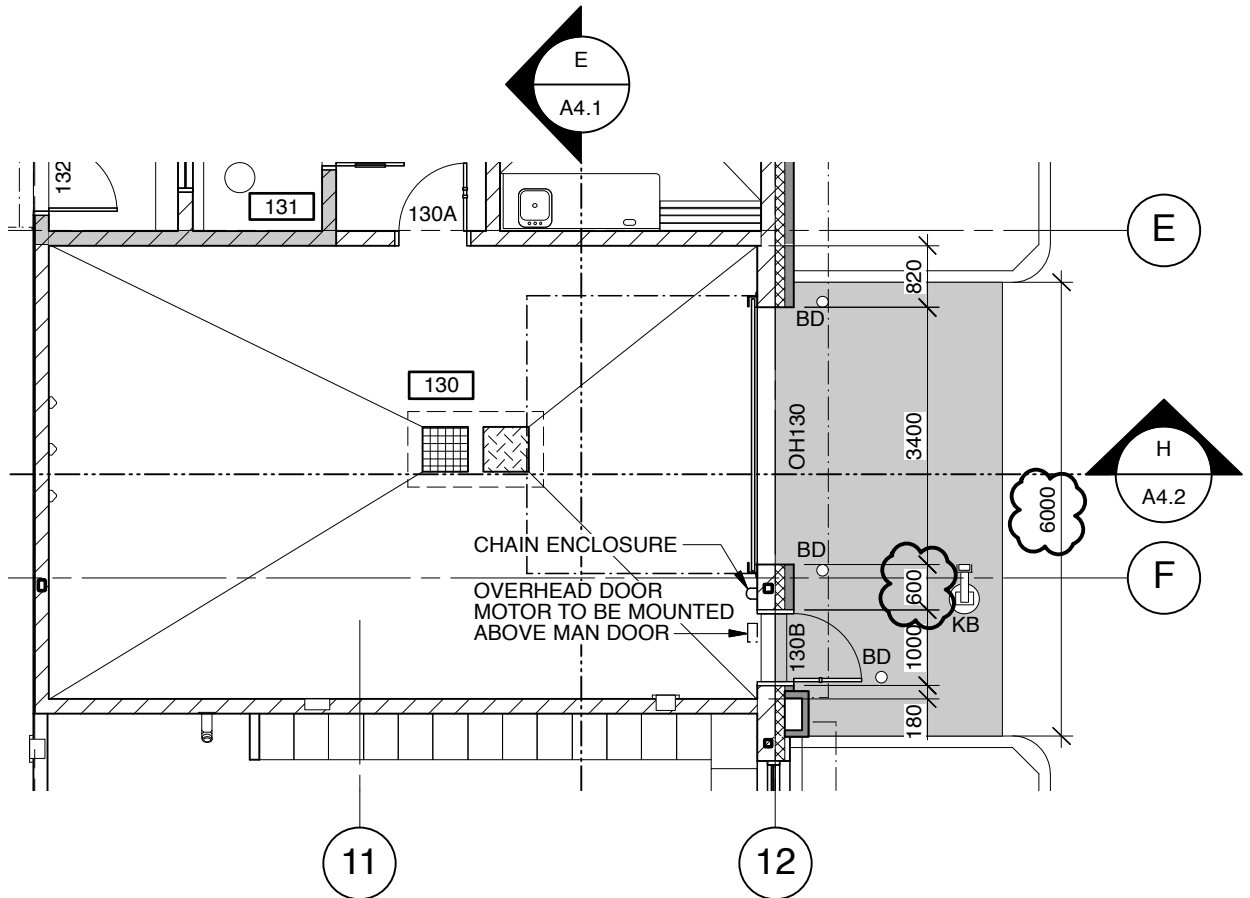
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Project
 COALDALE PROTECTIVE SERVICES BUILDING

Drawing Title
WEST OUT BUILDING NORTH ELEVATION BUILDING HEIGHT

Scale	AS NOTED	Designed By	KT	Drawing No. AASK3
Project No.	9030	Drawn By	KC	
Date	FEB 19, 2019	Checked By	PB	

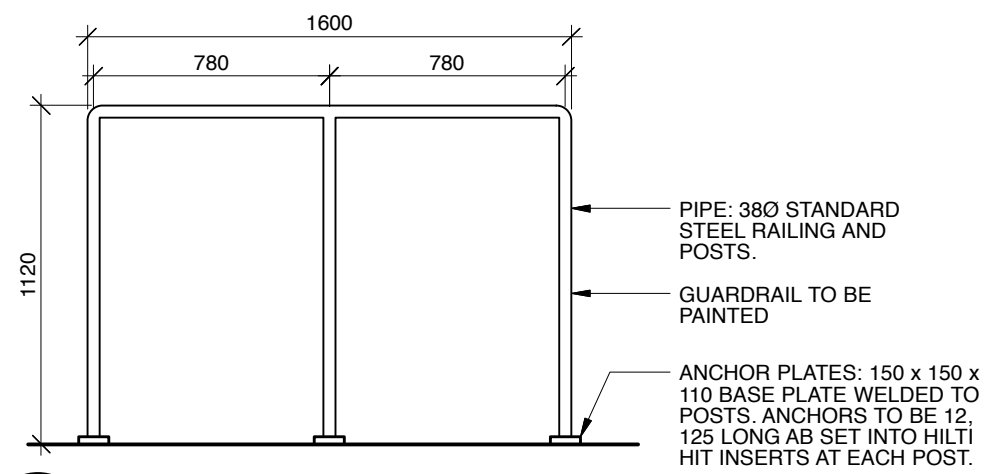


1 PARTIAL FLOOR PLAN
Scale: 1:100

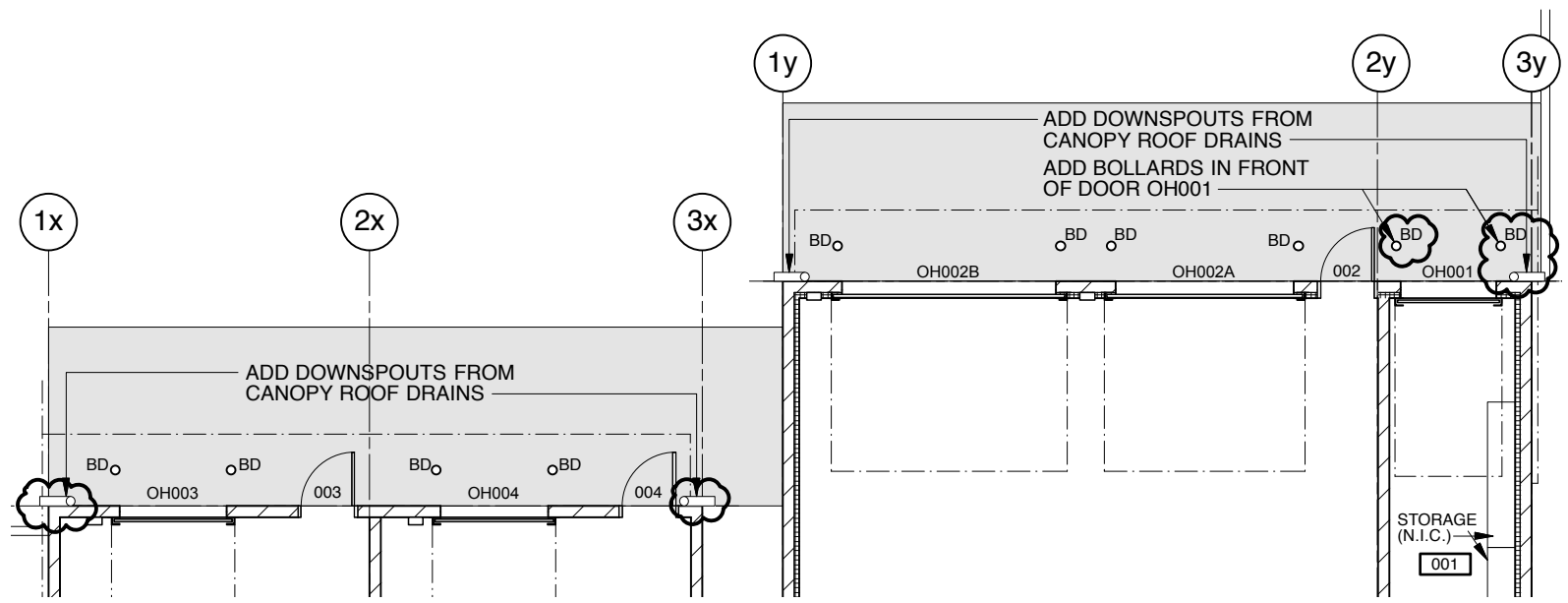
REVISIONS:

1. OVERHEAD DOOR (OH130) TO BE MOVED NORTH 200mm. SPACE BETWEEN OVERHEAD DOOR AND MAN DOOR IS NOW 600mm.
2. OVERHEAD DOOR MOTOR AND CHAIN ENCLOSURE TO BE RELOCATED TO SOUTH SIDE OF OVERHEAD DOOR.
3. THE CONCRETE APRON WILL EXTEND NORTH 200mm FROM 5800 TO 6000. CONCRETE CURB TO ADJUST ACCORDINGLY.

- Notes:
- Do not scale drawing
 - It is the responsibility of the appropriate Contractor to check and verify all dimensions on site and report all errors and/or omissions to the Architect or Engineer
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1 EXTERIOR GUARDRAIL
AASK5 Scale: 1:25



3 PARTIAL OUT BUILDING FLOOR PLAN
A2.8 Scale: 1:125

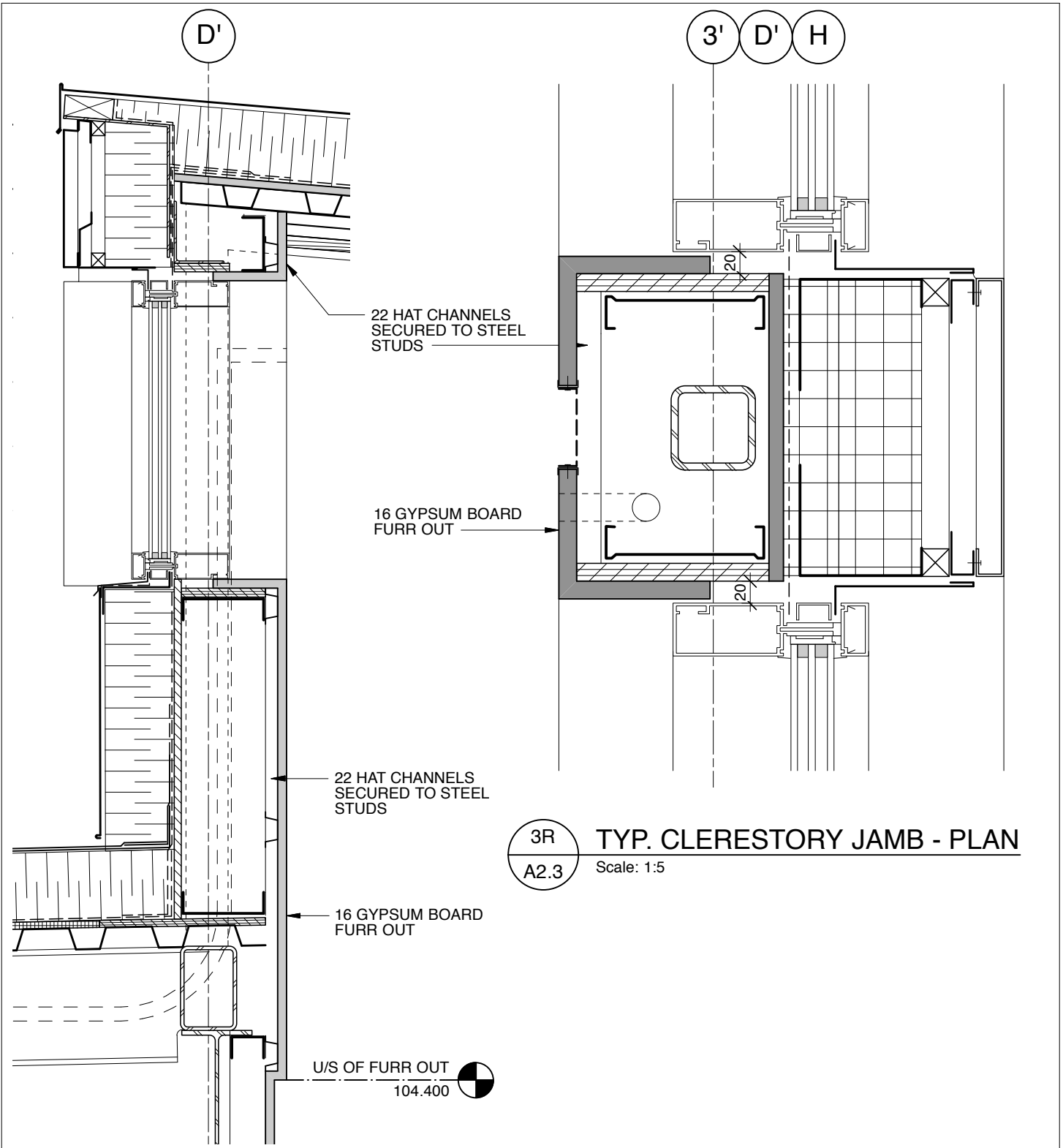
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Project
**COALDALE
PROTECTIVE
SERVICES BUILDING**

Scale	AS NOTED	Designed By	KT
Project No.	9030	Drawn By	KC
Date	FEB 19, 2019	Checked By	MT

Drawing Title
**GUARDRAIL AND
OUT BUILDING
FLOOR PLAN**
Drawing No.

AASK5



2R
A2.5
CORRIDOR 106 @ CLERESTORY
Scale: 1:10

REVISIONS:
1. FURR OUT CLERESTORY WALLS, THAT CONTAIN SPRINKLER LINES, WITH 22 HAT CHANNELS FROM U/S OF DECK TO 104.400. THIS FURR OUT APPLIES TO CLERESTORY WALLS ON GRIDLINES 3', D' AND H.



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Project
COALDALE PROTECTIVE SERVICES BUILDING

Drawing Title
CLERESTORY FURR OUT AT SPRINKLER LINES

Scale	AS NOTED	Designed By	MT	Drawing No. AASK6
Project No.	9030	Drawn By	KC	
Date	FEB 19, 2019	Checked By	MT	