This Addendum forms part of the Tender Documents and amends the Tender Documents as described below.

1. **ARCHITECTURAL SPECIFICATIONS**

1.1 **DIVISION 05 - METALS**

.1 **Section 05 52 00 - METAL FABRICATIONS**

.1 Add the following new paragraph:

.1 "3.3 GUARDRAILS AND HANDRAILS

.1 Construct welded steel railings to meet the requirements of the Ontario Building Code. Loading for Guardrails shall be as per OBC Section 4.1.5.15, Loads on Guards. Loading for Handrails shall conform to OBC Section 3.4.6.4.(9).

.2 All handrails must conform to handicapped access requirements, with horizontal extensions at ends and return to wall. The ends of all handrails must be closed.

.3 Fabricate from hollow or solid steel sections and flat bar stock as indicated, for pickets and brackets.

.4 Fabricate all tubular handrails from 38mm diameter stainless steel pipe.

.5 Top rail to be 62mm x 38mm H.S.S. and vertical posts of guardrails to be 62mm x 62mm H.S.S. with 3.2mm wall thickness. Provide vertical posts at 900mm maximum o.c. Individually weld all posts and pickets at top and bottom.

.6 Mount handrails on brackets as detailed. Install brackets within 150mm of end of rail, spaced equally to maximum 1200mm o.c. Securely anchor to structure. Posts and handrails to be straight, true, free from kinks and waves. Slope to follow stair.

.7 Weld pickets and posts to stringers on site; grind all welds smooth (3mm maximum arris) all exposed welds to be continuous bead."

1.2 **Division 07 - THERMAL AND MOISTURE PROTECTION**

.1 **Section 07 52 00 - MODIFIED BITUMINOUS MEMBRANE ROOFING**

.1 Add new Specifications Section 07 52 00 - MODIFIED BITUMINOUS MEMBRANE ROOFING attached to this Addendum.

.2 **Section 07 62 00 - SHEET METAL FLASHING AND TRIM**

.1 Add new Specifications Section 07 62 00 - SHEET METAL FLASHING AND TRIM attached to this Addendum.

1.3 **DIVISION 09 - FINISHES**

.1 **Section 09 30 00 - CERAMIC TILING**

.1 Replace Specification Section 09 30 00 - CERAMIC TILING with version attached to this Addendum.

2. **ARCHITECTURAL DRAWINGS**

2.1 **Drawing A1.0 SITE PLAN, CANOPY PLAN AND ELEVATION**

.1 Revise 2/A1.0 as per ADD-1r1.
.2 Revise guardrail on 6/A1.0 as per ADD-3r2.
.3 Replace previously issued A1.1 with revised as attached to show revised and added canopy details.
.4 Revise guardrail and handrail as per reissued 1/A1.1 and ADD-25.

2.2 Drawing A2.2 SECOND FLOOR DEMOLITION AND RENOVATION PLANS

.1 Revise Reference Renovation Note 106 to read:
"INSTALL NEW ***9MM*** WOOD UNDERLAYMENT BOARD OVER EXISTING SUBFLOOR IN ALL CORRIDORS AND ROOMS RECEIVING NEW LVT FLOORING."
.2 Add Reference Renovation Note 107 to read:
"INSTALL NEW 6MM WOOD UNDERLAYMENT BOARD OVER EXISTING SUBFLOOR IN ALL ROOMS RECEIVING NEW CAR FLOORING."
.3 Revise 2/A2.2 Second Floor Renovation Plan to show Reference Renovation Note 107 in rooms/corridor receiving carpet as per ADD-12r1.
.4 Revise wall at kitchenette in Meeting Room 2095 as per ADD-12r1.

2.3 **Drawing A5.0 WASHROOM DETAILS, INTERIOR DETAILS, MILLWORK DETAILS**

.1 Revise Meeting Room kitchenette as per ADD-22.
.2 Revise detail 13/A5.0 as per ADD-23.
.3 Revise detail 13A/A5.0 as per ADD-24.

Attach.

- Section 07 52 00 - MODIFIED BITUMINOUS MEMBRANE ROOFING
- Section 07 62 00 - SHEET METAL FLASHING AND TRIM
- Section 09 30 00 - CERAMIC TILING

- A1.1, ADD-1r1, ADD-3r1 ADD-12r1, ADD22-25

END OF ARCHITECTURAL ADDENDUM NO. 2

PART 1 - GENERAL

1.1 SECTION INCLUDES

.1 Provide 2-Ply Mod Bit Roofing where indicated on drawings, including air/vapour barrier, insulation, membrane, membrane flashing and metal counter flashing.

.2 Mod bit roofing system consists of a 2-ply modified bitumen membrane with modified bitumen flashings over mineral wool and polyisocyanurate foam insulation, all in conformance to class A roofing system and CAN/ULC S126. Provide uninsulated mod bit roofing at canopies not indicated to be insulated.

.3 The roofing shall be the approved system of one manufacturer, who shall provide the manufacturer's warranty specified herein. Manufacturer shall be responsible for confirming wind uplift resistence.

1.2 RELATED WORK SPECIFIED ELSEWHERE

.1	Steel Deck	Section 05 31 00
.2	Metal Fabrications	Section 05 52 00
.3	Wood nailing strips, curbs	Section 06 10 00
.4	Sheet Metal Flashing and Trim	Section 07 62 00
.5	Rooftop mechanical equipment	

1.3 REFERENCES

.1 American Society for Testing and Materials (ASTM)
- .1 ASTM C 1177M — Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing.

.2 Canadian General Standards Board (CGSB).
- .1 CGSB 37-GP-9Ma — Primer, Asphalt, Unfilled, for Asphalt Roofing, Dampproofing and Waterproofing
- .2 CGSB 37-GP-19M — Cement, Plastic, Cutback Tar.
- .3 CGSB 37-GP-56M — Membrane, Modified, Bituminous, Prefabricated, and Reinforced for Roofing
- .4 CAN/CGSB-37.29 — Rubber- Asphalt Sealing Compound.
- .5 CAN/CGSB - 51.33 — Vapour Barrier Sheet, Excluding Polyethylene, for Use in Building Construction.

.3 Canadian Roofing Contractor's Association (CRCA)
- .1 CRCA Roofing Specifications Manual.

.4 Canadian Standards Association (CSA)
- .1 CAN/CSA-A123.21 — Standard test method for the dynamic wind uplift resistance of membrane-roofing systems
- .2 CSA A123.4 — Asphalt for Constructing Built-Up Roof Coverings and Waterproofing Systems
- .3 CSA A231.2 — Precast Concrete Pavers
- .4 CSA O80.1-M — Specification of Treated Wood

.5 Underwriters Laboratories of Canada (ULC)
- .1 CAN/ULC-S701 — Thermal Insulation, Polystyrene, Boards and Pipe Covering

.2	CAN/ULC -S702.2	Standard for Mineral Fibre Thermal Insulation for Buildings
.3	CAN/ULC-S704	Standard for Thermal Insulation, Polyurethane and Polyisocyanurate Boards, Faced
.6	FM Approval Standard 4470	Single-Ply, Polymer-Modified Bitumen Sheet, Built-Up Roof (BUR) and Liquid Applied Roof Assemblies for use in Class 1 and Noncombustible Roof Deck Construction

1.4 **SUBMITTALS**

.1 Submit manufacturer's data sheets for roofing system to be installed, including a list of all products to be incorporated.

.2 Indicate in shop drawings flashings, control joints, tapered insulation details, roof drains and all required roofing materials.

.3 Provide layout for tapered insulation. List materials used.

.4 Do not order materials until drawings have been reviewed and accepted by the Consultant. Submittals to be in accordance with Section 01 33 23 of these specifications.

.5 Submit a draft copy of the roofing material manufacturer's warranty for review and acceptance by the Owner, prior to ordering roofing materials. Warranty shall be accompanied by a letter from the manufacturer confirming the roofing subcontractor as an approved installer of their products.

1.5 **QUALITY ASSURANCE**

.1 Work of this Section shall be performed by a member, in good standing, of the OIRCA.

.2 Roofing Subcontractor shall be approved by the roofing materials manufacturer as an installer of their products.

.3 Carry out Work in accordance with recommendations of the Ontario Industrial Roofing Contractors Association (OIRCA) and the Canadian Roofing Contractors Association (CRCA). Use only competent mechanics.

.4 Install all products in conformance with manufacturer's printed instructions.

1.6 **PRODUCT HANDLING**

.1 Store materials on raised platforms in approved manner at Site preceding application, and protect from inclement weather at all times. Roofing felts which become wet will be rejected.

.2 Store roofing felts and insulation in heated atmosphere 21°C for 24 hours before application in cold weather. Tarp all roofing felts.

.3 Store sealants at minimum + 5°C.

1.7 **PROTECTION**

.1 Protect Work of other trades from roofing procedural damage. Cover vertical surfaces with tarpaulins at hoisting locations.

.2 When using open flame in connection with this Work, maintain at all times 3-9 kg dry chemical fire extinguishers fully charged and in operable condition at location where open flames are in use.

.3 Locate kettles at grade level and minimum 2000mm from face of building.

.4 Protect completed portions of roofing from damage due to traffic and materials handling until completion of Work.

1.8 **ENVIRONMENTAL CONDITIONS**

.1 Do not apply roofing materials during rain, fog, snow, or other damp or otherwise unsuitable surfaces.

1.9 **WARRANTY**

.1 Provide both a **five (5) year** Contractor's warranty and a **ten (10) year** Manufacturer's warranty, as specified below.

.2 Furnish a **five (5) year** "Workmanship, Labour and Material" warranty on the complete roofing system, including all materials and labour against leakage, subsurface moisture, degradation of materials and insulation thermal value, failure to stay in place, undue expansion, deformation, delamination, buckles, blisters, ridges and splitting seams.

.3 Contractor's warranty shall include the OIRCA standard warranty for the first two years, plus an additional three years.

.4 Provide a single source manufacturer's total system warranty for all work of this section against defects in materials and workmanship for a period of **ten (10) years**. The written warranty shall be in a form approved by the Owner. The warranty shall cover all components of the roof system; including, but not limited to, the vapour retarder, roof insulation, roof membrane, flood coat/gravel and base flashings. The manufacturer shall supply all labour, materials, tools and equipment to repair and/or replace any material and/or workmanship defects, at no additional cost, for a period of **ten (10) years**. The warranty shall not be pro-rated over the ten (10) year period.

.5 The warranty period shall commence at the date of issue of the Certificate of Substantial Performance.

.6 Defective work shall include, but not be limited to: leaking, wind uplift, delamination of roofing materials, reduction of thermal value due to moisture in insulation, crazing and ridging. Dislodged surfacing and degradation of colour that detracts from its performance or visual appearance will also be judged as defective work and will require correction under the Contract.

.7 All defective workmanship and material evident during the period of the Warranty must be repaired to restore the work to good condition and to the original intent of the Drawings and Specifications.

.8 Warranty must cover repairs to other work damaged resulting from defects in the roofing system and from any work to repair said defects.

.9 Within 24 hours of the Owners notification, repair any leaks into the building or roof assembly.

.10 The warranty shall include annual inspections by the roofing trade and manufacturer's agent. Such inspections shall be scheduled with the Owner's maintenance department.

1.10 **INSPECTION AND TESTING**

.1 An independent inspection and testing agency nominated by the Consultant will be appointed to inspect and test roofing and sheet metal work.

.2 Arrange site meeting with Roofing Inspector and Consultant, maximum two weeks prior to commencement of Work on Site. Obtain Inspector's instructions re procedures to be followed.

.3 Co-operate with the Inspector and afford all facilities necessary to permit full inspection of the Work and testing of materials prior to their use. Act immediately on instructions given by the inspector. Where the inspector deems a change is required which will involve a change in cost, obtain Consultants written approval BEFORE proceeding.

.4 Make cut-outs for testing purposes when required and make good roofing at no extra cost to the Owner.

.5 Pay Inspection and Testing Agency from cash allowance in Division 01.

PART 2 - MATERIALS

2.1 **MANUFACTURERS**

.1 Roofing system shall incorporate the products produced, or approved for use, by one manufacturer, who shall warrant the entire system.

.2 Approved roofing manufacturers are Johns Manville, IKO, Firestone, Soprema, GAF, and Henry Co.

2.2 **MATERIALS**

.1 Roofing Asphalts:
- .1 to CSA A123.4, Type II or III, Rubberized asphalt
- .2 IKO Type II, III, and Easy Melt 200; 890-12 by Henry; Soprasphalte MV by Soprema; or equal by roofing materials manufacturer.
- .3 Asphalts must be acceptable to the roofing material manufacturer.
- .4 Provide a label on each container, or certification with each load, indicating flash point (FP), softening point (SP), and equiviscous temperature (EVT).

.2 Base sheets :
- .1 to CGSB 37-GP-56M, Styrene-Butadiene-Styrene (SBS) elastomeric polymer, prefabricated sheet, non woven, polyester reinforcement, weighing 180 g/m ^{2}.
- .2 Dynalastic 180 S by Johns Manville, Modiflex MP-180-SS-Base by IKO, Elastophene 180 Sanded by Soprema, modified Plus NP180s/s by Henry, or SBS Poly Base by Firestone.
- .3 If using torch-on cap sheet, provide the base sheet with thermofusible poly upper surface and sanded lower surface; Modified Plus NP180p/s by Henry

.3 Cap Sheet:
- .1 to CGSB 37-GP-56M, Styrene-Butadiene-Styrene (SBS) elastomeric polymer, prefabricated sheet, glass, polyester reinforcement, fire retardant, weighing 180 g/m^2, white ceramic granular surface.
  - .1 Dynalastic 180 FR by Johns Manville, modifiedPlus NP180MUW by Henry, or SBS Glass FR by Firestone for mopped application.
  - .2 or heat welded cap sheet Dynaweld Cap 180 FR CR G, Prevent ArmourCool Granular TP Cap by IKO, modifiedPlus NP180TUF by Henry, or SBS Glass FR Torch by Firestone .

.4 Asphalt Primer:
- .1 Conforming to CGSB 37-GP-9A.
- .2 IKO Mod-Bit Primer, 910-01 by Henry, or equal by roofing materials manufacturer.

.5 Elastic Flashing: Situra flexible reinforced flashing at expansion joints - red line for mopped areas, Flamline for torch.

.6 Cant Strips: Perlite cants to CAN/CSA-A247, 75mm.

.7 Sealant: One part polysulphide base, conforming to CAN/CGSB- 19.13. Dymonic by Tremco.

.8 Vapour Barrier: Self-adhering vapour retardant membrane; DynaGrip Base P/SA by Johns Manville, IKO MVP, Vapor-Bloc by Henry, or V-Force VB membrane by Firestone.

.9 Primer for Vapour Barrier:
- .1 S.A.M. Adhesive surface prep by IKO , for use on concrete or metal deck, and block walls, or
- .2 Johns Manville primers:
  - .1 Steel Deck Primer JM Metal Primer
  - .2 Concrete primer: JM Concrete Primer (use also on block walls).
- .3 SA-Solvent Based Primer by Firestone.

.10 Modified Bituminous Flashing System:

- .1 Base Sheet, 1 ply of 180 g/m ^{2} polyester reinforced, SBS modified bitumen base sheet
  - .1 DynaLastic 180S by Johns Manville, Modiflex MP-180-SS-Base by IKO, Elastophene 180 Sanded by Soprema, or SBS Poly Base by Firestone.

.2 Cap sheet, 1 ply of 180 g/m ^{2}, flexible polyester/glass scrim reinforced, fire retardant, white or light grey granular surfaced, SBS modified bitumen cap sheet.
.1 DynaLastic 180 FR Cap by Johns Manville, Modiflex MP-180-Cap by IKO, Sopralene 180 GR by Soprema, or SBS Cap by Firestone.

.11 Vent Pipe and Mechanical Flashings:

.1 SJ-39 aluminum pre-insulated stack jacks, 483mm high, complete with EPDM triple pressure grommet seal and EPDM base seal, by Thaler Metal Industries Inc.

.2 Gas pipe flashing: Thaler MEF-9-18: 457mm high

.3 Pipe supports:
.1 Mechanical and electrical roof supports by Thaler Metal Industries Inc.; 330mm height above roof; fastening type as required for specific application.
.2 Model MERS-600 for single uninsulated pipe.
.3 Model MERS-605A for two pipes, and
.4 Model MERS-630 for single, large diameter insulated pipe.

.4 Flexible conduit flashing: Thaler MEF series for single and miltiple conduite.

.5 Rigid conduit flashing: Thaler MEF-AE1-18; 457mm high.

.12 Roof Mastic: MBR flashing cement by Johns Manville.

PART 3 - EXECUTION

3.1 PREPARATION

.1 Examine materials over which Work of this Section are applied and ensure that roof deck is free of snow, ice, loose or adhering materials which would impair this Work. Substrate shall be clean, dry and suitable for roofing application. Dry with torches if necessary.

.2 Coordinate with forces installing exterior grade plywood over steel deck at canopies.

3.2 WORKMANSHIP

.1 Employ experienced and qualified workmen and competent supervision to ensure satisfactory installation in accordance with specified requirements.

.2 Maintain roofing equipment in good working order.

.3 Do not overheat bitumen. Maximum temperature for rubberized asphalt is 243°C. Do not apply to the roof under 205°C. Once asphalt temperatures exceed 246°C., the material will be considered unsatisfactory and must be removed from the site.

.4 Construct roof in conformity to Class A roof assembly as approved by U.L.C.

.5 Keep an accurate thermometer suspended in the heating kettle while the work is in progress and provide a similar thermometer to test bitumen temperature at point of application.

.6 Locate bitumen kettles and tankers to avoid smoke discolouration of existing and adjacent buildings.

.7 Handle and store materials carefully to prevent damage. Keep manufacturer's labels and seals intact. Store bitumen containers in an upright position and store roofing rolls on end to prevent flattening. Protect materials from moisture at all times. When temperature is below 5°C, store roofing felts in a warm atmosphere for 48 hours before using.

.8 Commence roofing as soon as structure is ready. Do not apply roofing materials during inclement weather.

.9 All plies of roofing felt except when otherwise specified shall be "mopped solid" and squeezed into bitumen. Apply felts in straight lines, free from air pockets, wrinkles, fishmouths, open laps or tears.

.10 Do not leave installed insulation or roofing felts unprotected. Coat with bitumen and ensure that edges are sealed against penetration of moisture.

3.3 **ROOFING - APPLICATION**

.1 Complete all roofing work in conformance with OIRCA and CRCA publications and recommendations, and in accordance with these specifications.

.2 Roofing Membrane

.1 Built up mod bit roofing membrane shall consist of 1 ply of base sheet and 1 ply of cap sheet.

.2 Starting at the low point in the roof or at the drain, unroll layer of base ply, align and re-roll. Install base ply into hot asphalt or kettle modified asphalt at the nominal uniform rate of 25 lbs. per square (1.22 kg/m²) over the entire surface. Install each ply so that is shall be firmly and uniformly set, without voids, wrinkles, blisters or fishmouths.

.3 Starting at low point and offsetting joints in the cap sheet a minimum of one foot from those in the base sheet, unroll layer of granular cap ply, align and re-roll. Ensure that a lap in the cap ply does not align with the drain. Install cap ply into kettle modified asphalt at the nominal uniform rate of 25 lbs. per square (1.22 kg/m²) over the entire surface. Install each ply so that it shall be firmly and uniformly set, without voids, wrinkles, blisters of fishmouths. Ensure that granules are broadcast into the overpour at the side and end lap areas as the membrane is being installed.

.4 Side laps are to be a minimum of 75mm and end laps are to be a minimum of 150mm.

.5 Apply all plies smooth, free from air pockets, wrinkles, fishmouths, lap joints, or tears.

.6 Extend membrane felts to the top cant strips.

.7 Install one ply of base sheet and bitumen glaze coat for cutoff at end of day's operation. Remove cutoff before resuming roofing.

.8 At sloped roof areas, install roof membrane parallel to the direction of the slope.

3.4 **CANT INSTALLATION**

.1 Provide perlite cants at junction of roof and all vertical surfaces and other locations where wood cants are not provided.

.2 Apply a continuous and uniform mopping of rubberized asphalt to sufficiently cover the area being taken up by the cant, and while the asphalt is hot embed the cant strips into the asphalt.

.3 Cut and fit around corners, angles, etc., mitre joints and seal with asphalt.

3.5 **TWO PLY MODIFIED BITUMINOUS FLASHINGS**

.1 Apply modified bituminous base sheet with hot applied rubberized adhesive in accordance with CRCA Requirements for a 2 ply modified bituminous flashing system. Terminate base sheet at highest possible points and at parapets extend and mop-in over top ply roof felt.

.2 Cap sheet flashing shall be mopped on.

.3 Cap sheet flashing shall be applied to extend down outside face of parapet, across top of parapet, down interior vertical surface and on to flat roof a distance of 150mm.

.4 Cap sheet shall be mopped on in accordance with recommendations of the membrane Manufacturer.

.5 Care must be taken to avoid asphalt seepage greater than 5mm. At seams. Ensure that membrane is properly bonded, without air pockets, wrinkles, fishmouths or tears.

.6 Cap sheet shall have side laps of 75mm. And end laps 150mm. Surface granules on end laps shall be embedded prior to installation of following sheet.

.7 To prevent possible voids at end/side laps, cut the corner piece off the selvage edge that will be covered by the next roll. The cut piece shall be the width of the lap (75mm) and extended along the selvage edge 150mm.

.8 After installation of the cap sheet, check all lap seams. Adhere and reseal all seams found to be poorly mopped and bonded.

.9 Face nail total flashing system to outside face of parapet wood blocking with galvanized roofing nails.

.10 At low roof/exterior wall interface where wall flashings extend down over mod. bit. flashings, lightly trowel a continuous 75mm width of cap sheet and lap and bond wall flashing onto mod bit. flashing. Refer to details as shown on Drawings.

.11 Strip-in flanges of roof accessories, 'stack jacks' and other flashing flanges with a single ply of base sheet embedded in continuous mopping of asphalt of the same type used for the roof membrane. Set flanges into a bed of plastic cement. Similarly, gravelstop flanges must be primed and secured at 300mm o.c.

3.6 **ELASTIC FLASHINGS**

.1 At movement joints, mop in flexible flashing except where indicated otherwise.

.2 At vertical surfaces, fasten top of flashing as detailed.

.3 Carry elastic flashing down over cant and out 150mm onto membrane before top pour. Adhere to membrane. Seal all joints and edges. Cover lower, flat part of elastic flashing with top pours of bitumen and aggregate.

.4 Do not stretch elastic flashing during installation. Provide a minimum overlap of 100mm when forming laps and flashing corners.

3.7 **ROOF VENT FLASHINGS AND ACCESSORIES**

.1 Coordinate with mechanical and electrical trades for specific locations of mechanical and electrical flashings.

.2 Install roof accessories, stack jacks , split flashings, and other flashing flanges in accordance with manufacturer's recommendations, roofing manufacturer's recommendations and project drawings.

.3 Torch membrane until bitumen is fluid and set flange into fluid.

.4 Apply base flashing into kettle modified asphalt at the rate of 25 lbs./square (1.22 kg/m²) ensuring a full bond. Extend onto roof a minimum of 150mm.

.5 Apply cap sheet flashing into kettle modified asphalt at the rate of 1.22 kg/m² (25 lbs./100 sq.ft.) ensuring a full bond. Extend a minimum of 230mm onto roof surface. Properly secure flashing to their support, without sags, blisters, fishmouths or wrinkles with termination and fasteners as indicated on drawings.

.6 Install flashings in accordance with guide specifications listed in the manufacturer's installation manual and project drawings.

.7 Do not melt EPDM Base Seal and soldered joints.

.8 Install roofing accessories in accordance with manufacturer's printed instructions and as indicated on Drawings.

.9 Mop in and seal flanges of items penetrating membrane with a base and cap ply of modified bitumen membrane. Install clamping ring on drains.

.10 Coordinate installation of roof drains and related flashings.

END OF SECTION

PART 1 - GENERAL

1.1 RELATED WORK SPECIFIED ELSEWHERE

.1	Flashing Inserts	Section 03 30 00
.2	Modified Bituminous Membrane Roofing	Section 07 52 00
.3	Joint Sealants	Section 07 92 00

1.2 REFERENCES

.1 ASTM International

.1	ASTM A653M	Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
.2	ASTM A924M	Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process
.3	ASTM D41	Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing
.4	ASTM D2092	Standard Guide for Preparation of Zinc-Coated (Galvanized) Steel Surfaces for Painting

.2 Canadian Sheed Steel Building Institute (CSSBI)

.1	CSSBI S8	Quality and Performance Specification for Prefinished Sheet Steel Used for Building Products (Canadian Sheet Steel Building Institute)
.2	CSSBI 20M	Standard for Sheet Steel Cladding for Architectural, Industrial and Commercial Building Applications
.3	CSSBI SSF No. 6	Metallic Coated Sheet Steel Products for Structural Building Products

.3 Sheet Metal & Air Conditioning Contractors's National Association

.1 SMACNA Architectural Sheet Metal Manual, 7th Edition

1.3 QUALITY ASSURANCE

.1 Work of this Section shall be executed by same trade specialists installing membrane roofing, in accordance with practices and details of Sheet Metal and Air Conditioning Contractors National Association (SMACNA) Architectural Sheet Metal Manual.

1.4 SUBMITTALS

.1 Submit typical 300 mm long sample of flashing indicating design method of locking and method of anchoring and corner section fabricated from materials specified.

1.5 WARRANTY

.1 Contractor hereby Warrants that Work performed under this Section shall remain free against leakage, joint spalling and similar defects in accordance with General Conditions, but for a period of **five (5) years**.

1.6 **INSPECTION AND TESTING**

.1 Inspection and testing of this Work is included in inspection and testing of roofing and roof insulation.

PART 2 - PRODUCTS

2.1 **MATERIALS**

.1 Metal Flashing: Minimum 26 ga. prefinished sheet steel supplied in flat sheet stock
- .1 PMF 1: Metallic Series, 4-coat system, by Baycoat or Valspar, colour QC 2624 “Bright Silver”
  - .1 locations: canopy, wood siding, and elsewhere as indicated on drawings.

.2 Nails: Chromium/Nickel, No.12 x 25mm flat headed, annular threaded stainless steel.

.3 Cleats, Starter Strips and Back-up Plates:
- .1 Same metal and thickness as metal flashing;
- .2 cleats minimum 38mm wide and interlocked with metal flashing; starter strips, continuous.
- .3 Back-up plates minimum 300mm wide where adjacent lengths of cap flashing meet, fabricated of same material thickness and finish as cap flashing.

.4 Screws, Bolts and Expansion Shields:
- .1 Non-ferrous metal compatible with adjacent surfaces.
- .2 Exposed fastenings shall be same materials as metal surfaces through which they penetrate.
- .3 Use cadmium plated screws with round heads suitable for soldering for galvanized Work.

.5 Solder: ASTM B32-70, 50% block tin and 50% pig lead.

.6 Flux: Commercial hydrochloric acid cut with zinc, or 10%-20% solution of orthophosphoric acid in water, for use with galvanized Work.

.7 Sealants: As specified in Section 07 92 00.

.8 Asphaltic Primer: CGSB 37-GP-9M and ASTM D41; Henry/Bakor "Primer 910-01", quick drying asphaltic base paint.

PART 3 - EXECUTION

3.1 **FABRICATION**

.1 Where possible, shop fabricate flashing components in accordance with applicable requirements of SMACNA Architectural Sheet Metal Manual.

.2 Carry out fabrication in clean shops, located away from areas where carbon steel is torch cut, ground, or cut with abrasive wheels to ensure that carbon steel dust will not be embedded in

prefinished surfaces. Clean tools and dies which have been used on carbon steel prior to fabrication to prevent contamination of surface with carbon steel dust.

.3 Form sheet metal on bending brake. Perform shaping, trimming and hand seaming on bench, where practicable, using proper sheet metal working tools.

.4 Form sections square, true and accurate to size. Flashings shall be free from distortion, waves, twists, buckles or other defects detrimental to appearance and performance.

.5 Make allowances for thermal movement when forming, installing, interlocking and soldering sheet metal Work to avoid buckling, fullness of metal straining of joints or seams. Maximum length of flashing pieces; 2400mm. Double back exposed edges at least 12mm for appearance and stiffness.

.6 Fabricate flashings, copings, closures, plastic boxes, pipe sleeves and flashings for roof mounted equipment to details shown, unless otherwise indicated.

.7 Wipe and wash clean, soldered joints immediately after joint is soldered to remove acid.

.8 Where soldered joints are absolutely necessary and where approved for use in prepainted metal, clean paint off both surfaces before soldering for minimum area necessary.

3.2 **INSTALLATION**

.1 Carry out Work in accordance with industry standard sheet metal practice with joints lapped, locked, cleated with "S" cleats and caulked or soldered as required. Hem exposed edges 12mm. Type of joints used shall be adequate for various conditions, subject to approval.

.2 Fabricate exposed fastening, where used, in such a manner as to prevent water penetration at point of fastening.

.3 Provide starter strips where indicated or required to present true, non-waving, leading edge. Anchor to back-up to provide rigid, secure installation.

.4 Make end joints where adjacent lengths of metal flashing meet using 300mm. long back-up flashing secured in place before installing flashing. Apply beads of caulking compound on face of back-up plate to seal ends of metal flashing. Leave 12mm wide space between end of adjacent lengths of metal flashings. Fabricate back-up of same material and finish as metal flashing with which it is being used. Make back-up plate exact profile of flashing allowing for thickness of flashing joints.

.5 Form metal fascia with inner edge extended over fascia top and down cant to meet roofing aggregate. Nail with roofing nails and neoprene washers at 300mm C. Avoid placing nails in face of fascia, through membrane or flashing.

.6 Interlock counter flashing pieces with prepainted metal base flashing and fold locking seam into position ensuring complete sealing. Continue counter flashing down to hemmed and sprung position at base of cant and junction of aggregate.

.7 Provide underlay of resin sized paper under sheet metal installed over masonry, concrete or wood. Lay underlay dry as sheet metal Work is installed. Secure in place and lap joints 100mm.

.8 At canopies, cap flashings are to be prefinished aluminum; refer to Section 07 4213. Coordinate with forces installing prefinished aluminum fascia.

.9 Imperfections in sheet metal Work such as holes, dents, creases, or oil-canning is cause for rejection.

.10 Repair damaged sheet metal Work, wash entire installation down, and leave in neat condition.

.11 Provide all flashings required for proper execution and completion of the Work in acceptable manner including metal flashing around mechanical and other equipment occurring on roof.

END OF SECTION

PART 1 - GENERAL

1.1 WORK INCLUDED

.1 Substrate preparation
.2 Grouting control joints in tiling substrate
.3 Waterproofing membrane Crack-Isolation membrane system (CIM)
.4 Cement mortar-bed, screed and levelling coats
.5 Thin-Set Mortar Bond Coat
.6 Ceramic Wall Tiling, including base, trims and fittings
.7 Porcelain Floor and Wall Tiling, including base, trims and fittings
.8 Installation Systems, adhesives, mortars and grouts
.9 Sealing tiling movement joints and accessory contours
.10 Sealing penetrations through walls, partitions, countertops and floors
.11 All tiling work indicated on drawings and schedules.

1.2 RELATED WORK SPECIFIED ELSEWHERE

.1	Rough Carpentry	Section 06 10 00
.2	Gypsum Board	Section 09 29 00
.3	Toilet Accessories (non-ceramic)	Section 10 28 13

1.3 REFERENCES

.1 International Organization for Standardization
- .1 ISO 13006 Ceramic tiles- Definitions, Classification, Characteristics and Marking
- .2 ISO 23599 Assistive Products for Blind and Vision-Impaired Persons - Tactile Walking Surface Indicators

.2 American National Standards Institute
- .1 ANSI A108/A118/A136.1 American National Specifications for the Installation of Ceramic Tile (Compilation)
- .2 ANSI A137.1 Specifications for Ceramic Tile

.3 ASTM International
- .1 ASTM C 50 Standard Specification for Portland Cement.
- .2 ASTM C 847 Standard Specification for Metal Lath.

.4 Canadian General Standards Board
- .1 CAN/CGSB-75.1M Tile, Ceramic
- .2 CGSB 71-GP-22M Adhesive, Organic, for Installation of Ceramic Wall Tile
- .3 CGSB 71-GP-30M Adhesive, Epoxy and Modified Mortar Systems, for Installation of Quarry Tiles

.5 Canadian Standards Association
- .1 CAN/CSA A-3000 Cementitious Materials Compendium

.6 Terrazzo, Tile and Marble Association of Canada (TTMAC):
.1 Specification Guide 09 30 00/ Tile Installation Manual 2012-2014
.2 TTMAC Hard Surface Maintenance Guide

1.4 **SUBMITTALS**

.1 Submit required submittals in accordance with Section 01 33 00 Submittal Procedures

.2 Submit manufacturer's product data sheets on each product to be used, including:
.1 Storage and handling instructions
.2 Preparation instructions
.3 Installation instructions and recommendations

.3 Submit 4 random samples of each colour of ceramic tile to be used on this project; clearly identify with manufacturer's name, colour number and project number. Do not proceed with work until samples have been approved by Consultant.

.4 Submit pattern of control and expansion joints to Consultant, for approval.

.5 Edging and Finishing profiles: Submit sample of each type and colour.

.6 Closeout Submittals:

.1 Submit three (3) copies of TTMAC Hard Surface Maintenance Guide, for inclusion in maintenance manuals.

.2 Provide document listing specific warnings of any maintenance products or practises that could possible damage the finished work.

.7 Spare Materials: Provide 1 box of each floor tile and 1.0 x 1.0m of wall tile. Tiles shall be boxed, labelled, and stored where directed by the Owner.

1.5 **PROTECTION**

.1 Protect Work of this Section against damage by other trades for minimum 72 hours after application by prohibiting passage of traffic over tile.

1.6 **QUALIFICATIONS**

.1 Installer to have membership in good standing with the TTMAC; must have 10 years experience in the Work of this Section. Employ skilled mechanics trained and experienced in tile work. If requested, submit references detailing experience in at least three projects of similar scope.

1.7 **DELIVERY, STORAGE, AND HANDLING**

.1 Deliver materials in manufacturer's unopened containers, fully identified with name, brand, type, and grade.

.2 Protect materials from contamination, dampness, freezing, or overheating in accordance with manufacturer's instructions.

.3 Broken, cracked, chipped, stained, or damaged tile will be rejected, whether built-in or not.

.4 Protect mortar and grout materials against moisture, soiling, or staining.

.5 Handle tile that has temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

1.8 **PROJECT CONDITIONS**

.1 Comply with manufacturer's requirements for environmental conditions before, during, and after installation.

.2 Do not begin installation until building is completely enclosed and HVAC system is operating and maintaining temperature and humidity conditions consistent with "after occupancy" conditions for a minimum of 2 weeks.

.3 Maintain continuous and uniform building temperatures of not less than 12EC or more than 38EC during installation and for at least 7 days after completion of installation.

.4 Ventilate spaces receiving tile in accordance with material manufacturer's' instructions.

PART 2 - PRODUCTS

2.1 **TILE MATERIALS**

.1 Floor Tile:

.1 300 x 600 x 9mm “Basaltina Max” as supplied by Centura. Equivalent tile by Ceragres, Savoia, OSI Hard Surfaces or Olympia will be accepted as equal.

.2 Ceramic Base: Wall base to match floor tile, with bullnose top, 100mm high. Cut tile will <u>not</u> be accepted as wall base.

.3 Ceramic Wall Tile:

.1 108 x 216mm Modern Dimensions Semi-Gloss series wall tile by Dal-Tile Corp., colours from Group 1, 2 or 3.

.4 Each type of ceramic tile must all be from the same production batch to ensure consistent colour and texture quality. Any obvious change in tile quality will result in rejection of all tile of the affected type.

2.2 **INSTALLATION SYSTEM MATERIALS**

.1 Installation system materials and sealers to be the products of one manufacturer, who shall warrant the system against failure.

.2 Thin-set Mortar:
.1 At tile sizes 305 x 305mm and smaller:
.1 single component, polymer-modified premium tile mortar, conforming to ANSI-A118.4 and A118.11, ISO 13077 class C2ES; Ultraflex 3 by Mapei Canada Inc., Laticrete 254 Platinum by Laticrete International Inc., or Ardex X5 by Ardex Engineered Cements.
.2 At tile sizes over 305mm in any dimension:
.1 Non-slump, polymer-modified premium large format tile mortar, conforming to ANSI-A118.4 and A118.11, ISO 13077 class C2TES1P1; Ultraflex LFT by Mapei Canada Inc., Latricrete 4-XLT by Laticrete International Inc., Ardex X77 by Ardex Egineered Cements, or TEC Ultimate Large Tile Mortar by H.B. Fuller Construction Products Inc.

.3 Dry-Set Setting Mortar:
.1 Premium floor and wall dry-set mortar, complying with ANSI A118.1 and ISO 13007 C1; Mapei "Kerabond", or Ardex X77 Microtec.
.2 For installations over young concrete.

.4 Grout:
.1 At ceramic tile: Conforming to ANSI A118.6, polymer-modified grout, “Ultracolor Plus” with “BioBlock”, by Mapei Canada Inc., or 1500 Sanded Grout with Microban, by Laticrete, or Ardex FL. Grout to be fast setting, polymer modified cementitious grout.

.5 Grout Additives: To be supplied by grout supplier, Plasti-joint by Mapei or 1776 Grout Enhancer by Laticrete, or approved equal.

.6 Wall Mastic: Conforming to ANSI-136.1 Type 1. Type 1 mastic by Mapei or Latamastic by Laticrete, or Ardex D 14.

.7 Dry Cure Grout: L & M Dry Cure, by D.A. White & Co. Ltd., or Dry-Mix Blended by Gum-It Products Co. Ltd., or Joint Filler by H.B. Fuller or Flextile Wall Grout. Coloured acid resistant grout. Grout colour to match tile.

.8 Levelling coat: Self-curing liquid latex, Portland cement based floor levelling product by Mapei, Laticrete, or Ardex. Levelling coat must be compatible with mortar being used, and approved by the manufacturer for the specific application.

.9 Sealants: Conform to Section 07 92 00.

2.3 **ACCESSORIES**

.1 Accessory products must be compatible with all other products used in tile installation system. Confirm compatibility with product manufacturers.

.2 ***Decoupling Membrane:***
.1 Schluter®-DITRA 3mm high-density polyethelyne membrane.

~~.3 Waterproofing:~~
~~.1 seamless, load-bearing 2 component, trowel-applied Acrylic/Cement mortar and fiber-mesh reinforcement waterproofing system, to ANSI A118.10~~
~~.2 Laticrete 9235 waterproofing membrane, Mapei "Mapelastic 315", or Ardex 8+9 with Ardex SK Mesh.~~

.4 Junction Strips:
.1 Schluter Systems products, for junctions with other floor coverings.
.2 Finish: Satin finish anodized aluminum
.3 Profiles as follows:
.1 Reno-V: Sloped transition to existing carpet or VCT
.2 Schiene: Tile edge at surface of equal height (ie. LVT or carpet tile)
.3 Reno-ramp: Ramped transition at Tile to existing Concrete landing

.5 Control Joints: Schluter Systems "Dilex-AKWS" movement joint, 6mm wide, with aluminum anchors perforated for bonding into mortar and PVC movement material forming joint surface. Colour to be selected by Consultant, to match grout as closely as possible.

.6 Joint Sealants: Conform to Section 07 92 00.

.7 Sealer: to CAN/CGSB-25-20, as recommended by tile manufacturer.

PART 3 - EXECUTION

3.1 PREPARATION AND EXAMINATION

.1 Coordinate ~~locations and depths of any slab depressions required for~~ the work of this section. If any discrepancies exist between the drawings and the recommended installation methods of the TTMAC, the manufacturers, or these specifications, notify the Consultant immediately, in writing.

.2 Examine surfaces prepared to receive installation of tiling. If conditions are not acceptable, report to Consultant, in writing. Commencement of installation of any part of the Work of this section will be construed as acceptance of existing conditions.

.3 ~~Ensure concrete substrate is fully cured prior to commencing tile installation; wait a minimum of 60 days after placement of concrete floor slab.~~

.4 Substrate must be structurally sound, solid, stable, level, plumb and true to a tolerance in plane of 6 mm in 3000 mm.

.5 Substrate shall be dry, clean and free of dust, oil, grease, paint, tar, wax, curing agent, primer, sealer, form release agent or any deleterious substances which could inhibit adhesion.

.6 Prepare substrate surfaces for adhesive installation in accordance with adhesive manufacturer's instructions.

.7 Ensure compatibility of substrate materials with materials supplied under this Section.

.8 Mechanically sand or scarify the substrate as required to completely remove all paint, adhesives, sealers, loosely bonded topping, loose particles and contaminants. Surface etching or contaminant removal by chemical means is not permitted.

.9 ~~Apply levelling coat to level floors and where required to build up concrete floors slabs to elevations as noted on the Drawings or as directed by the Consultant. Levelling coat to be used to correct substrate irregularities up to 8 mm thickness. Above 8 mm, use mortar bed method to correct irregularities.~~
Install decoupling membrane as per manufacturer's instructions. Refer to Terrazzo, Tile and Marble Association Tile Installation Manual Detail 313F.

.10 Review setting out point with consultant for each location; verify patterns and edge conditions.

.11 Verify that substrate expansion joints have been installed properly.

3.2 **INSTALLATION**

.1 Regard recommendations, installation methods and materials specified and illustrated in Terrazzo, Tile and Marble Association Manual, latest issue, and applicable manufacturer's instructions as minimum acceptable standards. Provide additional work and materials as required to meet the contract specifications and the drawing details.

.2 Lay tile to pattern indicated on drawings. Unless otherwise indicated, arrange pattern so that a full tile or joint is centred on each wall and that no tile less than ½ width is used. Do not interrupt tile pattern through openings.

.3 ~~Install tactile attention indicator in conformance with OBC, as follows:~~
~~.1 at top of the stairs, 610mm band by width of stairs, one tread width away from the edge of the top stair, and~~
~~.2 minimum 300mm band across leading edge of landings at doorway~~ opening onto stairs.

.4 Install floor tile by thin-set method, to TTMAC Detail 313F, detail D.

.5 ~~Where slab depression is required, install floor tile by mortar bed method, to TTMAC detail 310F-A.~~

.6 ***Install tile on gypsum walls by thin-set method, to TTMAC detail 304W.***

.7 Do not cover expansion and control joints in substrate with mortar or tiles.

.8 Apply anti-fracture membrane over substrate before applying thin-set mortar.

.9 Before commencing installation, wipe all dust from back of tile with a damp sponge.

.10 Use tile setting method specified hereinafter. All tile must be fully bedded using suitable notched trowels to ensure full, even bedding.

.11 Apply mortar using notched trowel, of type recommended by mortar manufacturer for specific installation. Do not spread more material than can be covered before it begins to skin over.

.12 Set tiles before skinning occurs. Back butter each tile immediately before laying, to achieve full mortar contact.

.13 Set tiles firmly over wet mortar; shifting tile in the direction of the mortar ridges to ensure full mortar contact. Beat in tile to flatten ridges into a continuous bed. Between 25% and 33% of the tile is to be imbedded in the mortar. Adjust tile for correct alignment.

.14 Make joints of tiles 3mm in width. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Do not use gauges, string or plastic spacers. Make joints watertight, without voids, cracks, excess mortar, or excess grout. Provide minimum 85% mortar coverage.

.15 Using a damp sponge, clean all joints and wipe all mortar smudges from the face of the tile before mortar hardens.

.16 Keep expansion joints free of adhesive or grout.

.17 Place tile snugly around piping, fixtures and other items built in or passing through tile work. Form external angles with round edge tile extending over edge of square edge adjacent tile. Internal angles shall be formed square, carrying 1 flat tile past edge of other.

.18 Drill holes for fixing accessories of other trades.

.19 Finish surfaces flat and level or sloped and graded as required.

.20 Provide stringers, caps, coves, corners, angles and other moulded pieces to suit requirements of job. Ensure that striping and joints are in alignment.

.21 Lay out borders and defined lines, wherever they occur, prior to setting of adjacent tile. Keep inner edges of borders against fields or wall panels straight.

.22 Cut tiles to conform to irregularities in wall lines and vertical planes along outer edges. Smooth cut edges with carborundum block or by other means to provide clean straight edges.

.23 Install wall base free of sharp corners or exposed edges. Form internal angles square and external angles bullnosed.

.24 Wait at least 24 hours after tile installation before grouting. Grout joints, leave to set for 45 minutes, then rub with “scrubby” brush to break surface, make one pass with clean sponge to leave grout joint flush with tile.

.25 Install control joints at a maximum spacing of 4m in both directions in large rooms, one direction in corridors. Conform to shop drawing showing pattern of control and expansion joints, as approved by the Consultant.

.26 Install thresholds and edge trim at junctions with other floor finishes, at doorways, and where indicated on drawings.

.27 Repoint joints after cleaning to eliminate imperfections. Avoid scratching tile surfaces.

.28 Finished tile to be clean and free of tiles which are pitted, chipped, cracked or scratched.

3.3 **CLEANING AND PROTECTION**

.1 Clean tile work progressively as work proceeds. Do not allow mortar to stain absorbent tile. Do not use acids for cleaning.

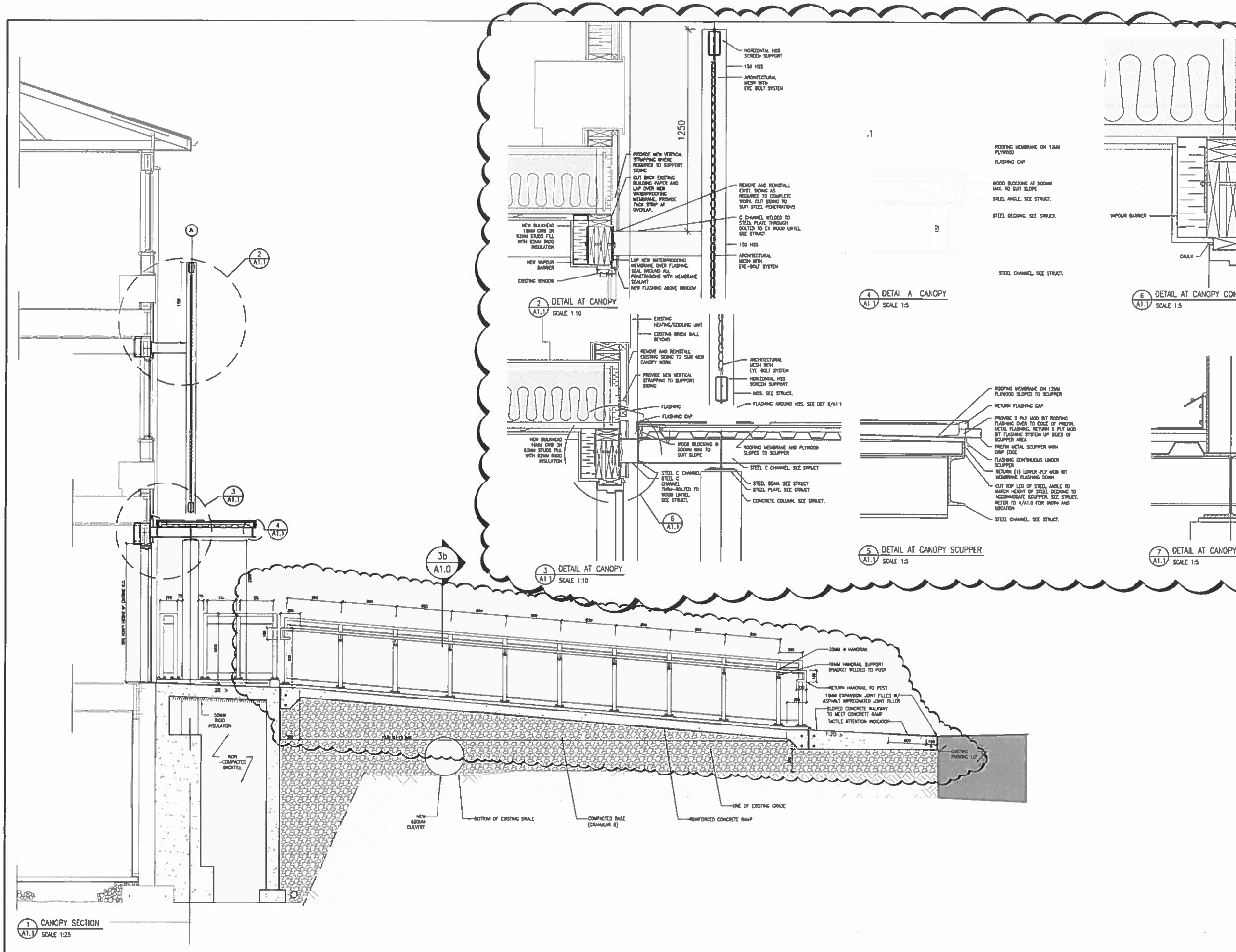
.2 Seal tile in accordance with TTMAC recommendations using TTMAC certified products only.

.3 Conform to Section 07 92 00 for Joint Sealants.

.4 Protect finished areas from traffic until setting materials have cured. Protect grouted areas from foot traffic for72 hours after completion of grouting.

.5 Provide protective covering in traffic areas until building is ready for occupancy.\

END OF SECTION



DATE	REVISIONS
JAN 4, 2019	ISSUED FOR ARCH ADD 2
DEC 12, 2018	ISSUED FOR BUILDING PERMIT
DEC 12, 2018	ISSUED FOR TENDER

SIMCOE VILLAGE
RENOVATIONS PHASE 2 2019
1910 SIMCOE STREET NORTH OSHAWA, ONTARIO

DURHAM COLLEGE
SUCCESS MATTERS

DRAWING
CANOPY SECTION,
DETAILS

ONTARIO ASSOCIATION OF ARCHITECTS
KEN MACSPORRAN
LICENCE
4751

TRUE NORTH | DWG. NORTH

JOB NO.
1910

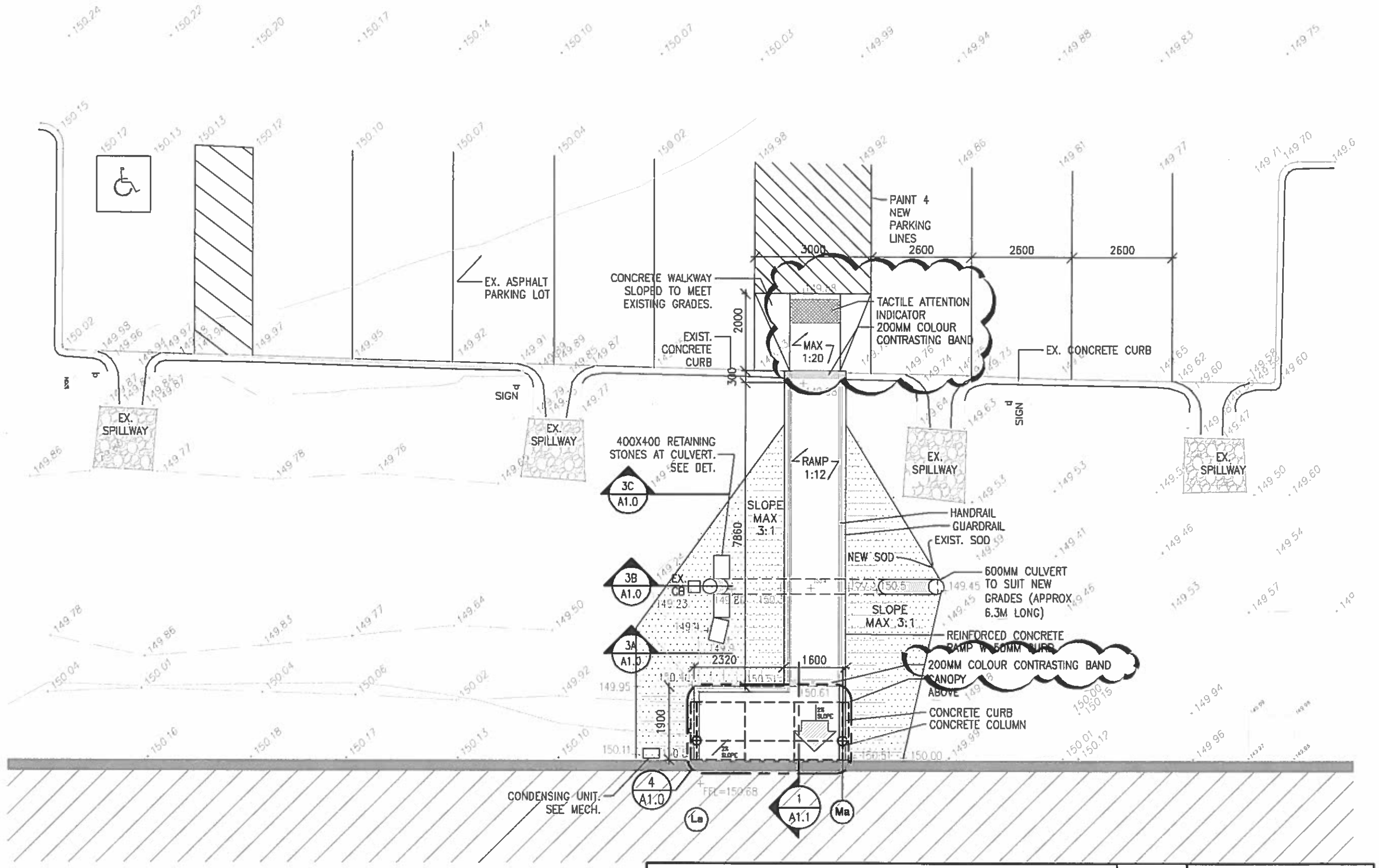
SCALE
AS NOTED

DATE
NOVEMBER 2018

PRINTED
January 4, 2019

DWG. NO.
A1.1

MOFFET & DUNCAN
architects inc.
3052 DUNDAS ST. WEST
ETOBICOKE, ONT. M6A 1B8
TEL: (416) 239-2773
FAX: (416) 239-6729
EMAIL:



SIMCOE VILLAGE RENOVATIONS PHASE 2 – 2019
DURHAM COLLEGE

2/A1.0 SITE PLAN AT NEW ENTRANCE

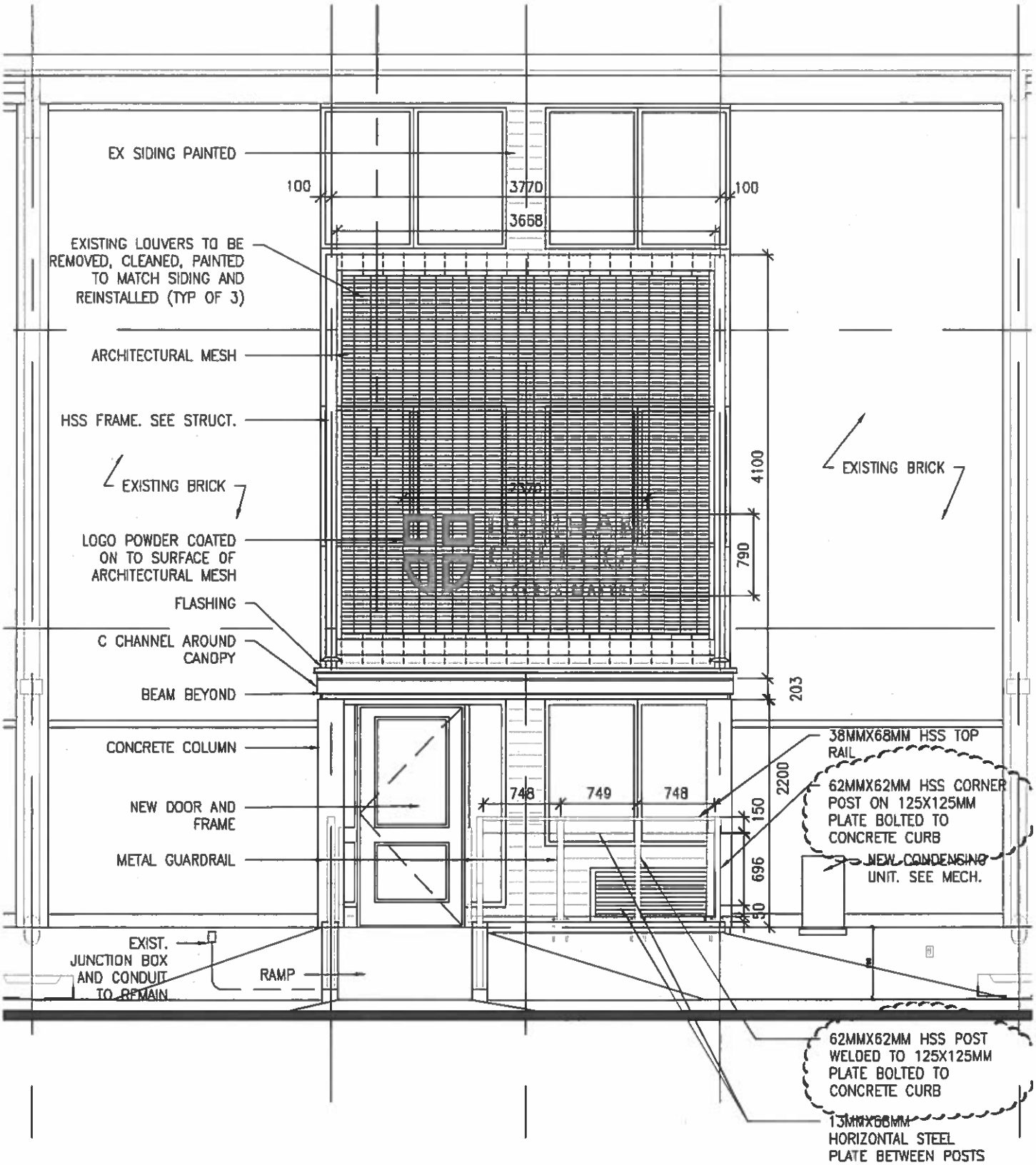
SCALE 1:100

DWG. NO. ADD-1

REV 1 ARCH ADDENDUM 2

MOFFET & DUNCAN ARCHITECTS INC.
5052 DUNDAS ST. WEST TORONTO ONT. M9A 1B9 TELEPHONE (416)–239–2775

JOB # 1910



SIMCOE VILLAGE RENOVATIONS PHASE 2 – 2019
DURHAM COLLEGE

6/A1.0 PART EAST ELEVATION AT NEW ENTRANCE/CANOPY

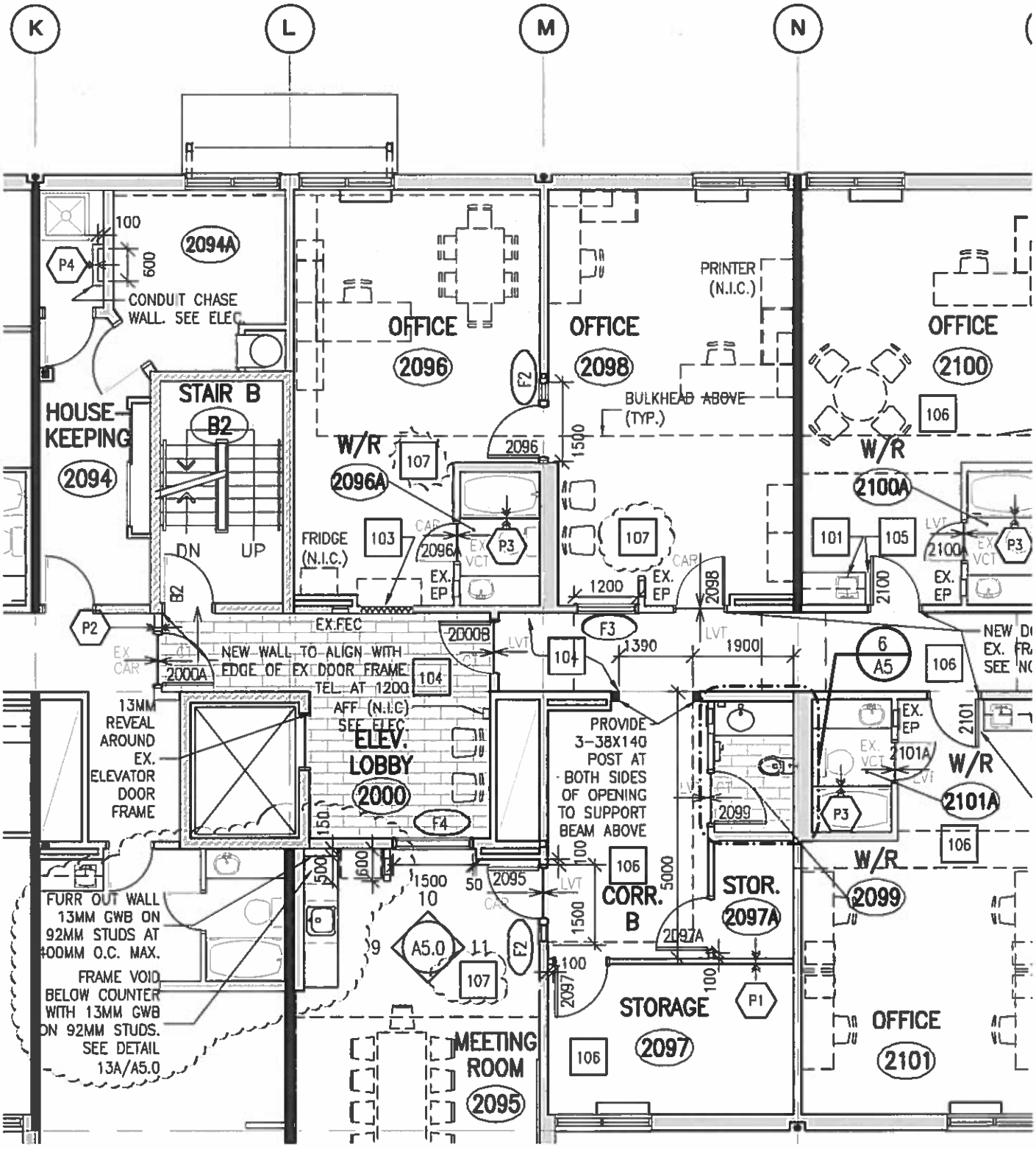
SCALE 1:50

DWG. NO. ADD-3

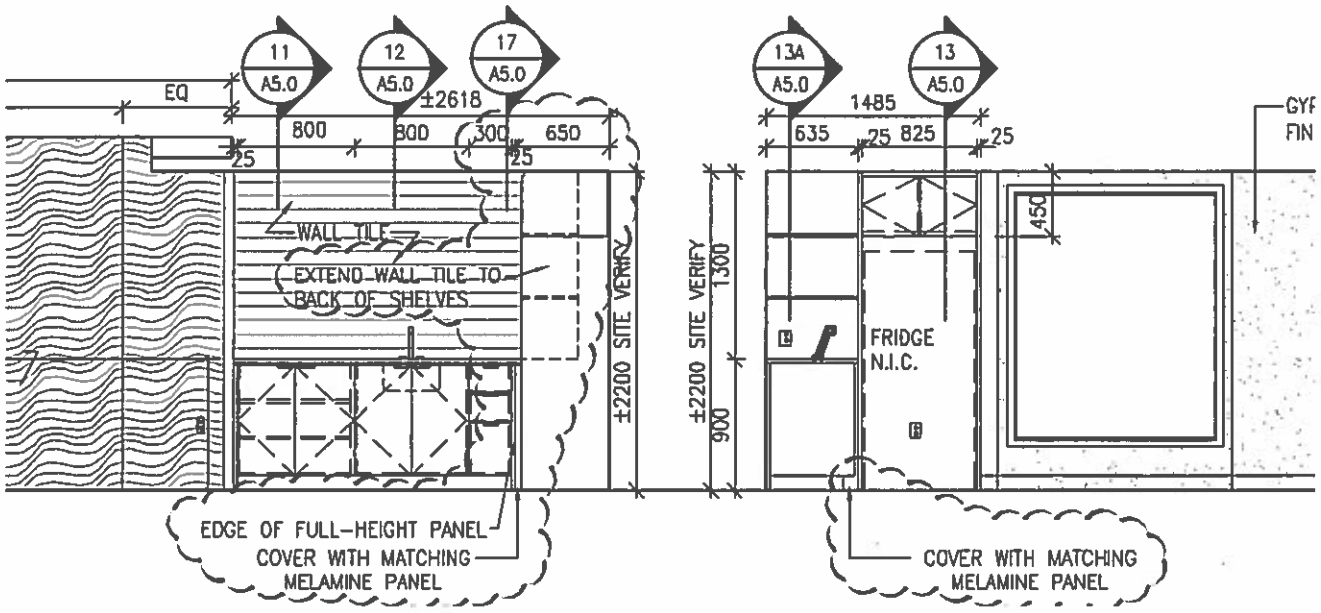
REV 1 ARCH ADDENDUM 2

MOFFET & DUNCAN ARCHITECTS INC.
5052 DUNDAS ST. WEST TORONTO ONT. M9A 1B9 TELEPHONE (416)-239-2775

JOB # 1910



SIMCOE VILLAGE RENOVATIONS PHASE 2 – 2019 DURHAM COLLEGE 2/A2.2 PARTIAL SECOND FLOOR RENOVATION PLAN	SCALE 1:100	DWG. NO. ADD-12
MOFFET & DUNCAN ARCHITECTS INC. 5052 DUNDAS ST. WEST TORONTO ONT. M9A 1B9 TELEPHONE (416)-239-2775	JOB # 1910	REV 1 ARCH ADDENDUM 2



9 / A5.0 MEETING ROOM 2095 – NORTH ELEVATION
SCALE 1:50

10 / A5.0 MEETING ROOM 2095 – EAST ELEVATION
SCALE 1:50

SIMCOE VILLAGE RENOVATIONS PHASE 2 – 2019
DURHAM COLLEGE

MILLWORK AT MEETING ROOM 2095

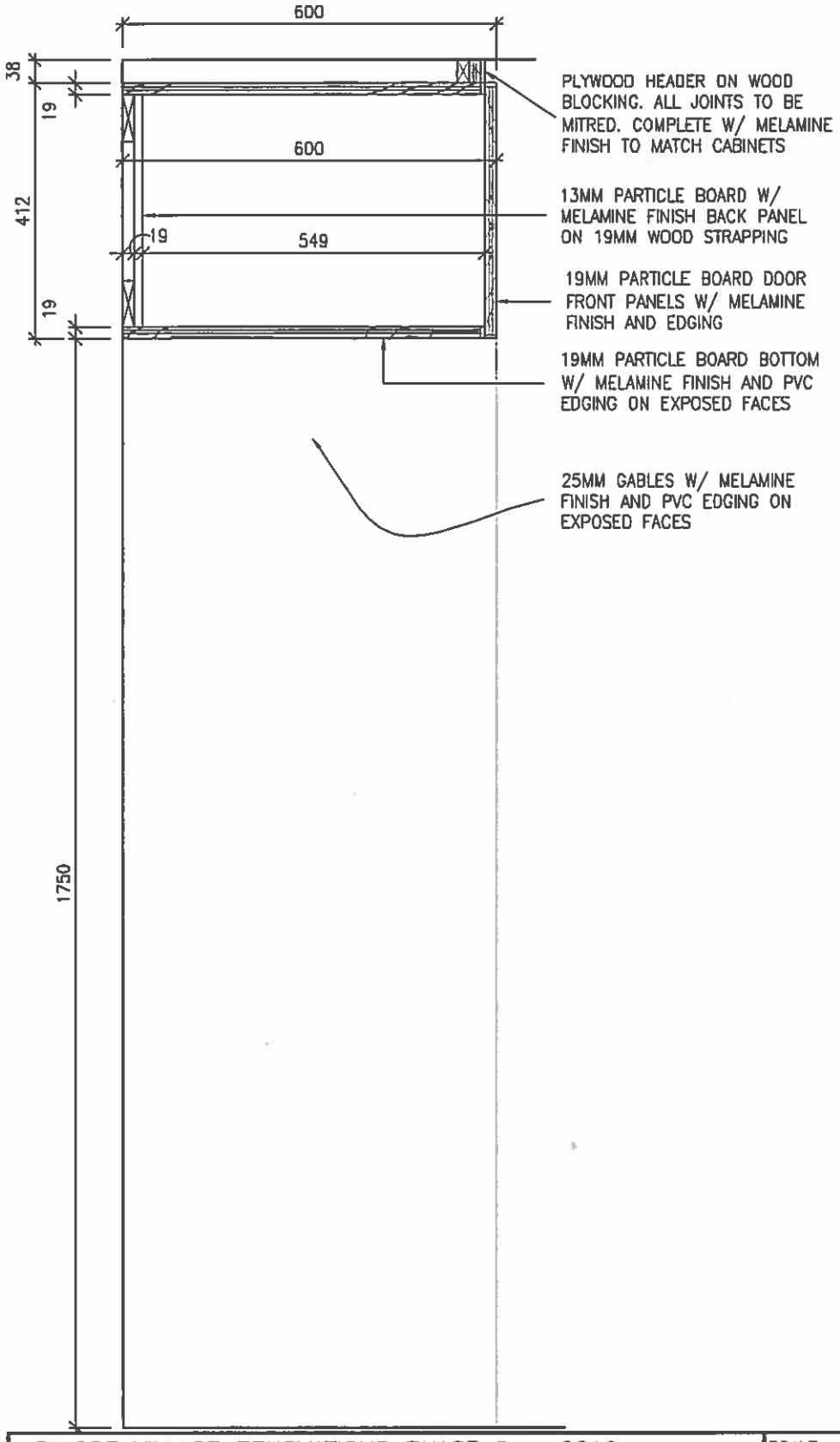
REF DWG A5.0 WASHROOM DET, MILLWORK...

SCALE: AS NOTED

DWG. NO.: ADD-22

MOFFET & DUNCAN ARCHITECTS INC.
5052 DUNDAS ST. WEST TORONTO ONT. M9A 1B9 TELEPHONE (416)-239-2775

JOB # 1910



SIMCOE VILLAGE RENOVATIONS PHASE 2 – 2019
DURHAM COLLEGE

13/A5.0 CABINET AT FRIDGE

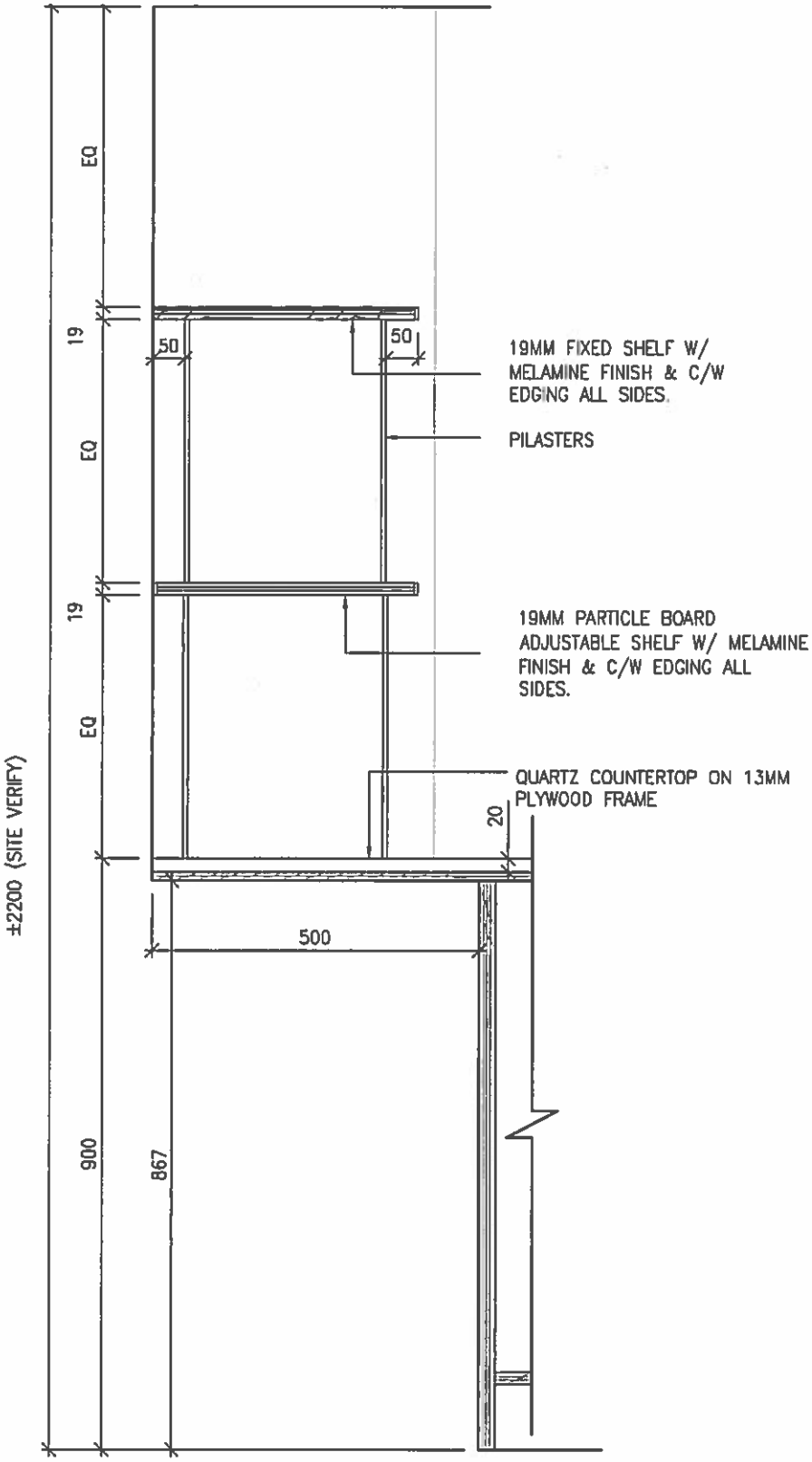
REF DWG A5.0 WASHROOM DET, MILLWORK...

SCALE: AS NOTED

DWG. NO.: ADD-23

MOFFET & DUNCAN ARCHITECTS INC.
5052 DUNDAS ST. WEST TORONTO ONT. M9A 1B9 TELEPHONE (416)-239-2775

JOB # 1910



SIMCOE VILLAGE RENOVATIONS PHASE 2 – 2019 DURHAM COLLEGE 13A/A5.0 SECTION @ COUNTER REF DWG A5.0 WASHROOM DET, MILLWORK...	SCALE AS NOTED	DWG. NO. ADD-24
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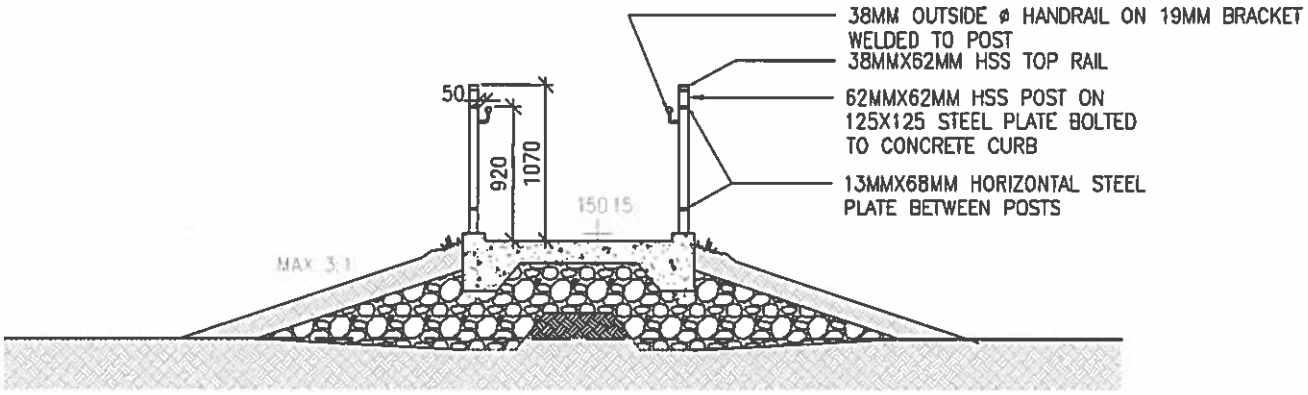

C SECTION THROUGH RAMP

SIMCOE VILLAGE RENOVATIONS PHASE 2 – 2019 DURHAM COLLEGE EXTERIOR RAMP SECTION C PART 3/A1.0 RAMP SECTIONS	SCALE 1:100	DWG. NO. ADD-25
MOFFET & DUNCAN ARCHITECTS INC. 5052 DUNDAS ST. WEST TORONTO ONT. M9A 1B9 TELEPHONE (416)-239-2775	JOB # 1910	