



Addendum	03
Date:	August 13 th , 2026
Project:	KGCC - Clubhouse
Address:	777 Clonsilla Av. Peterborough ON

1 INTENT

1.1. This Addendum is issued prior to receipt of Bid to provide clarifications and revisions to the Drawings and Specifications. Receipt of Questions. The following additional instructions shall apply to and govern the Bid Documents.

1.2. FORMAT OF QUESTIONS AND RESPONSES

2.1. QUESTIONS:

Questions will be shown in bold?

RESPONSE:

Will be provided in italics

2.1.1 All Questions received and responses are listed below:

QUESTIONS AND RESPONSES:	
1.	Is there an audio scope? <i>Scope of work is to provide a box as required at the device and provide a path back to the basement elec/mech room. Include pull string in all conduit runs.</i>
2.	Control symbols missing Sc, St, Sf <i>Please see Addendum E1 for switch types and slight lighting modifications.</i>
3.	Please provide specs for floor box <i>Arlington FLB5331NL 1-Gang Floor Box Kit with Steel Box and Metal Cover</i>
4.	Need location of where the new power is coming from for the conduit and wire length <i>Refer to Electrical Consultants response/updated dwgs The new power is coming from the power wall located north/west of the Pro Shop. The contractor should do a site visit to review actual conditions. The power wall is approximately 185 meters away from the new club house.</i>
5.	Drawing of Mezzanine missing for location of panel M, lighting, and power. Roof plans missing for all RTU etc. <i>See drawing E7 Detail 1 for the roof plans. Panel M is located in Storage Room 111 on drawing E2</i>
6.	Starter for EF-6/MUA-1 is 600v on electrical drawings and the units are 208v on Mech schedule ? Do we need two starters for this or are they interlocked? EF-6 and MUA-1 are both 208 volt 3 phase. Please provide information on where 600 volts is referenced and we will remove for construction drawings.

7. **Need clarification of scope of work on drawing E1T. Is all the work on the drawing by owner? If not, we need the location of the pro shop panel and type for the conduit run. All work shown on E1T is by owner. Drawing is provided for reference purposes**
8. **Exterior lighting drawings do not match. E1S and E4 have different counts. Please clarify which one is correct Refer to Electrical Consultants Addendum E1. Ignore light fixtures A, B, B1 and C on drawing E1S. Use Drawing E4 for locations and quantity.**
9. **Single line riser shows 4-250al to panel M that is 400a This should have parallel runs. Also, the main sec run does not have a neutral for the 600v. Please clarify Correct, feed to panel M shall be parallel runs of 250MCM. Contractor should price a neutral cable in the main run for future purposes.**
10. **Type W and W1 are no longer available. Please provide an approved equal for these types. GC to provide Price for <https://www.kohler.com/en/products/lighting/shop-lighting/parallel-one-light-sconce-35113-sc01?skuld=35113-SC01-2GL> Client team to review and finalize any alternatives following GC appointment.**
11. **Drawings A4.00, A4.07 & A7.08 are noted on the floor plans but these drawings are not in the package. Can you please provide A7.08 SUPERSEDED – See attached revised plan with correct reference for A6.02 – As previously provided.**
12. **Assembly R1 notes 2 layers of R31 batt insulation - Is R60 blow-in cellulose insulation an approved alternate? Detailing would be required to ensure the insulation would stay in place over dormers – or a combination blow & batt would need to be used – price for batt and a change order w/ credit can be discuss following GC appointment.**
13. **RCP drawing A2.07 shows that T&G is the ceiling finish in the restaurant and foyer. However, drawing A4.02 section notes that the finish is GWB. Can you please confirm if these areas are to be a GWB or T&G finish bulkhead? Refer to A2.07 ONLY for Ceiling finishes**
14. **What is the finish of the cabinet interiors? White Oak**
15. **Please confirm locations of plate rail 3/A5.09. There is a notation on the elevations on A6.01 but it's not clear the extent of it. Refer to A6.00 Elevation 01 to left of entry door to restaurant – shelf runs along top of wood panelling (7.52M)**
16. **The door to the IT closet (A9.01) is called out as part of the millwork package. Is the closet a piece of millwork? I can't see a frame for the door. Are shelves required? The door is part of millwork – it should match the adjacent millwork finish and be flush with wall finish when closed. Interior shelving for IT – servers etc not part of millwork – IT shelving/racks by IT.**
17. **The Back Office desk (A9.01) has open countertop spans that appear to require additional support. Please advise on the required support type, configuration and if it's part of the millwork contract. Single Adjustable support leg “ADILS, IKEA” or similar. Provide shop drawings for review**
18. **Is there a finish specification for the metal footrail at the Bar (2/A9.00)? See millwork finishes Addendum 02 – Stainless steel**
19. **The vanities will also require support. Please advise on the required support type, configuration and if it's part of the millwork contract. GC to RE: Subs scope of works. Yes Concealed cantilever Supports should be allowed for as required to suitably support counter, sinks faucets and any additional loads as per industry standards.**

20. **Are the lockers (LR-1) part of the millwork contract? Are more details available. GC to advise RE: Subs scope of works. LR-1 to be Salsbury Designer Wood Lockers or similar approved.**
21. **Please note that oak veneer is not a durable option for the shoe cubbies in the change room. Plastic laminate would be more durable. Discussions around changes for recommended durability can be done following appointment. Changes delt with via change orders etc.**
22. **Are more details available for the change room benches? Is it a steel frame below the oak seat? Assumed solid oak – Changes can be discussed following appointment**
23. **Please clarify if millwork is required in the Kitchen. Elev. 01/A7.10 shows some upper cabinets with doors and some open shelving. ? If in drawings GC To provide**
24. **To clarify - Elev. 05/A7.10 shows a Handwash Station (E11). It appears on the equipment schedule as being supplied by KGC but appears to be a piece of millwork. Refer to elevations – cabinets above sink – standard Eyewash station below.**
25. **On A2.07 there are faux beams in the dining room. Are these part of the millwork? GC to advise RE: Subs scope of works.**
26. **Assembly R2 says 2 ply mod bit, but detail 1 @ A4.03 shows TPO/EPDM membrane to extend vertically min 3'0". Is this correct? Roof assembly for R2 as per assemblies – see attached A4.00 & A4.07**
27. **Please provide a spec for the fire-retardant treated wood identified in assembly R1 and R3 on drawing A0.02 – See attached**
28. **What is the finish of the W10 fencing in the basement? Galvanized? Standard storage wire fencing – Husky Wire and post or similar approved.**
29. **Is the W10 fence to be base plated to anchor to the concrete slab? Or core drilled? Detail to be baseplates to floor and ceiling**
30. **ICI's roofing quote does not include the roof hatch and safety railing shown on detail 6/A5.03. Please provide the manufacturer and specifications. See attached Bilco spec**
31. **ICI's roofing quote indicated that they have carried a PVC membrane roof system. R2 indicates a 2 ply SBS mod-bit roof. Please confirm that this has been changed. To be as per ICI Quote**
32. **ICI's roofing quoted value listed in the divisional cost breakdown does not include the \$2,100 total system warranty from the manufacturer. Is this to be included? Additional To Quote, (Total Quote plus Warranty - \$52300)**
33. **ICI's quote does not include the adjustable pedestals indicated in the R2 assembly. Please clarify if their included products (sacrificial PVC layer/1" SM/patio stones) is replacing the components (pedestals) listed in the R2 assembly. Pavers as per ICI Quote**
34. **R1 and R3 assemblies :15 lb felt underlay, is this covered by the ice shield and synthetic underlayment also requested? The underlay and the Ice & water shield are 2 separate items**
35. **The roofing brand identified is IKO and based on the assembly identified, I assume the shingles are also IKO(If this is correct), the shingle name would help as 3 tab are not as readily available any longer, and have been replaced with Laminated style such as Dynasty**

by IKO for example. If it is not IKO, Please clarify with brand and name of the shingle. Refer to exterior finishes on A8.01 – 3-Tab Shingles IKO Cambridge Dual Grey

36. The ice shield mentioned to be applied on edge of valleys, is this to be adhered not only onto the valley metal but also on to what? the underlayment, the 15lbs felt, direct to the wood deck? How wide and how much overlap onto the valley? Please refer to the standard installation details of manufacturer - attached for ease. Its not adhered to Valley Metal...
- "Center a 36" wide strip of ice and water protector in the valley and then fasten at the edges with only enough nails to hold in place. Center a minimum 24" wide, minimum 28 gauge pre-finished/galvanized metal valley liner in the valley, and fasten the edges with only enough nails to hold in place. Snap two chalk lines the full length of the valley, 6" apart at the top and increasing in width 1/8" per foot towards the bottom. When the shingles are being applied, lay them over the valley flashing, trim the ends to the chalk line, and cut a 2" triangle off the corner to direct water into the valley (A). Embed the valley end of each shingle into a 3" band of asphalt plastic cement(B). Do not place a nail in the shingle closer than 2" from the chalk line."*
37. The valley requested, what gauge and size? how much overlap? See Manufacture installation notes as per quote above
38. Drawing A3.01 Materials Legend: Items #6 and #7 , please provide locations and specs. Not required revised drawing with annotations updated attached
39. On the 3/12 pitch portion of the roof, (lower wrap around area) Identified as west and east elevation on this page (north and south on another page) where is the ice shield to be applied? Are we one row following the exterior wall all the way around? Or do we fill in from eave to minimum of what height beyond the exterior wall? Provide 600mm from exterior wall & 2nd row 600mm from eave.
40. Drawing A5.12: detail 11 - for siding area above the window frames - "Lap membrane over flashing"...what type and how high? All Flashing laps to be min 75mm (TYP. flashing strip total 150mm), flashing as per A8.00 "CONTEGA EXO WINDOW SEALING TAPE FOR EXTERIOR to windows and doors"
41. Drawing A5.12: detail 11 - "Prefinished metal flashing typical" ... is 26 gauge from standard stock colour acceptable? See A8.01 Exterior finishes for colour 26 gauge acceptable.
42. Drawing A5.12: detail 11 - Insect screen typical, how high and what type is acceptable? Metal Perforated vented started strip. EZ 60 – Perforated Vented Starter Strip Trim or similar
43. Drawing A5.12: detail 7 door head area, there is no insect screen. Is this to be applied as identified on #11? please clarify all locations. TYP. Insect screen to head of all windows and doors, and continuous to bottom of cladding. Top of cladding sealed with ventilated j-trim strip.
44. Drawing A5.12: detail 7 - "Blue skin tape or similar" what type of blue skin, do you want it primed? Blueskin VP160 – installation to be in accordance with manufacture recommendations – see manufacturer details re: if primer required. what height and do you want it wrapped on each metal flashing joint the depth of the "Maibec trim to all window and doors " all laps 75mm min.
45. Drawing A5.12: detail 9 - " typical Maibec trims, which material and style? Please clarify for all locations. <https://maibec.com/en/products/trim-and-corners-siding/> Maibec Wood trim rectangle 2x4 to window and door surrounds. Window sill – stone Shouldice stone sills. Maibec Metal trim to inside and outside corners.

46. **Drawing A3.00 Detail #1 identifies the ridge vent as asphalt, can we use Cobra or equal?** *Rapid ridge vent specified on A5.03/7 <https://benjaminobdyke.com/product/rapid-ridge-ridge-vent/>*
47. **Drawing A4.03 - Grid lines 2-3 show the shingles covering a TPO or EPDM wall wrap. How far down the wall are we to shingle? Flat roof membrane to wrap up wall 36" Refer to ICI quote, Is there to be a metal flashing at bottom of the shingles? shingles to terminate with continuous metal flashing What warranty is required/requested for the wall area of the flat and who will provide the warranty? Yes Standard warranty period assumed The manufacturer states to never apply asphalt shingles to roof slopes less than 2:12. Manufacturer has confirmed Shingles can be installed on walls – see attached documents provided by Manufacturer technical rep.**
48. **The shingles are being applied to a vertical area , what application to support the material and what will prevent sagging and wind conditions?** <https://www.iko.com/na/document/dynasty-application-instructions/> *See attached Documentation provided by manufacturer.*
49. **Drawing A4.03 - "prefinished metal valley at roof pitch change" is the top of the metal valley to be sandwiched with ice and water shield or just laid over the installed ice and water shield? please provide detail and clarification. Ice & Water shield on roof behind flashing Typ.**
50. **Drawing A4.04 - " prefinished metal soffit typical" what brand and style? , is it from standard stock colours? See A8.01 exterior finishes for colour**
51. **Drawing A4.04 – detail 2 – “6-inch eavestrough typical" it appears to be a squarish style which only comes in 10 ft max lengths, can this be run out of the trough machine, so the profile looks as if it were a standard trough only metal? Yes**
52. **Assembly S2 calls for true 1” wood strapping. Standard 1x strapping is ¾” thick. Please clarify – Nominal 1” Is sufficient**
53. **Assembly R2 calls for 7/8” thick exterior grade plywood. This is a special-order product and needs to be purchased by the lift. Is ¾” plywood sufficient in this location? Yes**
54. **Drawings A3.00 and A3.01 (Material Legend) - both state to refer to architectural Appendix 01, exterior finishes. Per the provided list of bid documents, Appendix 01 is listed as Millwork. Please clarify. Refer to Appendix 02.**
55. **Drawing A8.00, Window and Door Schedule, includes door hardware information and a general note referencing a specification. However, the specifications include Drawing A9.1, Window and Door Schedules, from 2023. Please advise whether any revisions or modifications are required to the specifications to align with the current design. Refer to addendum 02**
56. **Have the included appendices been fully coordinated with the drawing package to ensure all requirements are properly accounted for in bidders' pricing? Refer to addendum 02**
57. **Please confirm if any bonding is required. Refer to addendum 02**
58. **The documents include a note to coordinate with specialty suppliers. Please clarify what specific scope or responsibilities are intended to be covered by this note. Refer to addendum 02**
59. **The walk-in cooler is shown on the architectural drawings and is listed on Drawing A7.09 as being by the General Contractor, with a note to also refer to the mechanical drawings.**

However, the cooler does not appear to be identified on the mechanical drawings. Has this scope been coordinated? In addition, are full specifications available for the cooler system beyond the note referencing Norbec Camlock panels? *Refer to addendum 02*

60. The appendices include several FF&E items; however, responsibility for these items remains somewhat ambiguous. Please confirm which party is responsible for the supply and installation of each item listed. *Refer to addendum 02*
61. For the Designated Substance Report: The sampling report says ceiling/wall in the dining room contains asbestos. Would like for the project to be specific - is it the ceiling or the walls or both? Also please have the consultant confirm that the texture coat abatement should be done under Type 3 procedures. – *See attached report (Issued with ITT document) Contact details for specialist: Eric Wierdsma GHD Limited 347 Pido Road, Unit 29, Peterborough, ON K9J 6X7, 705-749-3317*
62. Plan E.1 Basement Power Layout Plan & Schedule Diagram- Electric Heating Schedule is missing BB-2 & UH-2 Equipment *Refer to electrical consultant response*

ELECTRIC HEATING EQUIPMENT SCHEDULE			
SYMBOL	MODEL NUMBER	MANUFACTURER	DESCRIPTION
	ODB01002-TB6	OUELLET OR APPROVED EQUAL	1000W BASEBOARD HEATER, WHITE, 120V, C/W INTEGRAL TAMPERPROOF THERMOSTAT
	ODB00502-TB6	OUELLET OR APPROVED EQUAL	500W BASEBOARD HEATER, WHITE, 120V, C/W INTEGRAL TAMPERPROOF THERMOSTAT
	OAC04000-T	OUELLET OR APPROVED EQUAL	3kW COMMERCIAL FAN-FORCED HEATER, WHITE, 208V, C/W INTEGRAL TAMPERPROOF THERMOSTAT, RECESSED
	OAS03008AM-T	OUELLET OR APPROVED EQUAL	3kW COMMERCIAL INDUSTRIAL SUSPENDED UNIT HEATER, ALMOND, 208V, C/W INTEGRAL THERMOSTAT, WALL OR CEILING MOUNTED
	OAS03008AM-T	OUELLET OR APPROVED EQUAL	3kW COMMERCIAL INDUSTRIAL SUSPENDED UNIT HEATER, ALMOND, 208V, C/W INTEGRAL THERMOSTAT, WALL OR CEILING MOUNTED

63. Window Schedule on A8.00 appears to be missing W04. Please confirm size of W04 Window. *See Addendum 02 regarding window pricing – updated information to be provided in IFC*
64. Please confirm size of W05 - Window Schedule A8.00 does not match Elevation A3.01 or the ground floor plan on A2.03 *See Addendum 02 regarding window pricing – updated information to be provided in IFC*
65. Please confirm the terrace beam specification. The architectural drawings indicate 8x12 beams, while the structural drawings specify LVL beams. If LVL beams are to be used, please confirm the required cladding or finish so that all quotations are based on the same scope. *LVL as per structural. finish to exterior beams/posts for terrace as per exterior finishes refer to A8.01*
66. Ceiling Tile C1 is identified as an ACT ceiling tile; however, I cannot locate the specification identifying the required tile type. As pricing varies significantly between a premium acoustic tile and a standard corridor tile, please confirm the specified ACT ceiling tile. *Armstrong ULTIMA lay-in Tile. White*
67. Architectural Drawing A2.07 identifies the required video and audio equipment but does not specify make or model numbers. While the tender includes a "Spec for Pretel Equipment", several of the listed items have been discontinued and are no longer available (for example, the specified Samsung TV is a 2023 model). Please provide an updated

equipment schedule with current make and model numbers, or alternatively, a cash allowance to ensure all bidders are pricing the same scope. GC to provide Alternative costs for equivalent items

68. **Millwork Detail A9.00 for the Bar Area identifies SS-2 or reclaimed wood. Please confirm the intended material specification for this location. This clarification is requested to ensure all bidders are pricing the same scope and specifications, allowing for an accurate and equitable comparison of bids. Assume Stainless Steel Countertop.**
69. **What are the temporary power requirements for the project and where will they be fed from? See drawing E1T for temp power supply. This power supply is provided by the owner for use in new construction work.**
70. **Is there any new parking lot lighting or existing parking lot light lighting that needs to be reworked? Yes see E1S for new site lighting. There are 4 existing pole lights that need to be removed.**
71. **Confirm the door hardware contractor will be providing all devices and low voltage wiring for the universal washroom kit. GC to advise RE: Subs scope of works.**
72. **Confirm electrical scope for security & comms is an empty flexible conduit (coreline) with pull string to the nearest accessible ceiling space. Scope of work is to provide a box as required at the device and provide a path back to the basement elec/mech room. Include pull string in all conduit runs.**
73. **Confirm thermostats are the responsibility of the mechanical contractor with the exception of built in thermostats for specified heaters. Any thermostats shown on the electrical drawings will be the responsibility of the electrical contractor.**
74. **Confirm service receptacles are required at each flat rooftop area. Rooftop receptacles are required by code. Receptacles need to be within 7.5 meters of the HVAC unit.**
75. **Confirm all fire alarm shutdown requirements at mechanical equipment. Refer to No required shutdowns for mechanical equipment.**
76. **Are disconnects required at kitchen equipment (fridges, freezers, etc.) or are the disconnects built into the units? For pricing purposes, disconnects will be built into the units.**
77. **Confirm exterior weatherproof disconnects are to be incorporated for all exterior mounted mechanical units. For pricing purposes all disconnects shown on the electrical drawings are to be supplied and installed by electrical contractor.**

7. ATTACHED DOCUMENTS

7.1. Architectural drawings:

- A0.00 – COVER SHEET Revision 04
- A0.02 – Assemblies Revision 04
- A2.03 – GROUND FLR PLAN Revision 04
- A3.00 – N/S ELEVATIONS Revision 04

A3.01 – E/W ELEVATIONS Revision 04
A4.03 – SECTIONS Revision 04
IKO Asphalt shingles installation document
IKO Shingles – Technical Bulletin
Bilco Specification

7.2 Structural Responses to Queries.
7.3 Elec Addendum E1.

ELECTRICAL ADDENDUM #1

TO: CRW Architects Inc. 8086 Tinkerville Road Port Hope, Ontario L0A 1B0	ELEC. ADDEN. No.: E1 PROJECT No.: 709 PROJECT NAME: KGCC Clubhouse DATE: August 11, 2026
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ATTENTION: Colleen Whyte,

This addendum forms part of the contract documents and is to be read, interpreted, and coordinated with all other parts, and shall be issued by CRW Architects Inc. The following items shall be added to the tendered price for this project:

Drawing E1S/E4

1. Exterior building lighting shown on drawing E1S shall be ignored (light types 'A', 'B', 'B1', & 'C'). Refer to drawing E4 for exterior building lighting.

Drawing E3

1. Switch type 'B' shall be an auto on/override off low voltage latching switch, white in colour. Current (or approved equal) model: LVS-L-1-PL-WH.
2. Switch type 'C' shall be a passive, dual technology wall switch occupancy sensor, 120V, white in colour, programmed auto-on (wall plate not included). Current (or approved equal) model: LVS-L-1-PL-WH.
3. Switch type 'F' shall be a passive, dual technology wall switch occupancy sensor, 120V, white in colour, programmed manual-on (wall plate not included). Current (or approved equal) model: LVS-L-1-PL-WH.
4. Switch type 'T' shall be a countdown timer switch compatible with LED lighting.

Drawing E4

1. The two (2) type 'H2' lights in the Men's Change Room 113B shall be relocated so that one (1) is in each shower. The timer switches that control each light shall be relocated to the outer wall of the second shower stall. See Sketch SK-E1.
2. Relocate the switch into the Men's Change Room. Relocated two (2) type 'H' lights into the Men's Change Room 113B. See Sketch SK-E1.

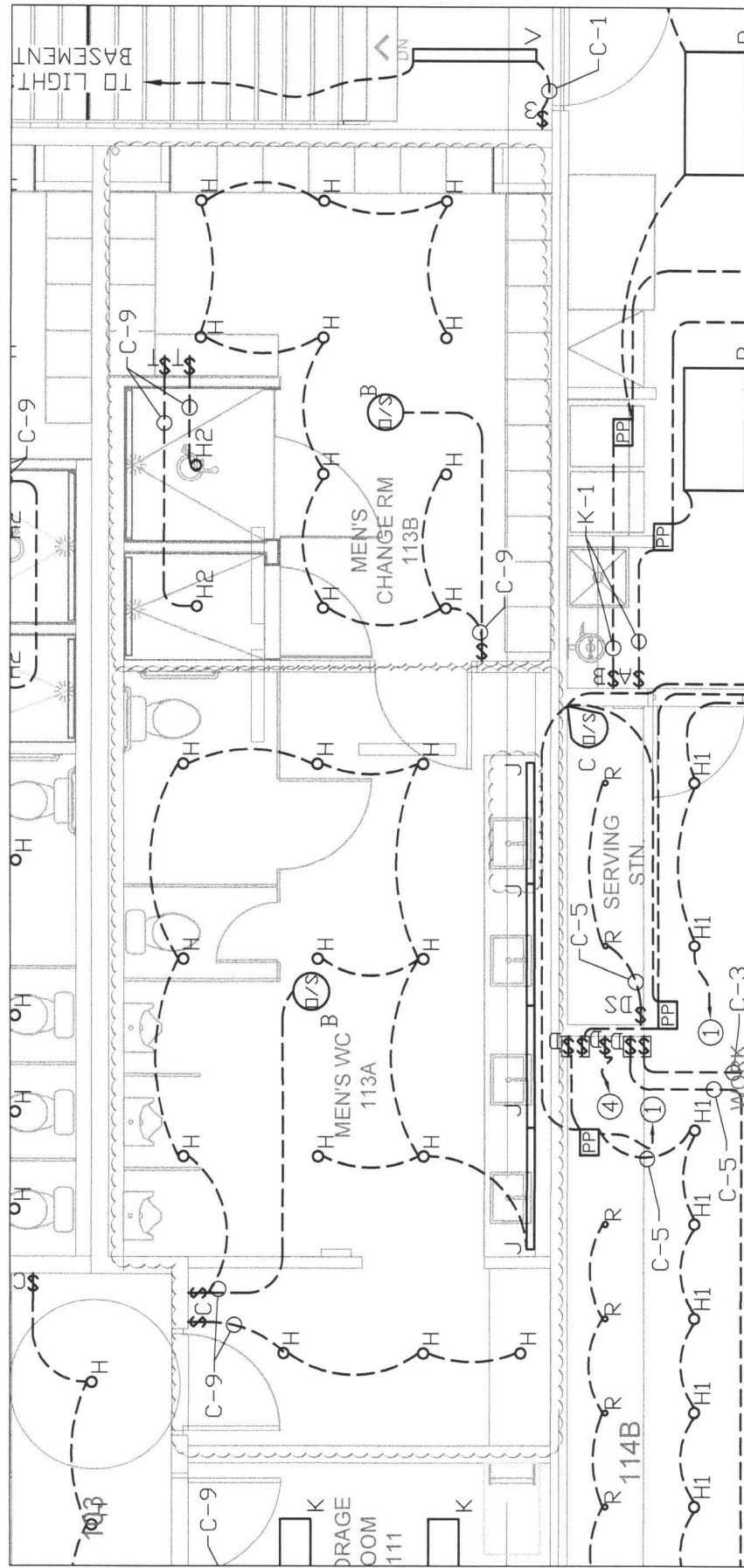
BERTHELOT ENGINEERING LTD.

2193 Lynhaven Rd, Peterborough, Ontario, Canada K9K 1W8

Tel: (705) 775-1517 email: pberthelot@bertheloteng.com

3. Lights in Men's Washroom 113A have been rearranged. See Sketch SK-E1.
4. Add one (1) new type 'J' fixture above the sink in Men's Washroom 113A. See Sketch SK-E1.

REQUESTED BY: Paul Berthelot, P.Eng.



BERTHELOT ENGINEERING LTD 2183 Lynhaven Rd., Peterborough, ON. K9K 1W8 Tel. (705) 775-1517	PROJECT					KAWARTHA GOLF & COUNTRY CLUB CLUBHOUSE, 777 Clonsilla Avenue, Peterborough, Ontario		DWG				
	TITLE					MAIN FLOOR LIGHTING LAYOUT PLAN			SK-E1			
	SCALE		3/16" = 1'-0"		DATE	August 11, 2026		DSN		P. BERTHELOT	DWN	T. ST. JEAN
FILE												709

BILCO Bil-Guard 2.0 fixed hatch railing system provides a permanent means of fall protection for roof hatch openings. System meets and exceeds OSHA fall protection regulations (29 CFR 1910.29). Bil-Guard® 2.0 models are available for most roof hatch and automatic fire vent sizes. For more information, please visit our website www.bilco.com or call 1-800-366-6530.

SECTION 077233

ROOF HATCH RAIL SYSTEM

(BILCO TYPE BIL-GUARD 2.0)

PART 1 - GENERAL

1.1 SUMMARY

- A. Work Included: Provide factory-fabricated fixed hatch railing system.

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data.
- B. Shop Drawings: Submit shop drawings including profiles, accessories, location, adjacent construction interface, and dimensions.
- C. Warranty: Submit executed copy of manufacturer's standard warranty.

1.3 QUALITY ASSURANCE

- A. Manufacturer: A minimum of 5 years experience manufacturing similar products.
- B. Installer: A minimum of 2 years experience installing similar products.
- C. Manufacturer's Quality System: Registered to ISO 9001 Quality Standards including in-house engineering for product design activities.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in manufacturer's original packaging. Store materials in a dry, protected, well-vented area. Inspect product upon receipt and report damaged material immediately to delivering carrier and note such damage on the carrier's freight bill of lading.

1.5 WARRANTY

- A. Manufacturer's Warranty: Provide manufacturer's standard warranty. Materials shall be free of defects in material and workmanship for a period of five years from the date of purchase. Should a part fail to function in normal use within this period, manufacturer shall furnish a new part at no charge.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis-of-Design Manufacturer: Type Bil-Guard® 2.0 Roof Hatch Railing System by The BILCO Company, P.O. Box 1203, New Haven, CT 06505, 800-366-6530, Fax: 1-203-535-1582, Web: www.bilco.com.

2.2 HATCH RAIL SYSTEM

- A. Furnish and install where indicated on plans hatch rail system Model RL2-S; The hatch rail system shall be field assembled and installed (by others) per the manufacturer's instructions.
- B. Performance characteristics:
 - 1. High visibility safety yellow powder coat paint finish (*other colors available as a special order*).
 - 2. Hatch rail system shall attach to the capflashing of the roof hatch and shall not penetrate any roofing material.
 - 3. Hatch rail system shall satisfy the requirements of OSHA 29 CFR 1910.29 and shall meet OSHA strength requirements with a factor of safety of two.
 - 4. Corrosion resistant construction with a five-year warranty.
 - 5. Hinged gate shall ensure continuous barrier around the roof hatch.
 - 6. Self-closing gate hinge and positive latching system provided with hatch rail system.
- C. Posts and Rails: 1-1/4" (32mm) 6061 T6 schedule 40 aluminum pipe
- D. Hardware: Mounting brackets shall be 3/8" (9mm) thick extruded aluminum. Pivoting post guides with compression fittings and latching mechanism shall be cast aluminum. Self-closing hinges and all fasteners shall be type 316 stainless steel.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and openings for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install products in strict accordance with manufacturer's instructions and approved submittals. Locate units level, plumb, and in proper alignment with adjacent work.
 - 1. Test units for proper function and adjust until proper operation is achieved.
 - 2. Repair finishes damaged during installation.
 - 3. Restore finishes so no evidence remains of corrective work.

3.3 ADJUSTING AND CLEANING

- A. Clean exposed surfaces using methods acceptable to the manufacturer which will not damage finish.

END OF SECTION



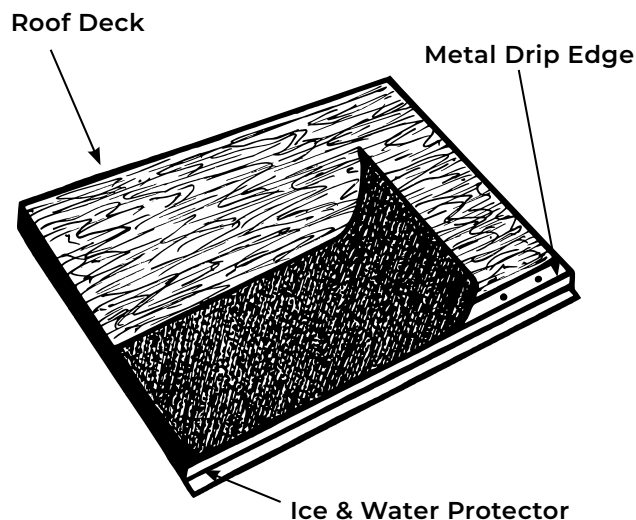
Application Instructions

ENGLISH

IMPORTANT MESSAGE • PLEASE READ! IKO assumes no responsibility for leaks or defects resulting from improperly installed shingles, improper preparation of the surface to be roofed over, or failing to provide proper ventilation in accordance with local building codes. Use caution when stacking bundles on sloped roofs.

ROOF SLOPE / ROOF DECKS: Never apply asphalt shingles to roof slopes less than 2:12. For slopes 2:12 to less than 4:12 (LOW SLOPE), see special underlayment requirements outlined below. We do not recommend the application of our roof shingles directly to any type of roof insulation, including perlite or fiberglass, foam, wood fiber, or similar products. Further, the application of our roofing shingles directly over any structural decks including gypsum, nailable concrete, or similar products (without our prior approval) will void the warranty.

STEPS 1-3



STEP 1:

PREPARE THE ROOF DECK: Deck must be smooth, firm, clean, dry and securely nailed. Wood panel decking is to be exterior grade, conforming to building code requirements. Panels are to be 3/8" min. thick plywood, or 7/16" min. thick non-veneer. The installation of asphalt shingles on dimensional lumber (including shiplap/board decks) is not recommended as it may potentially cause buckling problems, which are not covered by our Limited Warranty.

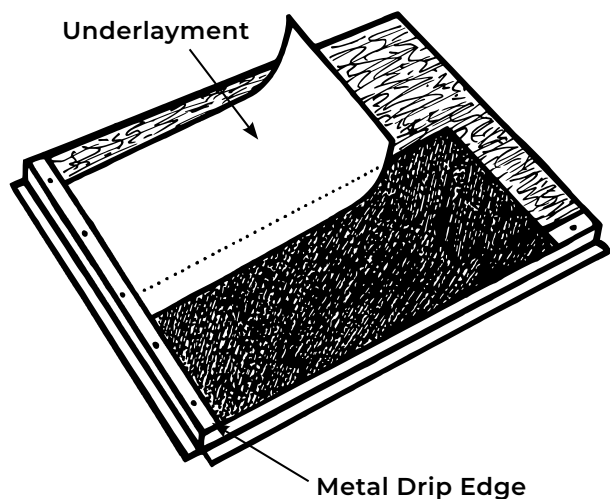
STEP 2:

APPLY DRIP EDGE ALONG EAVES: Apply metal drip edge over underlayment or directly to the deck along the eaves, spacing nails approximately 12" apart, conforming to building code requirements.

STEP 3:

EAVE PROTECTION: Apply eave protection, such as IKO StormShield® Ice & Water Protector, as per building code requirements and manufacturer's instructions, overhanging eaves by 1/4" to 3/4" and extending up the roof at least 24" beyond the vertical projection of the interior surface of the outside wall. NOTE: IKO recommends the use of eave protection in all situations, however, if no ice and water protector is required by your local code or standard, then alternately apply first course of underlayment overhanging the eaves by 1/4" to 3/4".

STEPS 4-5



STEP 4:

UNDERLAYMENT: Apply either asphalt saturated felt or synthetic underlayment, such as IKO's Stormtite™, in horizontal courses up the roof with 2" side laps and 4" end laps. Trim the sheet to fit the final course at the peak. One layer of underlayment is required over the entire deck to qualify for an ASTM E108/UL790 Class A fire-resistance rating or which may be required per the local building code.

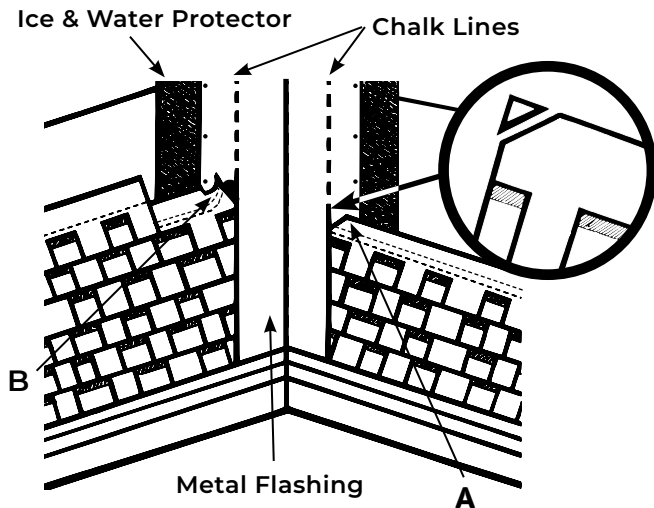
LOW SLOPE: For roof slopes less than 4:12 down to 2:12 apply underlayment in successive courses by overlapping the preceding sheet by 19" with 4" end laps. Alternatively, apply a single layer of ice and water protector over the entire deck per manufacturer's instructions.

NOTE: SHINGLES APPLIED ACCORDING TO THESE INSTRUCTIONS ON SLOPES 3:12 TO 4:12 WILL BE WARRANTED FOR THE FULL WARRANTY TERM. SHINGLES ON SLOPES LESS THAN 3:12 DOWN TO 2:12 WILL BE WARRANTED FOR 12 YEARS.

STEP 5:

APPLY DRIP EDGE AT THE RAKES: Apply metal drip edge on top of any underlayment along rake edges, spacing nails approximately 12" apart.

STEPS 6-7



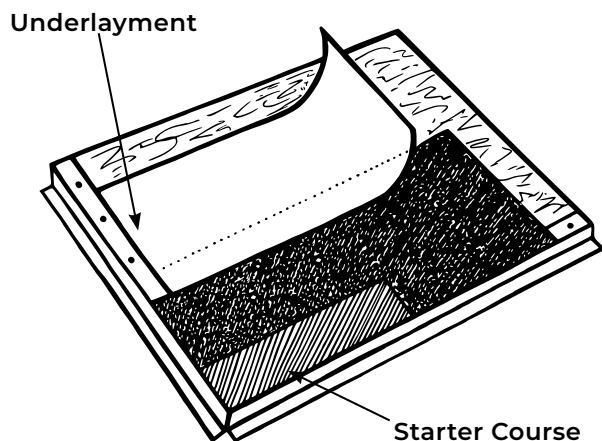
STEP 6:

INSTALL FLASHING: Corrosion-resistant flashing must be used to help prevent leaks where a roof meets a wall, another roof, a chimney or other objects that penetrate a roof. Flashing shall conform to the requirements of applicable building code and good roofing practice.

STEP 7:

INSTALL OPEN METAL VALLEYS: Metal valleys are recommended. (Closed valley applications are acceptable but not recommended. Please see Limited Warranty for details.) Complete valley flashing before shingles are applied. Center a 36" wide strip of ice and water protector in the valley and then fasten at the edges with only enough nails to hold in place. Center a minimum 24" wide, minimum 28 gauge pre-finished/galvanized metal valley liner in the valley, and fasten the edges with only enough nails to hold in place. Snap two chalk lines the full length of the valley, 6" apart at the top and increasing in width 1/8" per foot towards the bottom. When the shingles are being applied, lay them over the valley flashing, trim the ends to the chalk line, and cut a 2" triangle off the corner to direct water into the valley (A). Embed the valley end of each shingle into a 3" band of asphalt plastic cement (B). Do not place a nail in the shingle closer than 2" from the chalk line.

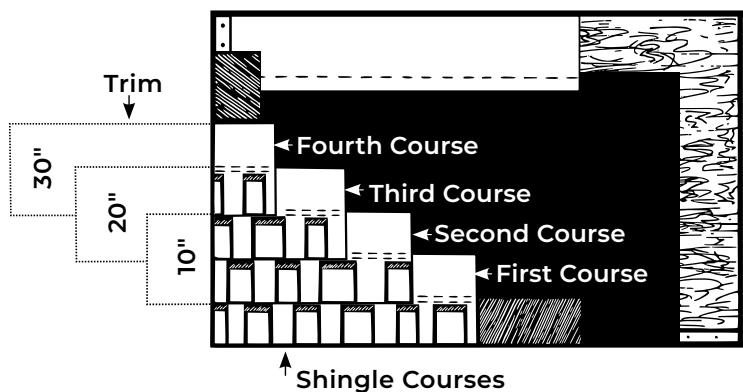
STEP 8



STEP 8:

INSTALL STARTER COURSE: IKO recommends using Leading Edge Plus™ Starter Shingles. Fold the Leading Edge Plus shingle along the perforation to separate. Cut the first starter shingle in half. Beginning at the left corner of the roof, start the eaves course by positioning one of the halves granule side up with the sealant adjacent to the eaves. It should overhang the eaves and rake edge by 1/4" to 3/4". Start the rake course by taking the remaining half and positioning it flush to the top edge of the eaves starter with the sealant adjacent to the rake edge overhanging the rake edge by 1/4" to 3/4". Fasten the half-length shingles with nails located about 3" from the eaves edge and 1" in from each end with a third in the center. Complete the eave and rake starter courses with full lengths of starter shingles maintaining a 1/4" to 3/4" overhang, and fastening with four nails per shingle. Alternatively, apply IKO EdgeSeal as directed by EdgeSeal application Instructions.

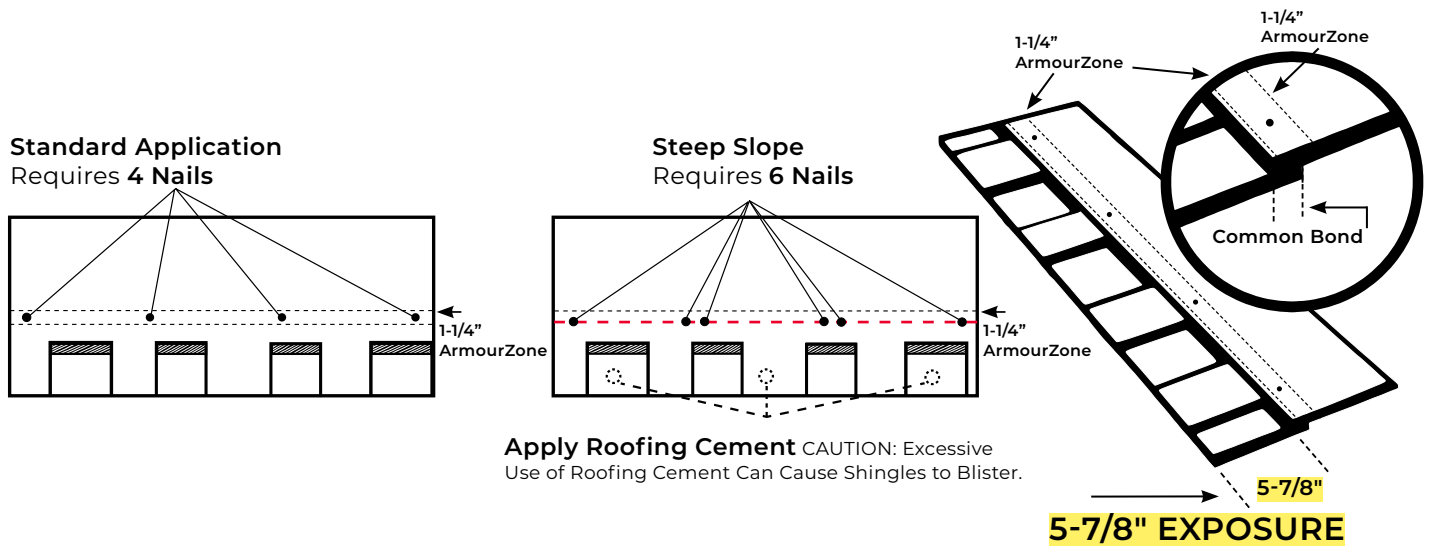
STEPS 9-13



STEP 9:

INSTALL THE FIRST COURSE: Start with a full length shingle applied flush with starter course at rake and eave. Use four nails per shingle placed as shown below. After the first shingle in the course is installed, continue with full length shingles to complete the first course, trimming the last shingle so that it matches the overhang of the starter course below.

IMPORTANT! — PROPER NAILING



PROPER NAILING:

NAILING ON STEEP SLOPES: On slopes of 21:12 (60°) or more, use six nails per shingle placed as shown above.

NOTE: Each nail **MUST** penetrate both layers of the shingle by nailing into the lower nail line only. Ensure that no nail is within 2" of a joint/cutout of the underlying shingle.

Seal down each shingle at time of application with three 1" diameter spots of roofing cement placed under the shingle 2" above the bottom edge and equally spaced along the shingle. Use roofing cement sparingly, as excessive amounts may cause blistering.

STEP 10:

CHALK LINES: To aid in alignment, snap horizontal chalk lines. Exposure is 5-7/8".

STEP 11:

INSTALL THE SECOND, THIRD AND FOURTH COURSES:

Trim off 10", 20", and 30" respectively, from the left end of the starting shingle and apply to overhang rake edge by 1/4" to 3/4". Continue each course across the roof with full shingles butting ends loosely. Align the bottom edge of the shingles with the tops of the saw teeth of the shingles in the underlying course. Note: Other offsets between 6" – 10" may be used. These alternative offsets will not adversely affect the applicable provisions of IKO's Limited Warranty, but may in some instances result in aesthetic issues.

STEP 12:

INSTALL THE FIFTH AND SUCCEEDING COURSES:

Repeat the sequence of the first four courses up the roof. For maximum wind protection, cement shingles at rake edges.

STEP 13:

MANUALLY SEAL SHINGLES (IF NEEDED): Shingles should seal to the underlying course when the factory applied asphalt sealant is sufficiently warmed by the heat of direct sunlight. When conditions such as cool weather, high winds or blowing dust might limit the effectiveness of the sealing strip, please follow the steep slope requirements above and manually apply roofing cement.

STEP 14:

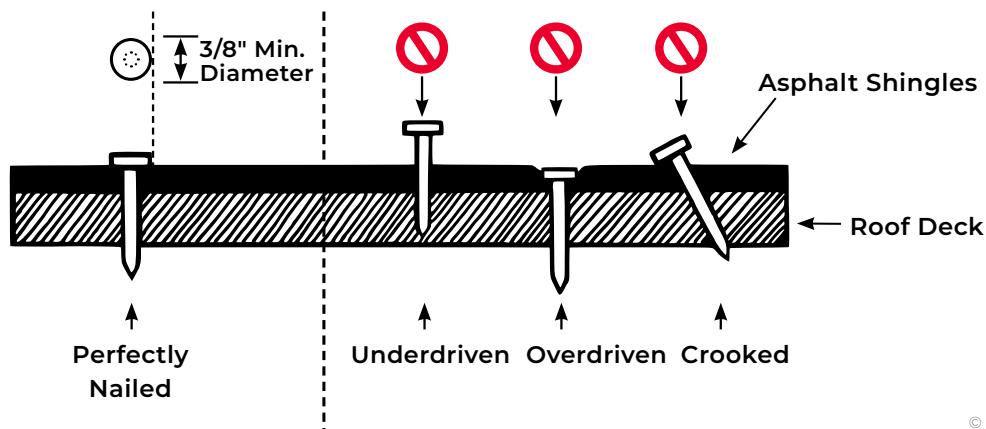
INSTALL HIPS AND RIDGES: IKO recommends its pre-cut hip and ridge products, or pre-formed high profile IKO UltraHP. For IKO pre-cut hip and ridge products, bend each piece over the hip or ridge, and nail per instructions on the wrapper. The exposed nail heads of the final shingle should be covered with roofing cement. For IKO UltraHP, follow the instructions on the box. Prior to application in cold weather, store hip and ridge shingles in a heated area to allow for easier bending.

IMPORTANT MESSAGE • PLEASE READ!

Shingles should seal to the underlying course when the factory applied asphalt sealant is sufficiently warmed by the heat of direct sunlight. When application conditions might limit the effectiveness of the sealing strip, such as in cool weather or in areas subject to high winds or blowing dust, shingle adherence should be ensured through manual sealing as described above. Starter strip shingles must be used at all eaves. Manual sealing is not required in the state of Florida.

IMPORTANT: FOR APPLICATIONS IT IS CRITICAL TO USE THE NAIL LINES AS A GUIDE AND POSITION NAILS IN EITHER NAIL LINE, OR IN THE ZONE BETWEEN THE NAIL LINES. IMPROPER NAILING CAN VOID IKO'S LIMITED WARRANTY.

FASTENERS: Nails must be 11 or 12-gauge roofing nails, corrosion-resistant, with at least 3/8" heads, and at least 1" long. For decks 3/4" thick or thicker, nails must go at least 3/4" into the deck. On thinner decks, nails must go at least 1/8" through the deck.



Application of Asphalt Shingles on Slopes Greater Than 21:12

Revised October 2024

The maximum slope ARMA considers suitable for normal asphalt shingle application is 21:12, or 21" per foot. The use of asphalt shingles on slopes greater than 21:12 (e.g., mansard roofs) requires special application methods because such very steep slopes reduce the effectiveness of factory-applied self-sealing adhesives, especially in colder climates and shaded areas. If normal application methods are used for asphalt shingles on very steep slopes, problems can occur that are not a result of any weakness or defect in the product but rather because special application methods for very steep slopes were not employed.

If a roof slope exceeds 21:12, the shingles should be applied by the following recommended method:

- Secure the shingle to the roof deck with fasteners as directed by the roofing manufacturer. Manufacturer directions may call for more than the normal number of fasteners per shingle and may provide specific fastener locations. On very steep slope roofs, correct placement of nails on laminated (two-piece) shingles is even more critical as the nails will penetrate both shingle layers when placed correctly. If the nails are placed too high on the shingle, it is possible that, over time, the bottom layer, which will be held in place only by the factory-applied adhesive, may delaminate and slide off the roof.
- Apply a manufacturer-recommended asphalt roof cement complying with ASTM D4586, *Standard Specification for Asphalt Roof Cement, Asbestos-Free*, or other cements approved by the roofing manufacturer under all shingle tabs in spots equivalent to the size of a quarter (about 1" or 25mm diameter), immediately upon installation.
- For standard laminated shingles (i.e., 'no cut-out' shingles), apply four spots of cement under each shingle near the lowermost edge, with two near the corners and two equally spaced between the corners.
 - For 'three-tab' shingles, apply two spots of cement under each tab near the lowermost corners.
 - For other specialty shingles, refer to the manufacturer's recommendations.
- Over-application of adhesives is not recommended; follow the manufacturer's recommendation for cement type and minimum and maximum quantities.
- An unvented space may be behind a mansard roof. It is important to provide a properly ventilated flow-through air space behind the roof sheathing to prevent the entrapment of moisture-laden air. Additional information is available in ARMA's technical bulletins "Considerations in Attic Ventilation System Selection" and "Why Ventilation is Important."

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- See also ARMA's *Residential Asphalt Roofing Manual*.

DISCLAIMER OF LIABILITY: This document was prepared by the Asphalt Roofing Manufacturers Association and is disseminated for informational purposes only. Nothing contained herein is intended to revoke or change the requirements or specifications of the individual roofing material manufacturers or local, state and federal building officials that have jurisdiction in your area. Any question, or inquiry, as to the requirements or specifications of a manufacturer, should be directed to the roofing manufacturer concerned. THE USER IS RESPONSIBLE FOR ASSURING COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.

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DESIGNATED SUBSTANCES SURVEY

Kawartha Golf and Country Club
777 Clonsilla Avenue
Peterborough, Ontario

Prepared for:
Kawartha Golf and Country Club

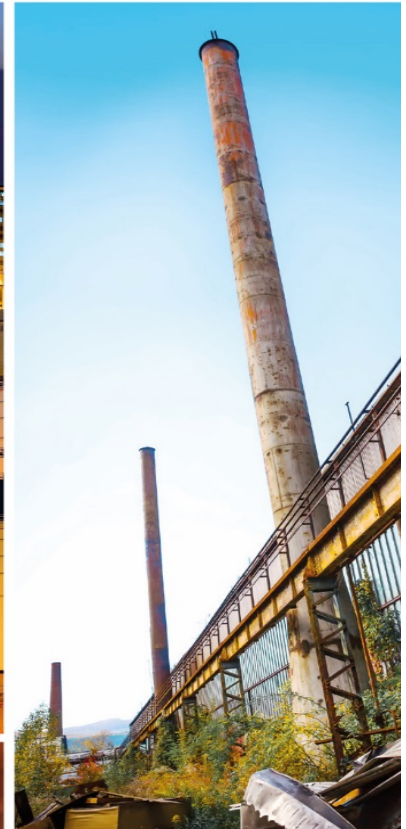




Table of Contents

1.	Introduction.....	1
2.	Regulations and Guidance.....	2
3.	Scope of Work.....	3
4.	Site Overview	4
5.	Records Review	4
6.	Site Inspection.....	5
	6.1 Sampling Plan.....	5
7.	Designated Substance Survey.....	7
	7.1 Asbestos	7
	7.2 Lead	9
	7.3 Mercury	10
	7.4 Mould Assessment.....	12
	7.5 Air-O-Cell Mould Testing	12
	7.6 PCB Containing Equipment.....	13
	7.7 Silica	14
	7.8 Urea Formaldehyde Foam Insulation	14
	7.9 Ozone Depleting Substances (ODS).....	14
	7.10 Radioactive Materials.....	14
	7.11 Acrylonitrile	15
	7.12 Arsenic	15
	7.13 Benzene.....	15
	7.14 Coke Oven Emissions.....	15
	7.15 Ethylene Oxide.....	15
	7.16 Isocyanates.....	16
	7.17 Vinyl Chloride.....	16
8.	Conclusions and Recommendations.....	17
	8.1 Conclusions	17
	8.2 Notification and Documentation	18
9.	Statement of Limitations.....	19
10.	Signatures	20



Table Index

Table 6.1	Summary of Building Materials Sampled	5
Table 7.1	Summary of Asbestos Testing Results	8
Table 7.2	Summary of Lead Testing Results	10
Table 7.3	Summary of Mercury Testing Results	11
Table 7.4	Air Sampling Locations	12

Appendix Index

Appendix A	Site Investigation Photo Log
Appendix B	Asbestos Certificates of Analysis
Appendix C	Lead Certificates of Analysis
Appendix D	Mercury Certificates of Analysis

Enclosures

Figure 1	Vicinity Plan
Figure 2	Property Plan
Figure 3A	Club House Floor Plan
Figure 3B	Pro Shop Floor Plan
Figure 4A	Club House Sampling Plan
Figure 4B	Pro Shop Sampling Plan



1. Introduction

This report presents the results of a Designated Substance Survey (DSS) for the Kawartha Golf and Country Club, located at the municipal address of 777 Clonsilla Avenue in the City of Peterborough, Ontario (herein referred to as “the Site”). This report outlines the DSS investigation of the Club House and Pro Shop buildings. The work for this DSS was conducted at the request of Mr. Rob Elliott, representing Kawartha Golf and Country Club.

The Club House was constructed prior to the 1930s and was originally a farm house. The Pro Shop was constructed around the same time and was the original barn. Various renovations and additions have taken place throughout the 1900s. The most recent addition is believed to be the banquet hall, located on the south side of the Club House. Based on visual observations, the buildings were observed to be in fair condition, with peeling of paint, crumbling of plasters and water damage observed in some areas. The majority of areas of the buildings were open and accessible at the time of the inspection, with the exception of a few smaller closets in various areas.

The location is illustrated, with respect to surrounding roads and watercourses, on the Vicinity Plan, Figure 1. The Property Plan, Figure 2 is based on a recent aerial photograph, and illustrates the Site location and surrounding properties. The general layouts of the buildings are depicted on the Floor Plans, Figures 3A and 3B. Figures 4A and 4B depict building material sample and air monitoring locations conducted as part of this investigation.

The objective of the survey was to identify potential designated material substances and confirm the presence, estimate quantities, and provide recommended practices to manage designate materials as defined by provincial and federal regulations. The materials evaluated at the Site included the following:

- asbestos containing materials (ACM);
- lead (including lead-based paints an lead-containing materials);
- mercury;
- polychlorinated biphenyls (PCBs);
- silica;
- urea formaldehyde foam insulation (UFFI);
- ozone depleting substances (ODS);
- radioactive materials;
- other hazardous materials including paints, solvents, oils, lubricants and fuels; and
- biological hazardous materials including mould and rodent/bird droppings.

Maintenance and abatement activities involving designated materials must be done in compliance with Part II of the Canada Labour Code (Occupational Health and Safety) and the Canadian Occupational Health and Safety (COHS) Regulations for federally regulated employees and the Ontario Occupational Health and Safety Act or provincially regulated employees. Employers with workers who have a risk of exposure must have an exposure control plan in place prior to allowing their workers to come into contact with identified hazardous material. As with all hazardous substances, all personnel working around or with such materials must be made aware of their presence and be supplied with specific training in the potential health effects and means of avoiding exposures.



2. Regulations and Guidance

Overall, the Ontario Occupational Health and Safety Act protects the health and safety of provincially regulated workers and Part II of the Canada Labour Code (Occupational Health and Safety) and the Canadian Occupational Health and Safety (COHS) Regulations protect the health and safety of federally regulated employees. In addition, various provincial and federal laws and regulations and supplemental guidance govern the use, management, and disposal of the various materials discussed in this report.

The survey references the following regulations and guidance documents:

- Occupational Health and Safety Act (OHSA) Section 30 Duty of Project Owners
- O. Reg. 490/09 Designated Substances
- O. Reg. 278/05 Asbestos on Construction Projects and in Building and Repair Operations and the corresponding Guideline (Ontario Ministry of Labour [MOL], May 2011)
- Lead Guideline for Construction, Renovation, Maintenance or Repair (Environmental Abatement Contractors of Ontario [EACO], October 2014)
- Guideline for Lead on Construction Projects (MOL, April 2011)
- Canadian Surface Coating Materials Regulation (SOR/2005-109 dated April 19, 2005, as amended in 2010), pursuant to the 2005 Hazardous Products Act
- Canadian PCB Regulations (SOR/2008-273)
- O. Reg. 362 Waste Management – PCBs
- Guideline for Silica on Construction Projects (MOL, April 2011)
- Mercury-Containing Products Pollution Prevention Fact Sheet #21 (Ministry of the Environment [MOE], September 2001)
- O. Reg. 347/90 General Waste Management
- Document 82, Mould Guidelines (Canadian Construction Association [CCA], November 2004)
- Mould Abatement Guidelines (Edition 3, EACO, 2015)
- Federal Halocarbon Regulations (FHR) (SOR/2003-289)
- Ozone depleting Substances Regulations (SOR/2016-137)
- O. Reg. 463/10 ODS and Other Halocarbons
- Construction Safety Association of Ontario – Synthetic Vitreous Fibres, Guidelines for Construction (Construction Safety Association of Ontario, 2005)



3. Scope of Work

The survey involved the assessment of accessible interior and exterior building materials, mechanical equipment, electrical equipment, and other building features. The survey of the building unit included the inspection for the following:

- ACM;
- Lead-containing materials, including lead-based paint;
- Mercury;
- PCB-containing equipment;
- silica;
- UFFI;
- ODS-containing equipment and materials;
- Radioactive materials;
- Paints and solvents, oils and lubricants, and fuels; and
- Biological hazardous materials, including mould growth and rodent/bird droppings.

The survey included sampling of the following materials:

- Suspected ACM; and
- Suspected lead/ mercury paints.

The survey also included the visual inspection for mould, and air quality testing to assess the prevalence of mould spores within the air surrounding “worst-case” and background areas.

It should be noted that data from the analyses of materials that appeared visually similar were sampled once and the data extrapolated to characterize the material's expanse within the structure.

The survey also included the preparation of a report and recommendations regarding removal, disposal and/or containment options for the identified hazardous materials, with reference to compliance with specific legislative provincial and federal requirements for disposal and/or handling.

The following items were not inspected or sampled as part of the Site inspection since these items were not readily accessible or practical to safely access for inspection or sampling or were not necessary to inspect based on the age and type of construction:

- Components or wiring within motors, lights or other electrical systems, equipment, wiring, and fixtures;
- Below-grade structure and utilities;
- Fiberglass insulation; and,
- Ceramic Materials.



4. Site Overview

The Site is located in a commercial and residential area within the City of Peterborough, Ontario. The Kawartha Golf and Country Club was established in the early 1900s. The Club House building was constructed in the early 1900s and was formerly a farm house. The Pro Shop building was constructed around the same time and was formerly a barn. Various additions and renovations have taken place at the Site throughout the 1900s. Based on conversations with site representatives, the most recent addition/renovation was the Banquet Hall located on the south side of the Club House.

The Club House is generally constructed of wood, stone and concrete, and is finished with plaster/drywall on the interior. Walls are generally painted. Older paint was observed to be flaking/peeling in several areas. Flooring was observed to be vinyl tile, wood, ceramic tile and carpet. Poured concrete was observed in the basement. Ceilings were generally drywall/plaster or drop ceiling tiles. Shingles were present on the roof of the building, which were sampled as part of this investigation.

The Pro Shop is also generally constructed of wood, concrete and stone, and is finished with plaster/drywall on the interior. The portion of the building containing the original barn is unfinished. Interior walls of the Pro Shop are drywall. Ceilings are plaster and drywall. Flooring is generally carpet, with poured concrete observed in the bathroom. Roofing was observed to be membrane, which was not sampled due to water penetration concerns. Exterior walls were vinyl siding. The silo portion had concrete floors, and plaster finished stone walls.

Two storage sheds are present behind the Pro Shop. The sheds were observed to be concrete slab-on-grade, and constructed of wood and metal materials. No samples were collected from the sheds.

Based on visual observations, building materials were generally in fair condition, with peeling of paint, crumbling of plasters and water damage observed in some areas. Roof leaks were observed in the men's change room of the Club House, and the back room of the Pro Shop. Indications of mould were observed in the back room of the Pro Shop.

The location is illustrated, with respect to surrounding roads and watercourses, on the Vicinity Plan, Figure 1. The Property Plan outlining the location of the Site in relation to the surrounding properties is presented on Figure 2.

5. Records Review

No previous historical survey information (e.g., surveys and abatement records) were provided to GHD for review of the building assessed as part of this DSS.



6. Site Inspection

Members of the GHD staff completed a survey and collected samples of building materials from the various locations on April 8, 2019. Only accessible areas were inspected and catalogued. Inaccessible areas included areas behind wall coverings, areas not accessible without damaging materials or not safely accessible areas. Samples were obtained across each representative area and represent the materials encountered and observed during the investigation.

The investigation was conducted on the interior and exterior portions of the building. Based on visual observations, the buildings were observed to be in fair condition, with peeling of paint and crumbling of plasters and water damage observed in some areas.

Lighting throughout the building was either fluorescent light fixtures or specialty lighting. Where present, pipe insulation appeared to be newer fiberglass insulation. No older style pipe wrapping was observed by GHD.

The general layouts of the buildings is presented on the Floor Plans, Figures 3A and 3B.

6.1 Sampling Plan

Samples of building materials collected included drywall joint compound, plaster/finishing materials, brick mortar, paper insulation, caulking, flooring materials, ceiling tiles, parging, roofing materials, and paint chips. A description of the various sampling and testing results is provided in the following summary table. Wherever possible, each sample set contained a minimum of three (3) separate sub-samples of the material. Figures 4A and 4B present the sample plans, which identify the building material sampling locations for asbestos, lead and mercury.

Table 6.1 Summary of Building Materials Sampled

Sample ID	Location	Description	Condition
PC-01A	Kitchen Walls	White Wall Paint	Peeling
PC-01B	Men's 2 nd Floor Change Room		Peeling
PC-01C	Ladies 2 nd Floor Change Room		Peeling
PC-01D	West Side Exterior Wall	Exterior White Paint	Peeling
PC-01E	Office - Pro Shop	White Ceiling Paint	Good
PC-01F	Back Room – Pro Shop		Good
PC-01G	Exterior Door – Pro Shop	White Door Paint	Peeling
PC-02A	Men's 2 nd Floor Change Room	Beige Wall Paint	Peeling
PC-02B	East Entrance to Banquet Hall		Good
PC-02C	Stairwell (east of Kitchen) to Basement		Peeling
PC-03A	Men's 2 nd Floor Change Room	Brown Window Paint	Peeling
PC-03B	Exterior Windows of Banquet Hall		Peeling
PC-04A	2 nd Floor Common Room Hallway	Grey Wall/ Ceiling Paint	Good
PC-05A	South End of Banquet Hall	Light Brown Exterior	Peeling



Table 6.1 Summary of Building Materials Sampled

Sample ID	Location	Description	Condition
		Window Paint	
PC-06A	Bathroom (unused) – Pro Shop	Blue Floor Paint on Concrete	Peeling
PC-07A	Original Barn Portion	Green Paint on Wood	Peeling
DW-01A-G	Club House	Drywall Mud	Good
DW-02A-G	Pro Shop		Good
ST-01A	Exterior Walls – Club House	Exterior White Finish	Good
ST-01B			Good
ST-01C			Good
ST-02A	Banquet Hall – Club House	Ceiling/ Wall Finish	Good
ST-02B			Good
ST-02C			Good
VT-01A	Kitchen – Club House	12' x 12' White Vinyl Floor Tiles	Good
VT-01B			Good
VT-01C			Good
VT-03A	Main Floor Men's Washroom – Club House	12" x 12" Green Vinyl Floor Tiles	Good
VT-03B			Good
VT-03C			Good
VT-05A	East Stair Well – Club House	Sponge Flooring	Good
VT-05B			Good
VT-05C			Good
VT-06A	Main Floor – Club House	Green Linoleum	Good
VT-06B			Good
VT-06C			Good
CT-01A	Main Floor – Club House	2' x 2' Drop Ceiling Tiles	Good
CT-01B			Good
CT-01C			Good
CT-02A	Pro Shop	2' x 2' Drop Ceiling Tiles	Good
CT-02B			Good
CT-02C			Good
CK-01A	Exterior Windows – Club House	Window Caulking	Fair
CK-01B			Fair
CK-01C			Fair
PA-01A	Old Silo – Pro Shop	Wall Parging	Good
PA-01B			Good
PA-01C			Good
RF-01A	Roof – Club House	Shingles	Good
RF-01B			Good
RF-01C			Good
PL-01A	Men's Change Room – Club House	Wall Plaster	Crumbling
PL-01B			Crumbling



Table 6.1 Summary of Building Materials Sampled

Sample ID	Location	Description	Condition
PL-01C	Office – Pro Shop		Good
GY-01A	Basement – Club House	Brick Mortar	Good
GY-01B			Good
GY-01C			Good
GY-02A	Basement – Club House	Electrical Room Paper	Good
GY-02B			Good
GY-02C			Good
GY-03A	Attic – Pro Shop	Paper Insulation	Ripped
GY-03B			Ripped
GY-03C			Ripped

Notes: DW = Drywall, PL = Plaster, CT = Ceiling Tile, VT = Vinyl Tile, CK = Caulking, PW = Pipe Wrap, GY = Misc. Materials, PC = Paint chips (Lead test), MC = Paint chips(Mercury test).

7. Designated Substance Survey

This section presents the results of the designated materials survey. A photographic log illustrating the general facility layout and observations of building materials is provided in Appendix A.

7.1 Asbestos

Asbestos is a group of fibrous minerals that occur naturally in soil and rock. Asbestos fibres were formerly used (primarily for their insulating and fireproofing properties) in roofing shingles, ceiling tiles, floor tiles, drywall mastic, asbestos cement products, gaskets, insulation, paper products, and other building and insulating products.

The ACM survey and sampling was completed in accordance with Ontario Regulation (O.Reg.) 278/05 entitled "Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations". Building materials are defined to be asbestos containing if the concentrations are greater than the Provincial guideline of 0.5% (by volume).

All samples were forwarded EMSL Analytical Inc. (EMSL) in Mississauga for analytical testing. Table 7.1 provides a list of materials sampled for ACMs with results provided as percentage volume. The Certificates of Analysis for ACMs are provided in Appendix B. Figures 4A and 4B present the sample location plans, which outline the respective asbestos building material sampling locations.

Generally, pipes exposed were constructed of either metal or PVC. Although transite piping was not observed during our investigation, there is a risk it may still be present within unexposed walls, and ceiling tiles at the Site. Transite pipe is typically non-friable and is assumed to contain asbestos.

Building materials collected and analyzed as part of the investigation for asbestos included drywall joint compound, plaster/finishing materials, brick mortar, paper insulation, caulking, flooring materials, ceiling tiles, parging and roofing materials.



Asbestos was detected at levels higher than the provincial criteria of 0.5% within the ceiling finishing material in the Banquet Hall and the electrical room paper in the basement of the club house. The materials were observed to be in fair condition. If these materials require removal they should be removed by a qualified contractor. Care should be taken during demolition and renovation as additional piping may be encountered behind wall and ceiling coverings that were not accessed in this investigation. Depending on the type of work to be completed, further testing may be warranted based on the asbestos containing materials found.

Table 7.1 Summary of Asbestos Testing Results

Sample ID	Location	Description	Analytical Results (% by volume and type of asbestos)*
DW-01A-G	Club House	Drywall Mud	ND
DW-02A-G	Pro Shop		ND
ST-01A	Exterior Walls – Club House	Exterior White Finish	ND
ST-01B			ND
ST-01C			ND
ST-02A	Banquet Hall – Club House	Ceiling/ Wall Finish	1% Chrysotile
ST-02B			--
ST-02C			--
VT-01A	Kitchen – Club House	12' x 12' White Vinyl Floor Tiles	ND
VT-01B			ND
VT-01C			ND
VT-03A	Main Floor Men's Washroom – Club House	12" x 12" Green Vinyl Floor Tiles	ND
VT-03B			ND
VT-03C			ND
VT-05A	East Stair Well – Club House	Sponge Flooring	ND
VT-05B			ND
VT-05C			ND
VT-06A	Main Floor – Club House	Green Linoleum	ND
VT-06B			ND
VT-06C			ND
CT-01A	Main Floor – Club House	2' x 2' Drop Ceiling Tiles	ND
CT-01B			ND
CT-01C			ND
CT-02A	Pro Shop	2' x 2' Drop Ceiling Tiles	ND
CT-02B			ND
CT-02C			ND
CK-01A	Exterior Windows – Club House	Window Caulking	ND
CK-01B			ND
CK-01C			ND
PA-01A	Old Silo – Pro Shop	Wall Parging	ND



Sample ID	Location	Description	Analytical Results (% by volume and type of asbestos)*
PA-01B			ND
PA-01C			ND
RF-01A	Roof – Club House	Shingles	ND
RF-01B			ND
RF-01C			ND
PL-01A	Men's Change Room – Club House	Wall Plaster	ND
PL-01B	House		ND
PL-01C	Office – Pro Shop		ND
GY-01A	Basement – Club House	Brick Mortar	ND
GY-01B			ND
GY-01C			ND
GY-02A	Basement – Club House	Electrical Room Paper	35% Chrysotile
GY-02B			--
GY-02C			--
GY-03A	Attic – Pro Shop	Paper Insulation	<0.25% Chrysotile
GY-03B			<0.25% Chrysotile
GY-03C			<0.25% Chrysotile

Notes: See Appendix B for Certificate of Analysis.

DW = Drywall PL = Plaster, GY = Misc. materials, ST = Stucco, CT = Ceiling Tile, VT = Vinyl Tile, PA = Parging,

CK = Caulking, RF = Roofing Materials, GY = Misc. Materials

-- indicates not analyzed due to positive stop

BOLD values indicate a detectable concentration identified during laboratory analysis.

7.2 Lead

Lead is a naturally occurring bluish-grey metal that is solid at room temperature. Lead is used in the manufacture of batteries, solder, paint, and piping. Lead is known to be present in electrical and plumbing equipment (solder), electrical conduit, batteries, older paints, and older piping system materials. Figures 4A and 4B present the lead sample location plans which outline the respective building material sampling locations at the Site.

The Canadian federal government has been limiting the amount of lead in paint to 0.5 percent (5,000 mg/kg) since 1976. Paint used in buildings before 1960 likely contained elevated levels of lead. Buildings constructed after 1980 are unlikely to have interior paint containing elevated concentrations of lead. In addition, buildings constructed after 1992 are unlikely to have exterior lead containing paint. The federal Surface Coating Materials Regulation was revised pursuant to the 2010 Hazardous Products Act, to define lead based paint as paint containing 0.009 percent by weight (90 ug/g or 90 ppm) of lead. The general industry practice is to consider paint with 0.009 percent by weight (90 ug/g or 90 ppm) lead or more as lead based paint.

Representative samples of paint were collected and submitted for analysis for lead. The Certificate of Analysis is presented in Appendix C. A summary of lead paint testing is presented in Table 7.2.



Table 7.2 Summary of Lead Testing Results

Sample ID	Location	Description	Analytical Results % by weight
PC-01A	Kitchen Walls	White Wall Paint	0.11
PC-01B	Men's 2 nd Floor Change Room		0.18
PC-01C	Ladies 2 nd Floor Change Room		0.062
PC-01D	West Side Exterior Wall	Exterior White Paint	0.17
PC-01E	Office - Pro Shop	White Ceiling Paint	<0.0082
PC-01F	Back Room – Pro Shop		<0.0083
PC-01G	Exterior Door – Pro Shop	White Door Paint	<0.0082
PC-02A	Men's 2 nd Floor Change Room	Beige Wall Paint	0.059
PC-02B	East Entrance to Banquet Hall		0.22
PC-02C	Stairwell (east of Kitchen) to Basement		<0.0081
PC-03A	Men's 2 nd Floor Change Room	Brown Window Paint	0.34
PC-03B	East Windows of Banquet Hall		0.056
PC-04A	2 nd Floor Common Room Hallway	Grey Wall/ Ceiling Paint	0.11
PC-05A	South End of Banquet Hall	Light Brown Exterior Window Paint	<0.0080
PC-06A	Bathroom (unused) – Pro Shop	Blue Floor Paint on Concrete	0.041
PC-07A	Old Silo (Original Barn)	Green Paint on Wood	2.5

Notes: See Appendix C for Certificate of Analysis. <## = Below method detection limited for sample analyzed.
BOLD values indicate lead concentration greater than 0.009 percent by weight.

The results of the chemical testing indicate varying levels of lead content in the paint surfaces tested. Several paint surfaces tested were identified as containing concentrations greater than 0.009 percent by weight. Depending on the activity taking place, for example sanding or grinding, safety measures may be prudent.

The Ontario OH&S Regulation and CCOHS require that worker exposure to airborne lead be kept below 0.05 mg/m³. Further details can be found in the Ministry of Labour document Guideline – Lead on Construction Projects. Ontario Regulation 558/00 provides requirements to handle and dispose of waste which is characteristically hazardous for lead, specifically in terms of leachate quality. The allowable leachate concentration in materials, including lead based paint, is 5 mg/L.

7.3 Mercury

Mercury is a naturally occurring metal. At room temperature, it is a shiny, silver-coloured, odourless liquid. When heated it becomes a colourless, odourless gas. Mercury is often used in electrical switches, thermostats, thermometers, dental fillings, certain batteries, and some manufacturing processes. Mercury containing thermostats were observed during the site inspection.



At the time of the inspection, fluorescent lighting fixtures were observed throughout the building. During removal, the fluorescent bulbs would be required to be handled in accordance with Ontario Regulation 347/90, General Waste Management. Most fluorescent lamps qualify as hazardous waste when removed from service and are therefore prohibited from disposal in the solid waste stream. Fluorescent lamps would be classified as 146T on a facilities' Generator Registration Report under Ontario, Regulation 347/90 - General Waste Management, as amended by Ontario Regulation 558/00. Under this regulation, if the leachate results exceed 0.1 milligrams of mercury per litre for a given waste, then the facility must treat the waste as hazardous waste. Most fluorescent and HID lamps will exceed the leachate toxicity limit. Therefore, these wastes must be registered and treated as hazardous waste or sent for recycling. Any waste that fails the test and that are managed off-site are required to be manifested, transported by a certified carrier and shipped to a certified receiver. The generator must also be registered.

However, generators that produce less than 5kg a month are subject to the Small Quantity Exemption from the regulation. The Small Quantity Exemption (SQE) for mercury as a hazardous waste chemical, or as a leachate toxic waste is 5kg of waste per month. If your facility generates more than 5kg in a one-month period, or accumulates more than 5kg on your site over any period, registration is required. Empty containers and liners are not considered as hazardous waste under Ontario Regulation 347. The 5kg SQE only exempts small volumes from manifesting the waste. The homeowner is still responsible for recycling or disposing of the hazardous waste properly.

The 5kg Small Quantity Exemption (SQE) limit applies to the total weight of the fluorescent tube, including all its components and packaging. Using the data from the table, the SQE limit for manifesting 4-foot fluorescent tubes that weigh 0.3125kg would be equivalent to approximately 16 standard tubes (5kg/0.3125kg).

Facilities should assume that their lamps are hazardous waste unless tests of their spent lamps and fragments confirm that the wastes are non-hazardous as described in the Toxicity Characteristic Leaching Procedure, Method 1311, U.S. EPA Publication SW-846.1. Used lamps must be handled carefully to ensure they do not break or implode and release mercury. Lamps must be stored properly to prevent them from breaking such as in the boxes the lamps came in or boxes supplied by lamp recyclers.

Representative samples of paint were collected and submitted for analysis for mercury. The Certificate of Analysis is presented in Appendix D. A summary of the mercury paint testing is presented in Table 7.3.

Table 7.3 Summary of Mercury Testing Results

Sample ID	Location	Description	Analytical Results (mg/Kg)
MC-01D	West Side Exterior Wall	Exterior White Paint	31
MC-03B	East Windows of Banquet Hall	Brown Window Paint	2.8

Notes: See Appendix D for Certificate of Analysis. ND = below method detection limited for sample analyzed. **BOLD** values indicate detectable levels of mercury.



The results of the chemical testing indicate the presence of mercury content in both of the paint surfaces tested. The Ontario Ministry of Labour (MOL) Occupational Exposure Level (OEL) for airborne alkyl mercury is 0.03 mg/m³. The results of the testing indicate the presence of mercury and depending on the activity taking place, for example sanding or grinding, further safety measures may be prudent.

7.4 Mould Assessment

A mould assessment was conducted in general accordance with the Canadian Construction Association “Mould Guidelines for the Canadian Construction Industry” dated March 2004. The CCA Mould Guideline process was developed using elements common to several other guidelines published by groups such as the New York Department of Health Guidelines, the Canadian Health Guidelines and Environmental Abatement Counsel of Ontario, the Institute of Inspection, Cleaning and Restoration Certification (IICRC), U.S. Environmental Protection Agency (EPA). The common factor to all the guidelines is the need to remediate mould contaminated building materials under controlled conditions.

The following table outlines the sample locations:

Table 7.4 Air Sampling Locations

Sample Identification	Sample Location	Description
AS-01	Outside – Club House	Background Outdoor sample represents relative baseline spore count to which indoor samples are compared.
AS-02	Inside Banquet Hall – Club House	Indoor sample in clean environment. Worst-case samples can be compared to areas where mould spores are not suspected.
AS-03	Office Area – Club House	Air sample in area occupied by employees. Represents general air conditions encountered for the majority of a working day.
AS-04	2 nd Floor Men’s Locker Room – Club House	Air sample near water-damaged ceiling. Represents general air conditions where mould impacts would be most prevalent.
AS-05	Storage Room – Pro Shop	Air sample near visible mould on ceiling. Represents general air conditions where mould impacts would be most prevalent.

7.5 Air-O-Cell Mould Testing

Bio-aerosols are naturally occurring biological particles suspended in the air, which is also more commonly referred to as organic dust. Bio-aerosols generally consist of airborne fungi (spores), microbial toxins, pollen, viruses and various bacteria. In general indoor microflora concentrations of healthy indoor environments are lower than outdoor concentrations, thus typically reference samples are collected from the outdoors to compare with the indoor concentrations.



Exterior and interior air sampling was performed on April 12, 2019. An exterior baseline sample provides indication as to what mould generally would be expected in “fresh air” and is variable based on seasonal conditions. Air-O-Cell samples were obtained with use of a high-volume air pump operated at 10 liters per minute passing air through Air-O-Cell cartridges for approximately 10 minutes. Samples were representative of 100 liters (cumulative volume). Sample filters were submitted for analytical testing of viable spore counts.

The result of the air testing are included in Appendix E. The exterior sample analyzed indicates cladosporium spores and basidiospores, indicative of background conditions. Interior samples AS-03, AS-04, AS-05 showed the addition of aspergillus/penicillium-like spores. Spore counts in the storage room of the Pro Shop are seen to be higher than those observed in the other areas. Based on the counts observed, mould growth is expected.

It should be noted that further water damage to various areas, in conjunction with a change in conditions (i.e. warmer weather) may provide the potential for further mould growth. It is recommended that ventilation be promoted and dehumidification utilized when appropriate.

7.6 PCB Containing Equipment

GHD conducted a survey of potential PCB-containing equipment. The building was surveyed for potential PCBs containing equipment including fluorescent light ballasts, electrical transformers, and capacitors. During the survey, GHD observed fluorescent light fixtures throughout the building. The fixtures appeared of varying ages, but were generally newer and in fair condition.

A ballast from the common room on the 2nd floor of the Club House was checked for the presence of PCBs. An older, unused ballast stored in the old silo entrance of the Prop Shop was also checked for PCBs. Both ballasts were identified as non-PCB containing.

For all fluorescent light fixtures encountered during renovation or demolition, they should have the ballast checked to determine if it contains PCBs. Ballasts manufactured prior to 1980 typically contain PCBs. PCB-containing ballasts should be separated from non-PCB ballasts to ensure proper handling and disposal.

Newer fixtures are generally identified on their labels as “No PCBs” or “Non-PCB” ballasts. Due to the numerous companies that manufactured ballasts, and the challenge to identify if PCBs are present, the ballast should be considered as containing PCBs if it cannot be found to have been manufactured after July 1, 1980. Reference is made to Commercial Chemicals Branch of Environment Canada “Identification of Lamp Ballasts Containing PCBs”, report EPS 2/CC/2 (revised) August, 1991 for assessing ballasts as to the possible presence of PCBs.

Any removed lighting ballast identified or suspected as containing PCBs are classified as a subject waste and require special handling and disposal under Ontario Regulation 347, under the Environmental Protection Act, when the lights are removed or replaced. The ballasts should be removed from the fixtures and stored in accordance with the Canadian Council of Ministers of the Environment “Guidelines for the Management of Wastes Containing PCBs, September, 1999.



7.7 Silica

Silica is a transparent to grey odourless powder or crystal at room temperature. It occurs widely in nature as sand, quartz, flint, and diatomite. Silica is used in the manufacture of glass, ceramics, abrasives, water treatment products, cosmetics, insecticides, paint, and foods. Silica is also used as a drying agent or preservative. Crystalline silica materials also are used in the production of concrete, cement, acoustic ceiling tiles, stucco, and ceramic tiles which are used for construction purposes.

Based on the Site inspection, crystalline silica may be present in the poured concrete floors and foundations. Silica is a hazardous substance regulated under the Ontario OH&S Regulation. The Regulation identifies airborne exposure criteria, respirator requirements, and mandatory worker testing requirements. Many of the removal techniques (grinding, cutting, chipping etc.) for concrete can generate high levels of crystalline silica in the air. Use wetting techniques and/or extraction systems attached to drills and other power equipment are recommended where possible in order to decrease dust levels. Based on the Occupational Exposure Limits for Ontario Workplaces Required under Regulation 833 (Ministry of Labour, January 2013), total silicon dust levels shall not exceed a time weighted average of 10 mg/m³.

7.8 Urea Formaldehyde Foam Insulation

Urea Formaldehyde Foam Insulation (UFFI) was used in the 1970s as a building insulation material in certain buildings. UFFI was banned in 1978 due to concerns regarding formaldehyde emissions and exposure. Based on the Site inspection, and the type of insulation observed in accessible areas (i.e. fiberglass), UFFI is unlikely to be present in building materials.

7.9 Ozone Depleting Substances (ODS)

The most common uses of ODS are as refrigerants in commercial, home, and vehicle air conditioners and refrigerators, foam blowing agents, solvents, aerosol spray propellants, fire extinguishing agents, and chemical reactants. Based on the Site inspection, GHD observed several fire extinguishers throughout the building. Kitchen refrigerators and freezers were also observed during the site investigation.

If any potential ODS containing units are encountered during renovation or demolition and removal is required, they should be handled in accordance with COHC Regulations or Ontario OH&S Regulation and disposed/recycled in accordance with the Ontario Regulation 347 General - Waste Management.

7.10 Radioactive Materials

Smoke alarms may be present which contain small sealed radioactive sources in the form of Americium 241. These materials are sealed into a metal case within the smoke detector and must not be damaged or tampered with.

The Canadian Nuclear Safety Commission (CNSC) and the Canadian Nuclear Safety Act regulate radioactive materials, although the CNSC has stated that household-sized smoke alarms can be disposed of in regular municipal household garbage. If integrated smoke alarms are being removed from commercial or industrial facilities, the CNSC should be contacted for guidance on disposal.



7.11 Acrylonitrile

Acrylonitrile is a colourless to pale-yellow liquid at room temperature, with an unpleasant odour. It is used in the manufacturing of synthetic fibres, rubber, coatings, and adhesives. There is a potential for release of acrylonitrile if synthetic fibres in plastics, rubber, coatings, adhesives and other materials degrade and/or combust during a fire or are degraded during renovation or demolition activities.

Based on the inspection and age of the buildings, synthetic fibres are not expected in the baseboard mouldings and the adhesives; however if present the amount of acrylonitrile is anticipated to be low.

7.12 Arsenic

Arsenic is a silver-grey, brittle, crystalline solid at room temperature. Arsenic compounds are used as wood preservatives, insecticides, herbicides, and in metal alloys and are naturally present in certain minerals and soils. Wood materials are present throughout the buildings. Based on the type of wood observed and age / type of construction, it is not anticipated that the wooden materials within the designated work area which may contain arsenic wood preservatives.

7.13 Benzene

Benzene is a colourless liquid at room temperature with a sweet odour. Benzene and benzene-containing compounds are components of crude oil and refined petroleum products such as gasoline and are present in coal, natural gas and other materials. Benzene is used to manufacture other chemicals that are used to make plastic, resin, nylon, rubber, lubricants, detergents, pharmaceutical products, and other materials. Benzene or benzene-containing compounds may be released if plastic and petrochemical-based products present in the building (e.g., electrical wiring, piping, etc.) were to degrade and/or combust during a fire, or materials are degraded during renovation or demolition hot-work activities such as cutting with a torch. Based on the inspection and historical use of the buildings, benzene-containing products of a significant amount (e.g., dispensing of petroleum products and/or manufacturing raw materials, paints and lubricants) are not suspected at the Site.

7.14 Coke Oven Emissions

Coke oven emissions are the airborne constituents of the by-product created by destructive distillation of coal and petroleum. Coke oven emissions are typically associated with the production of steel and coal processing/coke manufacture. Based on the inspection and historical use of the buildings, coke oven emissions are not present at the Site.

7.15 Ethylene Oxide

Ethylene oxide is a colourless gas at room temperature and a liquid at 12°C. It is used in the manufacture of ethylene glycol, surfactants, fumigants, fungicides, and petroleum demulsifiers. Based on the inspection and historical use of the buildings, no sources of ethylene oxide as part of building components were identified at the Site.



7.16 Isocyanates

Isocyanates are compounds containing the isocyanate group (-NCO). They react with compounds containing alcohol (hydroxyl) groups to produce polyurethane polymers, which are components of polyurethane foams, thermoplastic elastomers, spandex fibres, and polyurethane paints.

Isocyanates are the raw materials that make up all polyurethane products.

Work that may involve exposure to isocyanates include painting, foam-blowing, and the manufacture of many polyurethane products, such as chemicals, polyurethane foam, insulation materials, surface coatings, car seats, furniture, foam mattresses, under-carpet padding, packaging materials, shoes, laminated fabrics, polyurethane rubber, and adhesives, and during the thermal degradation of polyurethane products. Based on the inspection and historical use of the Site, no significant isocyanate-containing substances were identified. Materials present at the site that may contain isocyanates would not be expected to contain significant concentrations of residual isocyanates.

7.17 Vinyl Chloride

Vinyl chloride is a colourless, flammable gas at room temperature with a mild, sweet odour. Vinyl chloride is a degradation product of organic industrial/commercial solvents such as perchloroethylene (PCE) and trichloroethylene (TCE) that are used as degreasing and dry cleaning agents.

One use of vinyl chloride is in the manufacturing of polyvinyl chloride (PVC), which is used in many plastic products including plastic pipe, electrical cable insulation, plumbing and conduit fixtures, clothing, upholstery, roofing and flooring materials. Based on the inspection of the buildings, there was minimal indication that vinyl chloride present at the Site. There is the potential for release of vinyl chloride if residual building piping, wire and cable coatings and other building materials degrade or combust during a fire or due to renovation or demolition hot-work activities but does not pose a potential concern for typical usage.



8. Conclusions and Recommendations

8.1 Conclusions

The following conclusions are based on the results of the designated substance survey conducted:

1. GHD completed an Asbestos Survey in accordance with O. Reg. 278/05. GHD's Asbestos Survey identified asbestos at concentrations in excess of 0.5 percent weight (the provincial definition of Asbestos Containing Material) in the following samples:

ST-02 Ceiling finishing material was encountered within the Banquet Hall and small adjacent room (entrance room) in the Club House. The sample analyzed was found to contain one (1) percent asbestos (chrysotile). This material is considered friable and was observed to be in good condition. As this material contains more than 0.5 percent dry weight asbestos, this is classified as an Asbestos Containing Material (ACM) under O.Reg.278/05. It is recommended that this material be inspected, at least on an annual basis, for condition.

GY-02 Fireproof paper was encountered behind electrical equipment on a small panel, located in the basement of the Club House. The sample was analyzed and found to contain thirty-five (35) percent asbestos (chrysotile). This material is considered friable and was observed to be in good condition. As this material contains more than 0.5 percent dry weight asbestos, this is classified as an Asbestos Containing Material (ACM) under O.Reg.278/05. It is recommended that an asbestos abatement contractor be contacted to evaluate the potential for removal or encapsulation of the material.

If hidden potential ACM are discovered inside walls, or behind other materials during demolition, work should cease until samples are analyzed. Alternatively, potential ACM can be managed as ACM for handling and disposal purposes. If required during renovation work, ACM should be removed and disposed of by a qualified contractor.

2. Paint materials were identified as containing lead throughout the Prop Shop and Club House. Lead is also expected in historic layers of paint not tested as part of this investigation. Work impacting the paint coatings must proceed in a manner that will contain any paint dust and remain in compliance with COHS Regulations or the Ontario OH&S Act and Regulations. Lead is also potentially present in plumbing solder. Waste disposal should be in accordance with Ontario Regulation 347 of the EPA.
3. Fluorescent light fixtures were observed throughout the buildings. Each individual light ballast removed as part of replacement, renovation and/or demolition activities should be checked for the presence of PCBs. If it cannot be confirmed that the ballasts do not contain PCBs, the ballasts must be handled and disposed of in accordance with the Canadian PCB Regulations (SOR/2008-273) and Ontario Regulation 347 of the EPA.
4. Mercury-containing materials were identified. This included fluorescent light tubes and both of the paint surfaces tested. Mercury may also be present in historic layers of paints not tested as part of this investigation. Work impacting the paint coatings must proceed in a manner that will contain any paint dust and remain in compliance with COHS Regulations or the Ontario OH&S Act and Regulations. Mercury in thermostats should be managed in accordance with local waste removal requirements.



5. Mould. Based on the volume of spore counts recorded in the storage room of the Pro Shop (AS-05), the potential for mould growth is present. Visual indications of mould growth were observed in the storage room of the Pro Shop. It should be noted that further water damage to the windows, in conjunction with a change in conditions (i.e. warmer weather) may provide the potential for further mould growth. It is recommended that ventilation be promoted and dehumidification utilized when appropriate. Additional sampling was also completed with the results expected after the submission of this report. An update letter will be provided.
6. Silica is likely present in concrete floors and foundations. Workers must use caution to avoid creating airborne silica dust while removing concrete and stucco. Wetting techniques and/or extraction systems should be attached to drills and other power equipment, where possible, in order to decrease dust levels.

8.2 Notification and Documentation

Notification and/or a copy of this report should be made available to tenants, employees and third party contractors working in the areas with designated substances when the building is renovated or demolished. Prior to conducting renovation or demolition work, relevant designated substances survey documentation and any ACM investigation/ removal reports should be made available to construction subcontractors. Work must stop pending additional testing and/or evaluation, should additional suspect hazardous materials be encountered during renovation or demolition activities.

Employers with workers who have a risk of exposure must have an exposure control plan in place prior to allowing their workers to come into contact with identified hazardous material. Maintenance staff and other employees that may potentially use or be exposed to hazardous substances should have awareness and other training in accordance with Part II of the Canada Labour Code and the COHS Regulations or the Ontario OH&S Act and MOL guidelines on proper use and/or handling of these materials and protection measures, as appropriate.

The owner of the building is required to complete an annual review of the materials identified with ACMs and reference is made to Ontario Regulation 278/05: Section 8, on-going asbestos management in buildings. GHD recommends that the areas tested positive for ACMs be inspected at a minimum on an annual basis and documented.

The removal of any designated substance materials or ACM should be documented and be available on file for review. It is recommended that this documentation be available during ACM annual reviews.



9. Statement of Limitations

This assessment was conducted in a manner consistent with that level of care and skill exercised by members of the profession currently practicing under similar conditions, and was based upon the information made available to GHD representatives at the time of this assessment. GHD has analyzed and evaluated the information collected during this investigation using applicable engineering and industrial hygiene techniques and principles.

This report is intended solely for Kawartha Golf and Country Club and other parties explicitly identified in the report in assessing designated substances within the building located at 777 Clonsilla Avenue in the City of Peterborough, Ontario and is prohibited for use by others without GHD's prior written consent. This report is considered GHD's professional work product and shall remain the sole property of GHD. Any unauthorized reuse, redistribution of or reliance on the report shall be at the Client and recipient's sole risk, without liability to GHD. Client shall defend, indemnify and hold GHD harmless from any liability arising from or related to Client's unauthorized distribution of the report. No portion of this report may be used as a separate entity; it is to be read in its entirety and shall include all supporting drawings and appendices.

The conclusions and recommendations made in this report are in accordance with our present understanding of the project, the current Site use, building conditions, and are based on available information, a Site reconnaissance on the date set out in the report, records review and interviews with appropriate people and the work scope approved by the Client and described in the report and should not be construed as a legal opinion.

Therefore, our liability is limited to interpreting accurately the information made available to us and assessing the property information investigated during this designated substance survey. The services were performed in a manner consistent with that level of care and skill ordinarily exercised by members of environmental engineering professions currently practicing under similar conditions in the same locality. No other representations, and no warranties or representations of any kind, either expressed or implied, are made. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties.

If conditions at the Property change or if any additional information becomes available at a future date, modifications to the findings, conclusions and recommendations in this report may be necessary.

As applicable, the owner/operator of the Property is responsible for corrective or remedial action required and disclosure of any information obtained during this assessment or information contained in this report, if and as required.



10. Signatures

The aforementioned Statement of Limitations is an integral part of this report. We trust that this report meets with your immediate requirements. Should questions arise regarding any aspect of our report, please contact our office.

The following signatures are provided of GHD staff that prepared and conducted the Designated Substances Survey.

Should questions arise regarding any aspect of our report, please contact our office.

All of which is Respectfully Submitted,

GHD

Eric Wierdsma, B.A.Sc.

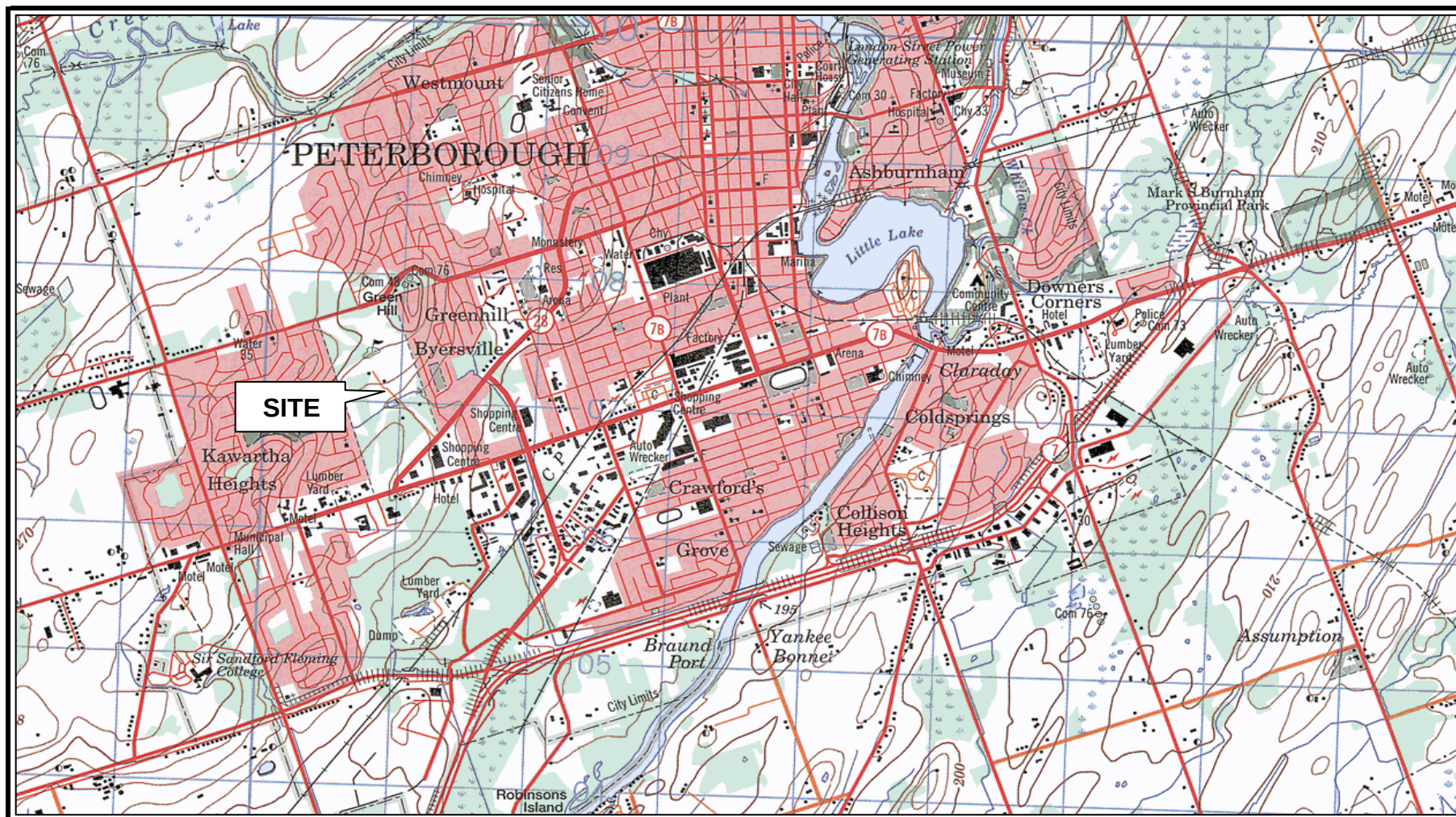
Steven Gagne, H.B.Sc.

Nyle McIlveen, P. Eng.

/EW/sg/nm



Enclosures



Source: Base map compiled from Centre for Mapping, Natural Resources Canada. Map 31 D/08. Aerial photography dated 1996, published 1998.

Scale:
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Coordinate System
NAD 1983 UTM Zone 17

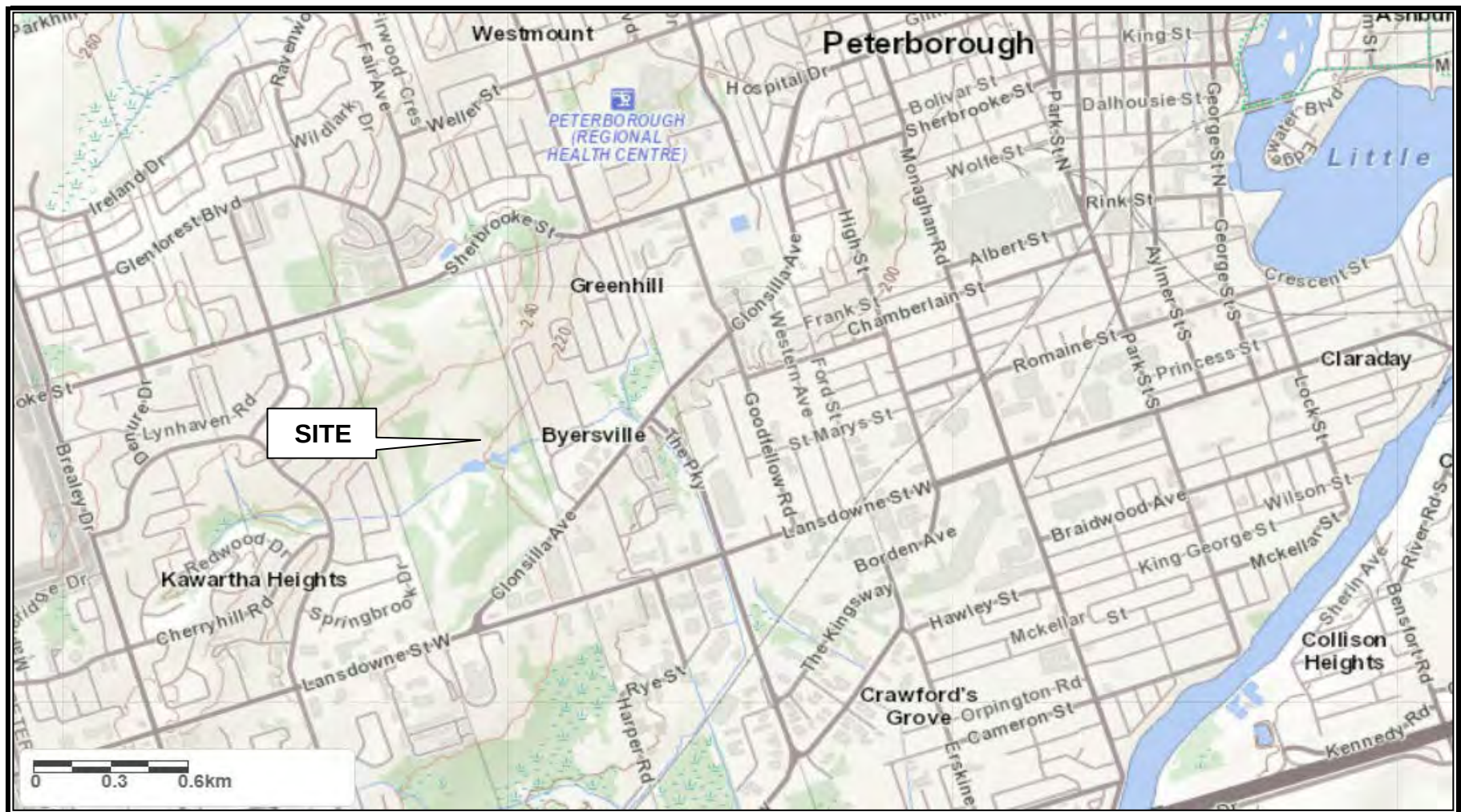


Kawartha Golf and Country Club
777 Clonsilla Avenue, Cambridge, Ontario
Designated Substances Survey

11193644-01
April 2019

Vicinity Plan

FIGURE 1



Source: Ministry of Natural Resources and Forestry. © Queen's Printer for Ontario, 2018.

Scale:

Refer to Scale Bar
Coordinate System:
NAD 1983 UTM Zone 17



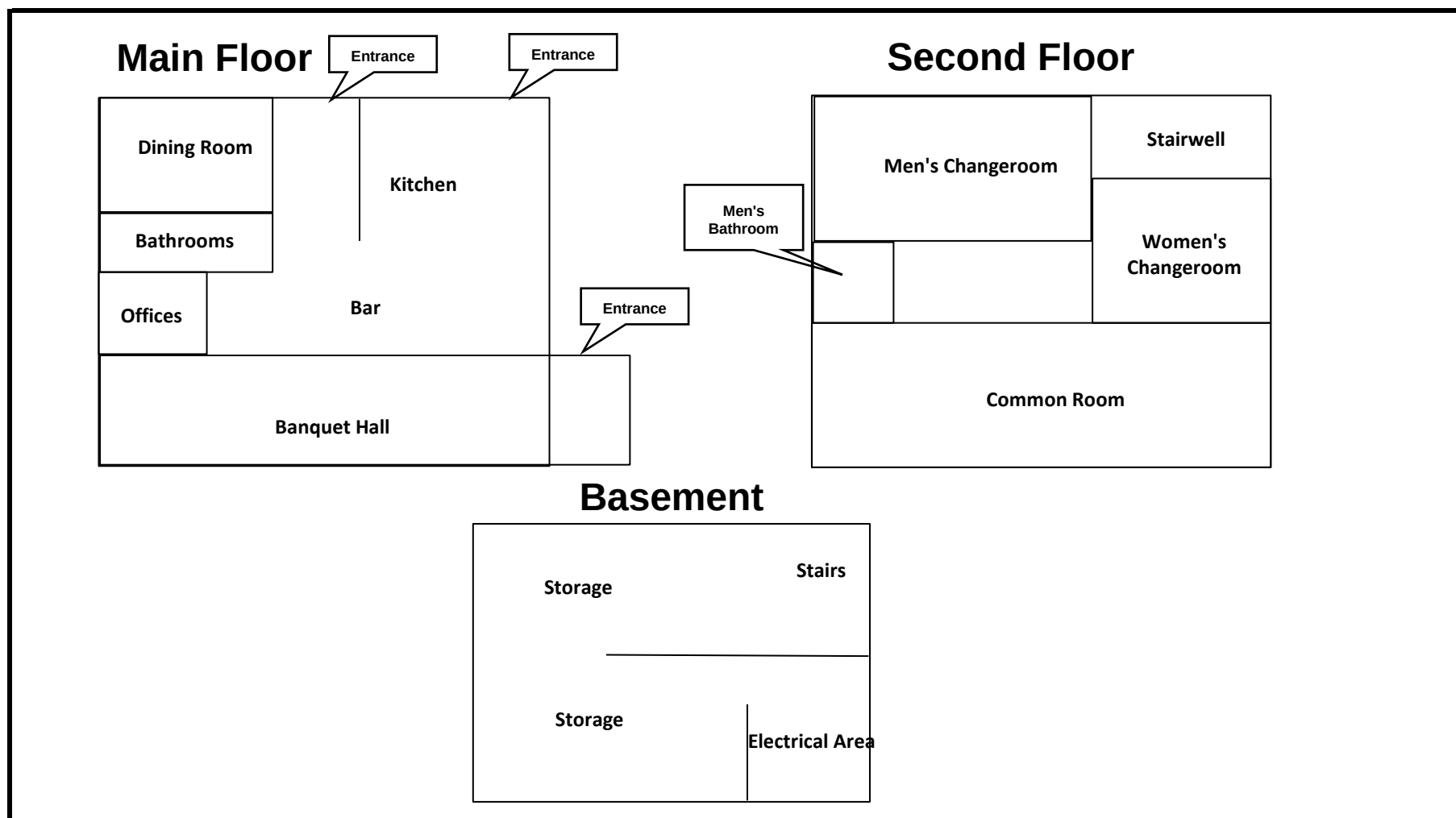
Kawartha Golf and Country Club
777 Clonsilla Avenue, Cambridge, Ontario
Limited Designated Substances Survey

11193644-01

April 2019

Property Plan

FIGURE 2



Source: Hand-drawn sketch

Scale:
Not to Scale
Coordinate System:
NAD 1983 UTM Zone 17

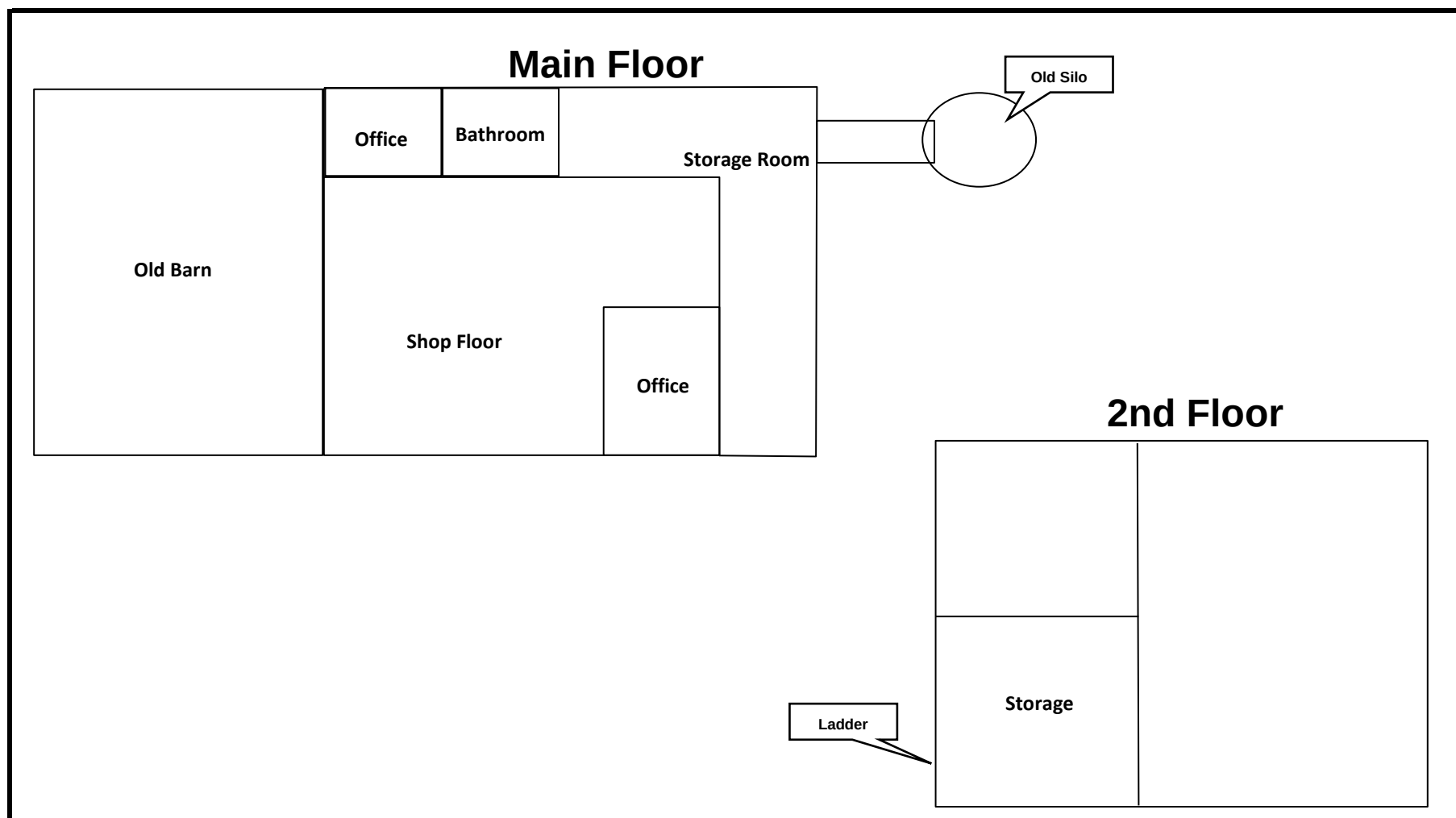


Kawartha Golf and Country Club
777 Clonsilla Avenue, Cambridge, Ontario
Limited Designated Substances Survey

11193644-01
April 2019

Club House Floor Plan

FIGURE 3A



Source: Hand-drawn sketch

Scale:
Not to Scale
Coordinate System:
NAD 1983 UTM Zone 17

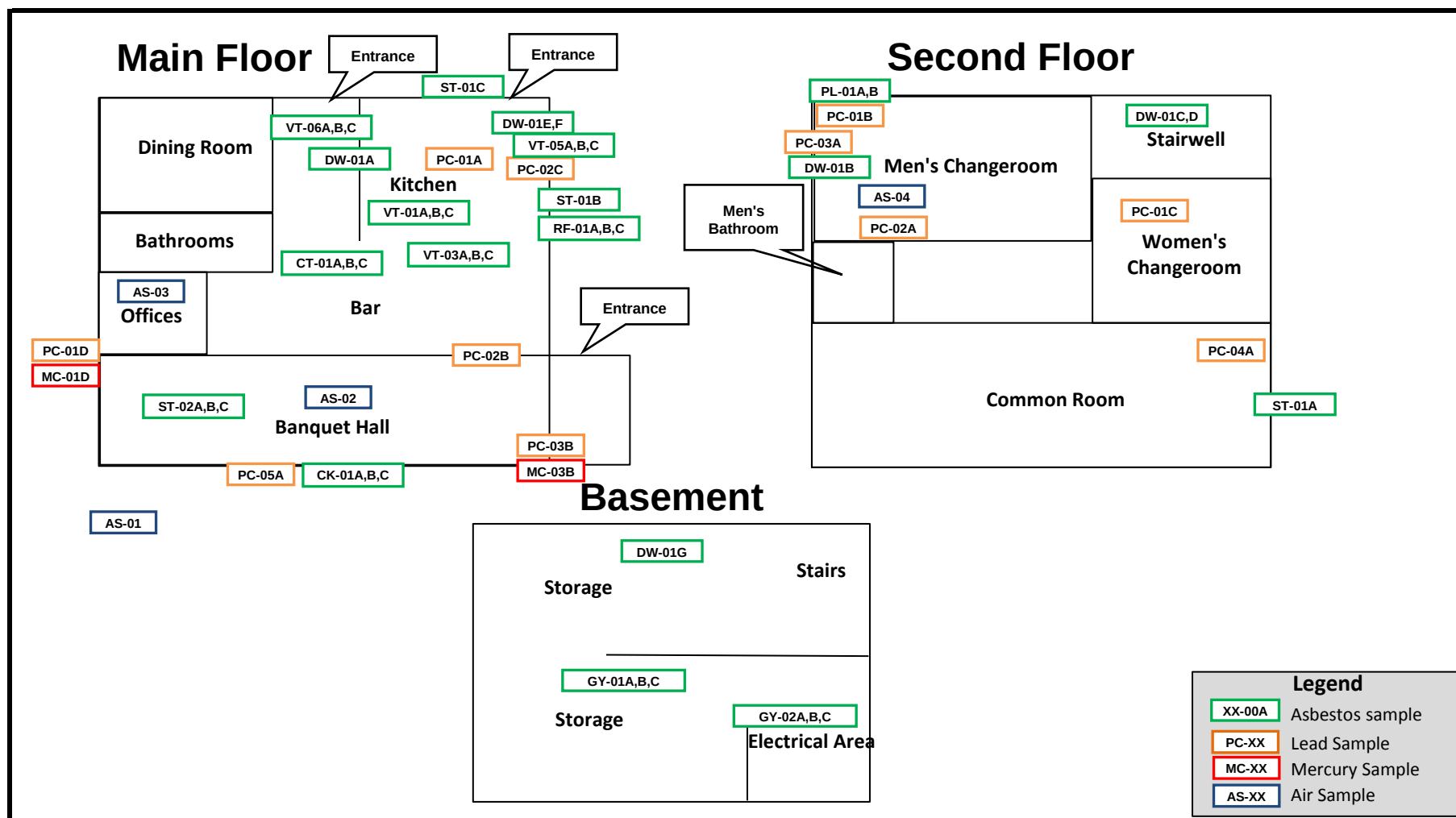


Kawartha Golf and Country Club
777 Clonsilla Avenue, Cambridge, Ontario
Limited Designated Substances Survey

11193644-01
April 2019

Pro Shop Floor Plan

FIGURE 3B



Source: Hand-drawn sketch

Scale:
Not to Scale
Coordinate System:
NAD 1983 UTM Zone 17

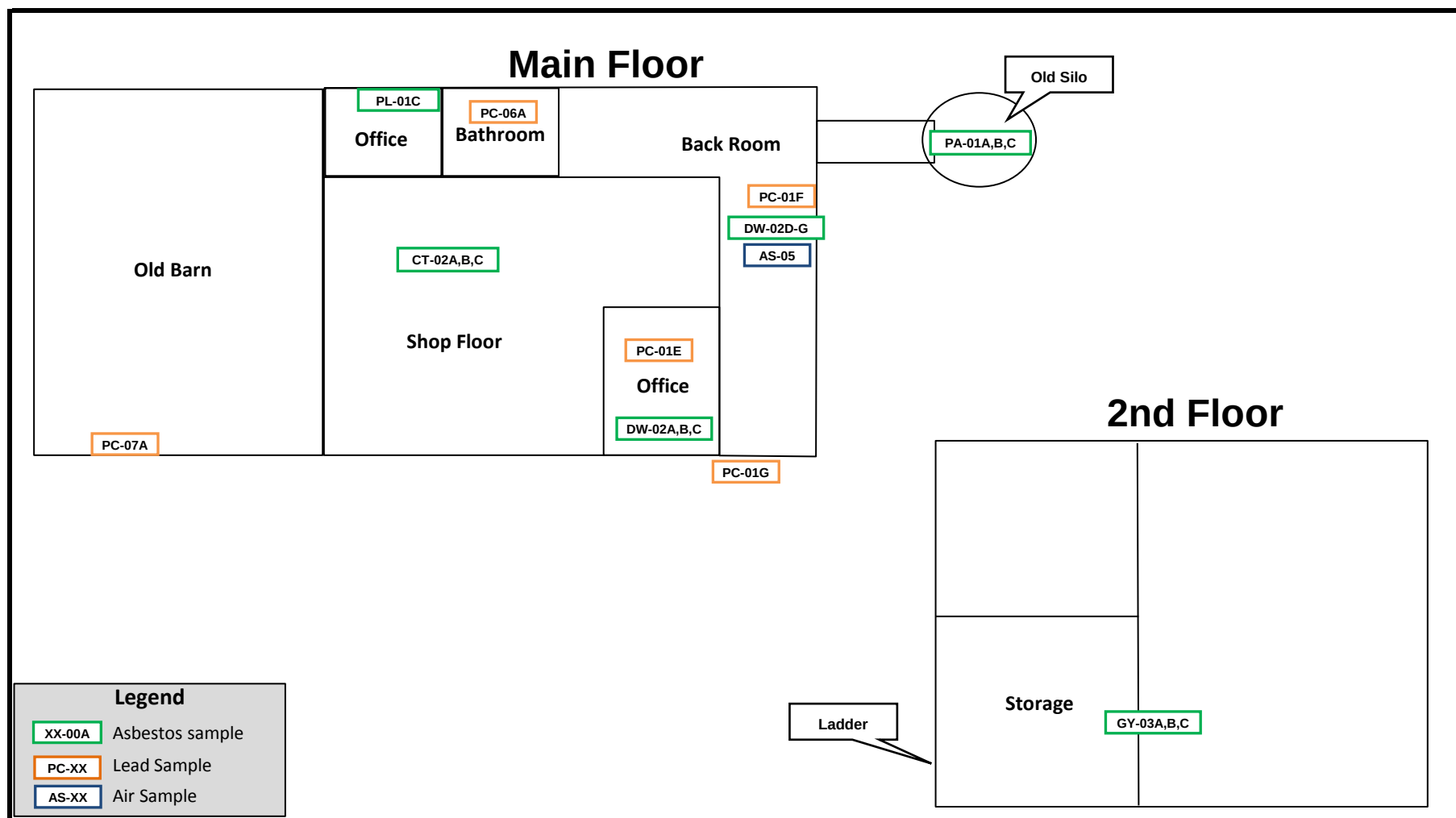


Kawartha Golf and Country Club
777 Clonsilla Avenue, Cambridge, Ontario
Limited Designated Substances Survey

11193644-01
April 2019

Club House Floor Plan

FIGURE 4A



Source: Hand-drawn sketch

Scale:
Not to Scale
Coordinate System:
NAD 1983 UTM Zone 17



Kawartha Golf and Country Club
777 Clonsilla Avenue, Cambridge, Ontario
Limited Designated Substances Survey

11193644-01
April 2019

Pro Shop Floor Plan

FIGURE 4B

Appendix A

Site Investigation Photo Log



Photo 1 – View of existing Club House.



Photo 2 – 2nd floor men's change room in Club House. Air sampled for mould (AS-04).



Site Photographs



Photo 3 – View of water leak in men's change room.



Photo 4 – Light ballast inspected from 2nd floor common room. No PCB's identified.



Photo 5 – Banquet hall in club house. Ceiling finishing material identified as asbestos containing.



Photo 6 – Peeling of paints observed. Several paints tested were identified as lead based.



Site Photographs



Photo 7 – Pipe insulation in the basement of the club house observed to be fiberglass.



Photo 8 – Paper material on electrical panel in basement of the club house identified as asbestos containing.



Photo 9 – View of Pro Shop building.



Photo 10 – Finished portion of Pro Shop building.



Photo 11 – Mould observed in storage room of Pro Shop. Air sampled in this area (AS-05).



Photo 12 – Green paint in Pro Shop building identified as containing high amounts of lead.

Appendix B

Asbestos Certificates of Analysis



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Proj: 11193644-01

Phone: (705) 749-3317
Fax: (705) 749-9248
Collected:
Received: 4/09/2019
Analyzed: 4/16/2019

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: VT-01A **Lab Sample ID:** 551904140-0001

Sample Description: Kitchen - Club House/12"x12" White Vinyl Floor Tiles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Tan/White	0.0%	100.0%	None Detected	

Client Sample ID: VT-01B **Lab Sample ID:** 551904140-0002

Sample Description: Kitchen - Club House/12"x12" White Vinyl Floor Tiles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Tan/White	0.0%	100.0%	None Detected	

Client Sample ID: VT-01C **Lab Sample ID:** 551904140-0003

Sample Description: Kitchen - Club House/12"x12" White Vinyl Floor Tiles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White/Black	0.0%	100.0%	None Detected	

Client Sample ID: VT-03A **Lab Sample ID:** 551904140-0004

Sample Description: Main Floor, Men's Washroom - Club House/12"x12" Green Vinyl Floor Tiles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Black/Green	0.0%	100.0%	None Detected	

Client Sample ID: VT-03B **Lab Sample ID:** 551904140-0005

Sample Description: Main Floor, Men's Washroom - Club House/12"x12" Green Vinyl Floor Tiles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Black/Green	0.0%	100.0%	None Detected	

Client Sample ID: VT-03C **Lab Sample ID:** 551904140-0006

Sample Description: Main Floor, Men's Washroom - Club House/12"x12" Green Vinyl Floor Tiles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Black/Green	0.0%	100.0%	None Detected	

Client Sample ID: VT-05A **Lab Sample ID:** 551904140-0007

Sample Description: East Stairwell - Club House/Sponge Flooring

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray/Black	0.0%	100.0%	None Detected	



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EMSL Canada Order 551904140
Customer ID: 55GEOL85
Customer PO: 73514465
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: VT-05B **Lab Sample ID:** 551904140-0008
Sample Description: East Stairwell - Club House/Sponge Flooring

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray/Black	0.0%	100.0%	None Detected	

Client Sample ID: VT-05C **Lab Sample ID:** 551904140-0009
Sample Description: East Stairwell - Club House/Sponge Flooring

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray/Black	0.0%	100.0%	None Detected	

Client Sample ID: VT-06A **Lab Sample ID:** 551904140-0010
Sample Description: Main Entrance - Club House/Green Linoleum

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Tan/Black/Green	0.0%	100.0%	None Detected	

Client Sample ID: VT-06B **Lab Sample ID:** 551904140-0011
Sample Description: Main Entrance - Club House/Green Linoleum

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Black/Green	0.0%	100.0%	None Detected	

Client Sample ID: VT-06C **Lab Sample ID:** 551904140-0012
Sample Description: Main Entrance - Club House/Green Linoleum

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Black/Green	0.0%	100.0%	None Detected	

Client Sample ID: CT-01A **Lab Sample ID:** 551904140-0013
Sample Description: Main Floor - Club House/2'x2' Drop Ceiling Tiles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray	90.0%	10.0%	None Detected	

Client Sample ID: CT-01B **Lab Sample ID:** 551904140-0014
Sample Description: Main Floor - Club House/2'x2' Drop Ceiling Tiles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray	90.0%	10.0%	None Detected	

Client Sample ID: CT-01C **Lab Sample ID:** 551904140-0015
Sample Description: Main Floor - Club House/2'x2' Drop Ceiling Tiles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray	90.0%	10.0%	None Detected	



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EMSL Canada Order 551904140
Customer ID: 55GEOL85
Customer PO: 73514465
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: CT-02A **Lab Sample ID:** 551904140-0016

Sample Description: Pro Shop/2'x2' Drop Ceiling Tiles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Beige	90.0%	10.0%	None Detected	

Client Sample ID: CT-02B **Lab Sample ID:** 551904140-0017

Sample Description: Pro Shop/2'x2' Drop Ceiling Tiles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Beige	90.0%	10.0%	None Detected	

Client Sample ID: CT-02C **Lab Sample ID:** 551904140-0018

Sample Description: Pro Shop/2'x2' Drop Ceiling Tiles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray	80.0%	20.0%	None Detected	

Client Sample ID: CK-01A **Lab Sample ID:** 551904140-0019

Sample Description: Club House - Exterior Windows/Window Caulking

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Brown	0.0%	100.0%	None Detected	

Client Sample ID: CK-01B **Lab Sample ID:** 551904140-0020

Sample Description: Club House - Exterior Windows/Window Caulking

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Brown	0.0%	100.0%	None Detected	

Client Sample ID: CK-01C **Lab Sample ID:** 551904140-0021

Sample Description: Club House - Exterior Windows/Window Caulking

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Brown	0.0%	100.0%	None Detected	

Client Sample ID: ST-01A **Lab Sample ID:** 551904140-0022

Sample Description: Club House - Exterior Walls/Exterior White Finish

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: ST-01B **Lab Sample ID:** 551904140-0023

Sample Description: Club House - Exterior Walls/Exterior White Finish

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	



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EMSL Canada Order 551904140
Customer ID: 55GEOL85
Customer PO: 73514465
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: ST-01C **Lab Sample ID:** 551904140-0024
Sample Description: Club House - Exterior Walls/Exterior White Finish

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: ST-02A **Lab Sample ID:** 551904140-0025
Sample Description: Club House - Banquet Hall/Ceiling / Wall Finish

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White/Beige	0.0%	99.0%	1% Chrysotile	

Client Sample ID: ST-02B **Lab Sample ID:** 551904140-0026
Sample Description: Club House - Banquet Hall/Ceiling / Wall Finish

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019				Positive Stop (Not Analyzed)	

Client Sample ID: ST-02C **Lab Sample ID:** 551904140-0027
Sample Description: Club House - Banquet Hall/Ceiling / Wall Finish

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019				Positive Stop (Not Analyzed)	

Client Sample ID: GY-01A **Lab Sample ID:** 551904140-0028
Sample Description: Club House - Basement/Brick Mortar

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: GY-01B **Lab Sample ID:** 551904140-0029
Sample Description: Club House - Basement/Brick Mortar

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: GY-01C **Lab Sample ID:** 551904140-0030
Sample Description: Club House - Basement/Brick Mortar

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray/White	0.0%	100.0%	None Detected	

Client Sample ID: GY-02A **Lab Sample ID:** 551904140-0031
Sample Description: Club House - Basement/Electrical Room Paper

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray	0.0%	65.0%	35% Chrysotile	



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 Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: GY-02B **Lab Sample ID:** 551904140-0032
Sample Description: Club House - Basement/Electrical Room Paper

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019					Positive Stop (Not Analyzed)

Client Sample ID: GY-02C **Lab Sample ID:** 551904140-0033
Sample Description: Club House - Basement/Electrical Room Paper

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019					Positive Stop (Not Analyzed)

Client Sample ID: GY-03A **Lab Sample ID:** 551904140-0034
Sample Description: Pro Shop Attic/Paper Insulation

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Brown	0.0%	100.0%	<1% Chrysotile	
400 PLM Pt Ct	4/16/2019	Brown	0.0%	100.0%	<0.25% Chrysotile	

Client Sample ID: GY-03B **Lab Sample ID:** 551904140-0035
Sample Description: Pro Shop Attic/Paper Insulation

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Brown	0.0%	100.0%	<1% Chrysotile	
400 PLM Pt Ct	4/16/2019	Brown	0.0%	100.0%	<0.25% Chrysotile	

Client Sample ID: GY-03C **Lab Sample ID:** 551904140-0036
Sample Description: Pro Shop Attic/Paper Insulation

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Brown	0.0%	100.0%	<1% Chrysotile	
400 PLM Pt Ct	4/16/2019	Brown	0.0%	100.0%	<0.25% Chrysotile	

Client Sample ID: PA-01A **Lab Sample ID:** 551904140-0037
Sample Description: Old Silo - Pro Shop/Wall Parging

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: PA-01B **Lab Sample ID:** 551904140-0038
Sample Description: Old Silo - Pro Shop/Wall Parging

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: PA-01C **Lab Sample ID:** 551904140-0039
Sample Description: Old Silo - Pro Shop/Wall Parging

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray	0.0%	100.0%	None Detected	



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EMSL Canada Order 551904140
Customer ID: 55GEOL85
Customer PO: 73514465
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: RF-01A **Lab Sample ID:** 551904140-0040
Sample Description: Club House Roof/Shingles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Black	5.0%	95.0%	None Detected	

Client Sample ID: RF-01B **Lab Sample ID:** 551904140-0041
Sample Description: Club House Roof/Shingles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Black	5.0%	95.0%	None Detected	

Client Sample ID: RF-01C **Lab Sample ID:** 551904140-0042
Sample Description: Club House Roof/Shingles

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Black	0.0%	100.0%	None Detected	

Client Sample ID: PL-01A **Lab Sample ID:** 551904140-0043
Sample Description: Men's Changeroom - Club House/Wall Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray/White	0.0%	100.0%	None Detected	

Client Sample ID: PL-01B **Lab Sample ID:** 551904140-0044
Sample Description: Men's Changeroom - Club House/Wall Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: PL-01C **Lab Sample ID:** 551904140-0045
Sample Description: Pro Shop - Office/Wall Plaster

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	Gray	0.0%	100.0%	None Detected	

Client Sample ID: DW-01A **Lab Sample ID:** 551904140-0046
Sample Description: Club House/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: DW-01B **Lab Sample ID:** 551904140-0047
Sample Description: Club House/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	



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EMSL Canada Order 551904140
Customer ID: 55GEOL85
Customer PO: 73514465
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: DW-01C **Lab Sample ID:** 551904140-0048
Sample Description: Club House/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: DW-01D **Lab Sample ID:** 551904140-0049
Sample Description: Club House/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: DW-01E **Lab Sample ID:** 551904140-0050
Sample Description: Club House/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: DW-01F **Lab Sample ID:** 551904140-0051
Sample Description: Club House/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: DW-01G **Lab Sample ID:** 551904140-0052
Sample Description: Club House/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: DW-02A **Lab Sample ID:** 551904140-0053
Sample Description: Pro Shop/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: DW-02B **Lab Sample ID:** 551904140-0054
Sample Description: Pro Shop/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: DW-02C **Lab Sample ID:** 551904140-0055
Sample Description: Pro Shop/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	



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EMSL Canada Order 551904140
Customer ID: 55GEOL85
Customer PO: 73514465
Project ID:

Test Report: Asbestos Analysis of Bulk Materials for Ontario Regulation 278/05 via EPA600/R-93/116 Method

Client Sample ID: DW-02D

Lab Sample ID: 551904140-0056

Sample Description: Pro Shop/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: DW-02E

Lab Sample ID: 551904140-0057

Sample Description: Pro Shop/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: DW-02F

Lab Sample ID: 551904140-0058

Sample Description: Pro Shop/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Client Sample ID: DW-02G

Lab Sample ID: 551904140-0059

Sample Description: Pro Shop/Drywall Mud

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	4/16/2019	White	0.0%	100.0%	None Detected	

Analyst(s):

Harman Sohi PLM (43)
400 PLM Pt Ct (3)
Ioana Taina PLM (12)

Reviewed and approved by:

Matthew Davis or other approved signatory
or Other Approved Signatory

None Detected = <0.1%. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP of any agency of the U.S. Government.

Samples analyzed by EMSL Canada Inc. Mississauga, ON NVLAP Lab Code 200877-0

Initial report from: 04/16/2019 17:42:05

Appendix C

Lead Certificates of Analysis

**EMSL Canada Inc.**

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EMSL Canada Or 551904133

CustomerID: 55GEOL85

CustomerPO: 73514465

ProjectID:

Attn: **Eric Wierdsma**
GHD Limited
347 Pido Road
Unit 29
Peterborough, ON K9J 6X7

Phone: (705) 749-3317
Fax: (705) 749-9248
Received: 04/10/19 10:37 AM
Collected:

Project: **11193644-01, Kawartha Golf Club****Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)***

<i>Client Sample</i>	<i>Description</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>RDL</i>	<i>Lead Concentration</i>
PC-01A			4/11/2019	0.2492 g	0.0080 % wt	0.11 % wt
551904133-0001						
PC-01B			4/11/2019	0.2485 g	0.0080 % wt	0.18 % wt
551904133-0002						
PC-01C			4/11/2019	0.2500 g	0.0080 % wt	0.062 % wt
551904133-0003						
PC-01D			4/11/2019	0.2459 g	0.0081 % wt	0.17 % wt
551904133-0004						
PC-01E			4/11/2019	0.2448 g	0.0082 % wt	<0.0082 % wt
551904133-0005						
PC-01F			4/11/2019	0.2421 g	0.0083 % wt	<0.0083 % wt
551904133-0006						
PC-01G			4/11/2019	0.2446 g	0.0082 % wt	<0.0082 % wt
551904133-0007						
PC-02A			4/11/2019	0.2477 g	0.0081 % wt	0.059 % wt
551904133-0008						
PC-02B			4/11/2019	0.2480 g	0.0081 % wt	0.22 % wt
551904133-0009						
PC-02C			4/11/2019	0.2463 g	0.0081 % wt	<0.0081 % wt
551904133-0010						
PC-03A			4/11/2019	0.2475 g	0.0081 % wt	0.34 % wt
551904133-0011						

Rowena Fanto, Lead Supervisor
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON A2LA Accredited Cert #2845.08; AIHA-LAP, LLC - ELLAP #196142

Initial report from 04/17/2019 08:48:00

**EMSL Canada Inc.**

2756 Slough Street, Mississauga, ON L4T 1G3

Phone/Fax: (289) 997-4602 / (289) 997-4607

<http://www.EMSL.com>torontolab@emsl.com

EMSL Canada Or 551904133

CustomerID: 55GEOL85

CustomerPO: 73514465

ProjectID:

Attn: **Eric Wierdsma**
GHD Limited
347 Pido Road
Unit 29
Peterborough, ON K9J 6X7

Phone: (705) 749-3317
Fax: (705) 749-9248
Received: 04/10/19 10:37 AM
Collected:

Project: **11193644-01, Kawartha Golf Club****Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)***

<i>Client Sample</i>	<i>Description</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>RDL</i>	<i>Lead Concentration</i>
PC-03B			4/11/2019	0.2460 g	0.0081 % wt	0.056 % wt
551904133-0012						
PC-04A			4/11/2019	0.2451 g	0.0082 % wt	0.11 % wt
551904133-0013						
PC-05A			4/11/2019	0.2492 g	0.0080 % wt	<0.0080 % wt
551904133-0014						
PC-06A			4/11/2019	0.2464 g	0.0081 % wt	0.041 % wt
551904133-0015						
PC-07A			4/11/2019	0.2489 g	0.080 % wt	2.5 % wt
551904133-0016						

Rowena Fanto, Lead Supervisor
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON A2LA Accredited Cert #2845.08; AIHA-LAP, LLC - ELLAP #196142

Initial report from 04/17/2019 08:48:00

Appendix D

Mercury Certificates of Analysis



EMSL Analytical, Inc.

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (856) 303-2500 Fax: (856) 858-4571 Email: EnvChemistry2@emsl.com

Attn:

**Eric Wierdsma
GHD Limited
347 Pido Road
Unit 29
Peterborough, ON K9J 6X7**

4/24/2019

Phone: (705) 749-3317

Fax: (705) 749-9248

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 4/10/2019. The results are tabulated on the attached data pages for the following client designated project:

11193644-01, Kawartha Golf Club

The reference number for these samples is EMSL Order #011904056. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (856) 303-2500.

Approved By:

Phillip Worby, Environmental Chemistry
Laboratory Director



The test results contained within this report meet the requirements of NELAP and/or the specific certification program that is applicable, unless otherwise noted.

NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, CA ELAP 1877

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (856) 303-2500 / (856) 858-4571

<http://www.EMSL.com>EnvChemistry2@emsl.com

EMSL Order: 011904056

CustomerID: GEOL85

CustomerPO: 551904082

ProjectID:

Attn: **Eric Wierdsma**
GHD Limited
347 Pido Road
Unit 29
Peterborough, ON K9J 6X7

Phone: (705) 749-3317
Fax: (705) 749-9248
Received: 04/10/19 9:30 AM

Project: 11193644-01, Kawartha Golf Club

Analytical Results

Client Sample Description MC-01D **Collected:** 4/8/2019 **Lab ID:** 011904056-0001

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
METALS								
7471B	Mercury	31		2.4 mg/Kg	4/24/2019	PV	4/24/2019	PV

Client Sample Description MC-03B **Collected:** 4/8/2019 **Lab ID:** 011904056-0002

Method	Parameter	Result	RL	Units	Prep Date	Analyst	Analysis Date	Analyst
METALS								
7471B	Mercury	2.8		0.23 mg/Kg	4/24/2019	PV	4/24/2019	PV

Definitions:

ND - indicates that the analyte was not detected at the reporting limit

RL - Reporting Limit (Analytical)

D - Dilution

Appendix E

Mould Certificates of Analysis

Certificate of Analysis

GHD Limited (Peterborough)

347 Pido Rd. Unit 29, P.O. Box 694
Peterborough, ON K9J 6X7
Attn: Kyle Gerald

Client PO: 73515387 - Peter Minaker
Project: 11193644-01
Custody: 37437

Report Date: 18-Apr-2019
Order Date: 15-Apr-2019

Order #: 1916052

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1916052-01	AS-01
1916052-02	AS-02
1916052-03	AS-03
1916052-04	AS-04
1916052-05	AS-05

Approved By:



Heather S.H. McGregor, BSc
Laboratory Director - Microbiology

Certificate of Analysis

Client: GHD Limited (Peterborough)

Client PO: 73515387 - Peter Minaker

Report Date: 18-Apr-2019

Order Date: 15-Apr-2019

Project Description: 11193644-01

Microscopic - Air-O-Cell

Paracel I.D.	Sample Date	Media Expiry Date	Background Debris**	% of Trace	LOD (Cts/m ³)	Sample Volume(L)	Total Cts/m ³	Propagule Identification	Cts/m ³	% of Total	Counts*
1916052-01	12-Apr-19	2019-11	Low	31	33	100	228	Client ID: AS-01			
								Cladosporium spores	130	57	4
								basidiospores	98	43	3
								pollen	NA	NA	Trace
1916052-02	12-Apr-19	2019-11	Low	31	33	100	98	Client ID: AS-02			
								basidiospores	33	33	1
								Cladosporium spores	33	33	1
								Epicoccum spores	33	33	1
1916052-03	12-Apr-19	2019-11	Low	31	33	100	423	Client ID: AS-03			
								Aspergillus/Penicillium-like spores	260	62	8
								basidiospores	65	15	2
								Cladosporium spores	65	15	2
								pigmented mycelial fragments	33	8	1
1916052-04	12-Apr-19	2019-11	Low	31	33	100	33	Client ID: AS-04			
								Aspergillus/Penicillium-like spores	33	100	1
								basidiospores	NA	NA	Trace
1916052-05	12-Apr-19	2019-11	Low	31	33	100	2925	Client ID: AS-05			
								Aspergillus/Penicillium-like spores	1853	63	57
								basidiospores	488	17	15
								Cladosporium spores	228	8	7
								unidentified spore	163	6	5
								ascospores	65	2	2
								pigmented mycelial fragments	65	2	2
								[M-SM] bacteria	33	1	1
								hyaline mycelial fragments	33	1	1

*Counts - Definitions:

Trace = 2 propagules or less noted per trace

Low = occupying < 10% of microscopic field

Moderate = 11-30% of microscopic field

High = > 31% of microscopic field

**Background Debris - Definitions:

Low = occupying < 10% of microscopic field

Moderate = 11-30% of microscopic field

High = > 31% of microscopic field

Certificate of Analysis

Report Date: 18-Apr-2019

Client: GHD Limited (Peterborough)

Order Date: 15-Apr-2019

Client PO: 73515387 - Peter Minaker

Project Description: 11193644-01

Analysis Summary Table

Analysis	Method Reference/Description	Lab Location	Analysis Date
Microscopic Fungal - Air-O-Cell	ASTM D7391-09	Ottawa West Lab	16-Apr-19

Qualifier Notes

Sample Qualifiers :

M-SM: The propagule was present in a smear. The high density prevented individual propagules from being discerned and counted.

Work Order Revisions / Comments

Information on common indoor/outdoor fungi may be found on our website at the link below; however, interpretation of the results is the responsibility of the client.

[Paracel Species Ecology List](#)

Report Notes:

*ND - No fungal propagules detected, below limit of detection (LOD).**NA - Not applicable; calculations cannot be performed on non-numerical data.*



about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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KAWARTHA GOLF AND COUNTRY CLUB
NEW CLUB HOUSE

ARCHITECTURAL SHEET LIST	
SHEET	SHEET NAME
A0.00	COVER SHEET
A0.01	OBC MATRIX & GENERAL NOTES
A0.02	ASSEMBLIES
A0.03	FLS, ROOM & AREA SCHEDULES
A1.01	DEMO PLAN SHT 1
A2.01	FOUNDATION PLAN
A2.02	BASEMENT PLAN
A2.03	GROUND FLR PLAN
A2.04	ROOF MECH AREA
A2.05	ROOF PLAN
A2.06	RCP - BASEMENT
A2.07	RCP - GROUND
A2.08	GROUND FLR - FINISHES
A2.09	GROUND FLR - SIGNAGE
A3.00	NORTH SOUTH ELEVATIONS
A3.01	EAST WEST ELEVATIONS
A4.01	SECTIONS - SHORT SECTION 1
A4.02	SECTIONS - SHORT SECTION 2
A4.03	SECTIONS - SHORT SECTION 3
A4.04	SECTIONS - ROOF
A4.05	SECTIONS - TERRACE AREA
A5.00	CONST. DETAILS - FOUNDATIONS
A5.03	CONST. DETAILS - ROOF
A5.05	DETAILS - EXT. STAIRS
A5.06	DETAILS - BARRIER FREE RAMP
A5.07	DETAILS - INTERIOR STAIR
A5.09	DETAILS - INTERIOR DETAILS
A5.10	DETAILS - FRR DETAILS
A5.11	DETAILS - TYP. FIRESTOP DETAILS - HILTI
A5.12	DETAILS - WINDOW AND DOORS
A6.00	INT. ELEVS - BAR/ RESTAURANT AREA
A6.01	INT. ELEVS - FOYER AREA
A6.02	INT. ELEVS. BOARD RM
A7.00	DETAILED LAYOUTS - WOMENS WC & CHANGING RMS
A7.01	DETAILED LAYOUTS - SHOWER RMS
A7.02	DETAILED LAYOUTS - UNIVERSAL WC
A7.03	DETAILED LAYOUTS - BBQ AREA
A7.04	TYP. MOUNTING HEIGHTS
A7.09	DETAILED LAYOUTS - KITCHEN SHT 1
A7.10	DETAILED LAYOUTS - KITCHEN SHT 2
A8.00	WINDOW AND DOOR SCHEDULE
A8.01	FINISHES SCHEDULE
A9.00	MILLWORK - BAR AREA
A9.01	MILLWORK - OFFICE

DRAWING SHOULD NOT BE SCALED
Contractor must check and verify all dimensions on the job and report any discrepancies to the architect before proceeding with the work. This drawing shall not be used for construction purposes until stamped and signed by the consultant responsible. This drawing is an instrument of service, is provided by and is the property of CRW ARCHITECTS INC.

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DRAWING ISSUE

Rev.	Description	Date
1	PRELIM. COORDINATION	260626
2	PRELIM. TENDER ISSUE	260726
3	REVISION ADD: AT_01	260728
4	Revision Add: 03	260811

CRWA
CRW ARCHITECTS INC.
705-818-0580
WHYTE@CRWARCHITECTS.CA

True North	Professional Seal
Issued for	
JUNE 2026	Date
26003	Author
Project	Drawn by

NEW CLUB HOUSE

777 CONSILLA AVE,
PETERBOROUGH, K9J 6Z6

Project

COVER SHEET

Drawing file

Sheet no.

A0.00

EXTERIOR WALL ASSEMBLIES

E1

EXTERIOR WALL - MAIBEC SIDING - R-VALUE TO SUIT CODE

308 [1'- 0 1/8"]

FRR: 45MIN

SB-2 (ADDITIVE)

R-VALUE: R21 +R10ci

INT.

EXT.

1X3

HORIZONTAL MAIBEC SIDING

1/2"

WEATHER RESISTANT BARRIER - TYVEK AIR BARRIER OR SIM. APPROVED (VAPOUR PERMEABLE)

2X6

EXTERIOR GRADE PLYWOOD SHEATHING W/ ALL EDGES TAPED/BLOCKED

7/8"

RIGID INSULATION, CONTINUOUS [R10 MINIMUM]

5/8"

WOOD STUDS @ 16" O/C [20 MINS]

[SINGLE SILL PLATE, DOUBLE TOP PLATE]

FILLED W/ R22 ROCKWOOL COMFORTBATT INSULATION

AIR VAPOUR BARRIER - VAPOUR PERMEABLE (6MILS - MIN)

(22MM) FURRING (METAL OR WD)

TYPE 'X' GWB [40 MINS]

E2

EXTERIOR WALL - STONE CLADDING.

289 [0' - 11 3/8"]

FRR: 45MIN

ULC: N/A

R-VALUE: R21 +R10ci

INT.

EXT.

VARIES

3 1/2"

(90mm) SHOULDICE STONE VENEER [RANDOM PATTERN READ INSTALL NOTE]

1"

AIR SPACE

1/2"

BRICK-TIE/MECHANICAL FASTENER AS PER MANUFACTURER INSTALLATION DETAILS

2X6

TYVEK AIR BARRIER

7/8"

EXTERIOR GRADE T&G PLYWOOD SHEATHING W/ ALL EDGES TAPED/BLOCKED

5/8"

RIGID INSULATION, CONTINUOUS [R10 MINIMUM]

WOOD STUDS @ 16" O/C [200MM MINS]

[SINGLE SILL PLATE, DOUBLE TOP PLATE]

FILLED W/ R22 ROCKWOOL COMFORTBATT INSULATION

VAPOUR PERMEABLE AIR BARRIER (6MILS - MIN)

FURRING (22MM) (METAL OR WD)

TYPE 'X' GWB [40 MINS]

E3

EXTERIOR WALL - FOUNDATION WALL

124 [0' - 4 7/8"]

FRR: N/A

ULC: N/A

R-VALUE: R20ci

INT.

EXT.

VARIES

1/2"

GWB FINISH [WHERE APPLICABLE]

VARIES

1X2"

FURRING - SERVICE VOID

4"

CONCRETE FOUNDATION WALL [SEE STRUCTURAL]

TUFF-N-DRI H8 QC90 [TREMCO]

CONTINUOUS EPS RIGID INSULATION BOARD (MIN R5/INCH)

(ADHERED W/ INSULATION PINS AND THE DRAINAGE

INSTALLED AGAINST THE PINS OR ALTERNATIVELY - HELD IN PLACE BY SLOWLY BACKFILLING DURING INSTALLATION W/ DRAINAGE BOARD)

TREMORAIN DRAINAGE BOARD W/ INTEGRATED FILTER FABRIC, DOWN TO FOOTING AND TIED INTO FOUNDATION DRAINAGE

E4

EXTERIOR WALL - CONCRETE UN-INSULATED

FRR: N/A

ULC: N/A

R-VALUE: N/A

INT.

EXT.

VARIES

VARIES

POURED CONCRETE FOUNDATION [SEE STRUCTURAL]

-

TUFF-N-DRI H8 QC90 [TREMCO]

TREMORAIN DRAINAGE BOARD W/ INTEGRATED FILTER FABRIC, DOWN TO FOOTING AND TIED INTO FOUNDATION DRAINAGE

E5

EXTERIOR WALL - CONCRETE W/ STONE VENEER

314 [1' - 0 3/8"]

FRR: 45MIN

ULC: N/A

R-VALUE: R15ci

INT.

EXT.

VARIES

-

SHOULDICE STONE VENEER [RANDOM PATTERN READ INSTALL NOTE]

1"

VENTILATION/AIR SPACE

-

BRICK-TIE/MECHANICAL FASTENER AS PER MANUFACTURER INSTALLATION DETAILS

3"

CONTINUOUS EPS RIGID INSULATION BOARD (MIN R5/INCH)

-

WEATHER BARRIER

8"

CONCRETE FOUNDATION WALL [SEE STRUCTURAL]

-

VAPOUR PERMEABLE AIR BARRIER (6MILS - MIN)

7/8"

FURRING (22MM)

5/8"

TYPE 'X' GWB [40 MINS]

FLOOR ASSEMBLIES

F1

SLAB ON GRADE

FRR: N/A

SB-2 (ADDITIVE)

R-VALUE: R15ci (48" OF PERIM.)

INT.

EXT.

3/4"

FINISHED FLOOR BUILD-UP [REFER TO FINISHES SCHED.]

4"

LIQUID APPLIED CONCRETE SEALER

3"

REINFORCED CONCRETE SLAB [SEE STRUCTURAL]

1"

VAPOUR BARRIER (6MILS - MIN)

4"

CONTINUOUS EPS RIGID INSULATION BOARD (MIN R5/INCH)

48" WIDE AROUND ENTIRE PERIMETER OF SLAB.

SAND BLINDING (25MM)

COMPACTED GRANULAR A [REFER TO GEOTECH REPORT]

ENGINEERED FILL [REFER TO GEOTECH REPORT]

F2

TYP. WOOD FRAMED FLOOR

FRR: 1HR

BXUVC.M523

STC - 52-54

INT.

EXT.

3/4"

FINISHED FLOOR BUILD-UP [REFER TO FINISHES SCHED.]

1 1/2"

GYPCORE LEVELING SLAB

3/4"

PLYWOOD SHEATHING GLUED & SCREWED (W/ TONGUE & GROOVE EDGES) [SEE STRUCT.]

16"

ENG. WD. JOISTS @ 16 O/C W/ BRIDGING (19X64MM)

6"

[SEE STRUCT.]

ROCKWOOL SAFE 'N' SOUND INSULATION OR SIMILAR.

DENSITY TO BE NOM 9 KG/M3.

PLACED OVER THE RESILIENT CHANNELS

1/2"

12.5MM RESILIENT CHANNELS

1"

2# LAYERS OF 15MM GYPSUM BOARD TYPE X.

F3

TYP. EXTERIOR CONC. SLAB

FRR: N/A

STC N/A

R-VALUE: N/A

INT.

EXT.

-

BROOM BRUSH FINISH [REFER TO FINISHES SCHED.]

-

LIQUID APPLIED CONCRETE SEALER

3"

REINFORCED CONCRETE SLAB [SEE STRUCTURAL]

1"

VAPOUR BARRIER (6MILS - MIN)

4"

SAND BLINDING (25MM)

-

COMPACTED GRANULAR A [REFER TO GEOTECH REPORT]

-

ENGINEERED FILL [REFER TO GEOTECH REPORT]

F4

TYP. WD STAIR LANDING

FRR: 1HR

BXUVC.M523

STC: 52-54

INT.

EXT.

3/4"

FINISHED FLOOR BUILD-UP [REFER TO FINISHES SCHED.]

1 1/4"

GYPCORE

3/4"

PLYWOOD SHEATHING, (TONGUE & GROOVE EDGES)

8"

GLUED AND SCREWED [SEE STRUCT.]

6"

2X8 JOISTS @ 16" O/C W/ BRIDGING [SEE STRUCT.]

1"

ROCKWOOL SAFE 'N' SOUND INSULATION

RESILIENT CHANNEL @ 16" O/C

2 LAYERS 5/8" TYPE 'X' GWB

ROOF ASSEMBLIES

R1

MAIN ROOF

FRR: 45MIN

SB-2 (ADDITIVE)

R-VALUE: R60

EXTERIOR

INTERIOR

30 YR 3 TAB ASPHALT SHINGLES [IKO ROOFGARD COOL GREY SYNTHETIC UNDERLAYMENT]

ICE AND WATER SHIELD 3'-0" [900mm] FROM EDGE OF ROOF AND BEYOND INNER FACE OF EXTERIOR WALL

CONTINUOUS STRIP OF ICE AND WATER SHIELD ON ALL EAVES, VALLEY

15LB. FELT UNDERLAYMENT

EXTERIOR GRADE PLYWOOD SHEATHING

2 LAYERS R31 (9.57235MM) FIBREGLASS PINK INSULATION], TOP LAYER LAID PERPENDICULAR TO BOTTOM LAYER

PRE-ENGINEERED WOOD ROOF TRUSSES [SEE STRUCT.] [FRR - 5 MINS]

POLY VAPOUR BARRIER (6MIL) [FRR- 6MINS]

METAL FURRING CHANNEL

TYPE 'X' GWB [FRR - 40 MINS]

R2

FLAT ROOF - ROOF-TOP MECHANICAL AREA

FRR: 45MIN

SB-2 (ADDITIVE)

R-VALUE: R35ci

INT.

EXT.

1 1/2" (39MM)

24x24" STONE PAVING FINISH

-

1" BLUE SM PADS W/ ADDITIONAL SACRIFICIAL LAYER PVC

1/2" (12.5MM)

60MIL PVC ROOFING MEMBRANE (WRB)

VARIES

PROTECTION BOARD

7" (178MM)

TAPERED RIGID INSULATION (MIN 1/2") (R2.5)

3/4"

XPS TYPE 4 RIGID INSULATION (R5/INCH)

-

AIR/VAPOUR RETARDER

1/2"

EXTERIOR GRADE PLYWOOD SHEATHING

5/8"

GLUE-NAILED

EWJ STRUC. FRAMING [SEE STRUCT.] [FRR - 5 MINS]

COMPACTED GRANULAR A [REFER TO GEOTECH REPORT]

ENGINEERED FILL [REFER TO GEOTECH REPORT]

R3

UN-INSULATED TERRACE AREA ROOF

FRR: 45MIN

SB-2 (ADDITIVE)

R-VALUE: N/A

INT.

EXT.

30 YR 3 TAB ASPHALT SHINGLES [IKO ROOFGARD COOL GREY SYNTHETIC UNDERLAYMENT]

ICE AND WATER SHIELD 3'-0" [900mm] FROM EDGE OF ROOF AND BEYOND INNER FACE OF EXTERIOR WALL

CONTINUOUS STRIP OF ICE AND WATER SHIELD ON ALL EAVES, VALLEY

15LB. FELT UNDERLAYMENT

EXTERIOR GRADE PLYWOOD SHEATHING

PRE-ENGINEERED WOOD ROOF TRUSSES [SEE STRUCT.] [FRR - 5 MINS]

EXTERIOR GRADE - CEMENTIOUS BOARD TYPE 'X' GWB OR SIM. APPROVED [FRR - 40 MINS]

SEE SOFFIT DETAILS

CEILING & SOFFIT ASSEMBLIES

S1

MAIN ROOF SOFFIT

25 [0' - 1"]

13 [0' - 0 1/2"]

INT.

EXT.

1X3"

WD STRAPPING

1/2"

T&G WOOD SOFFIT [MITER DIRECTION CHANGES] [PT-6]

S2

TERRACE SOFFIT

19 [0' - 0 3/4"]

13 [0' - 0 1/2"]

INT.

EXT.

1/2"

WD STRAPPING

1/2"

T&G WOOD SOFFIT [MITER DIRECTION CHANGES] [PT-6]

S3

DORMER SOFFIT

1"

STRAPPING (AS/WHERE REQ'D)

-

T&G METAL VENTILATED SOFFIT

-

REFER TO FINISHES SCHEDULE FOR COLOUR [MITER DIRECTION CHANGES]

C1

SUSPENDED ACOUSTIC TILE

VARIES

-

CEILING VOID VARIES REFER TO RCPS

-

SUSPENDED LAY-IN GRID

-

12"X12"

-

ACT CEILING TILES - REFER TO RCPS

C2

SUSPENDED DRYWALL

VARIES

-

CEILING VOID VARIES REFER TO RCPS

-

SUSPENDED LIGHT GAUGE STEEL GRID

-

PAINT FINISHED GWB CEILING - REFER TO RCPS

INTERIOR PARTITIONS

W1

INT. WD FIRE RATED PARTITION

121 [0' - 4 3/4"]

FRR: 1HR

ULC: DESIGN W301

STC: 42

INT.

EXT.

5/8"

1 LAYER 5/8" TYPE 'X' GWB

4"

2X4 WOOD STUDS @ 16" O/C

5/8"

ROCKWOOL SAFE 'N' SOUND INSULATION OR SIMILAR

1 LAYER 5/8" TYPE 'X' GWB

ALSO REFER TO FINISHES SCHEDULE

170 [0' - 6 3/4"]

**W1.1

* W1.1 = 2X6 WOOD STUD @ 16" O/C (ULC: DESIGN W305)

W2

INT. WALL - 4" PARTITION

114 [0' - 4 1/2"]

FRR: NA

ULC: DESIGN W301

STC: 46

INT.

EXT.

1/2"

1 LAYER GWB

4"

2X4 WOOD STUDS @ 16" O/C

1/2"

ROCKWOOL SAFE 'N' SOUND INSULATION OR SIMILAR AS REQUIRED

1 LAYER GWB

ALSO REFER TO FINISHES SCHEDULE

167 [0' - 6 5/8"]

**W2.1

** W2.1 = 2X6 WOOD STUD @ 16" O/C

W3

INT. WALL - 6" FURRING PARTITION - PLUMBING WALL

FRR: NA

-

STC: 46

INT.

EXT.

1/2"

1 LAYER GWB

6"

2X6 WOOD STUDS @ 16" O/C

1/2"

ROCKWOOL SAFE 'N' SOUND INSULATION OR SIMILAR AS REQUIRED

1 LAYER GWB

ALSO REFER TO FINISHES SCHEDULE

ACoustic BATT INSULATION REQUIRED IN WASHROOMS, KITCHEN, RESTURANT, BOARD RM. & OFFICES

W4

INT. WALL - 4" STEEL STUD FURRING WALL

104 [0' - 4 1/8"]

FRR: NON-COMBS-UTIBLE

STC: 46

INT.

EXT.

-

STAINLESS STEEL COVERING

1/2"

CEMENT BOARD

4"

METAL STEEL STUDS @ 16" O/C

-

ROCKWOOL SAFE 'N' SOUND INSULATION OR SIMILAR AS REQUIRED

ALSO REFER TO FINISHES SCHEDULE

ACoustic BATT INSULATION REQUIRED IN WASHROOMS, KITCHEN, RESTURANT, BOARD RM. & OFFICES

NON COMBUSTIBLE FRAMING BEHIND KITCHEN APPLIANCES

W5

INT. SHAFT WALL

FRR: 1HR

ULC: DESIGN W352

STC: 39

INT.

EXT.

76 [0' - 3"]

5/8"

1 LAYER TYPE-X GWB

2 1/2"

CGC C-H STUDS @ 24" O/C

1"

FIRE RATED MINERAL FIBER BATTS

1"

GYPSUM LINER PANELS

ALSO REFER TO FINISHES SCHEDULE

*** W5.1 - 4" CGC C-H STUDS

W6

INT. WALL - WOOD PANELING

216 [0' - 8 1/2"]

1/2"

WOOD PANELING

2"

2X2 WD STRAPPING

1/2"

GWB

6"

2X6 WD STUD @16 O/C

1/2"

ROCKWOOL SAFE 'N' SOUND INSULATION OR SIMILAR

1/2"

GWB

ALSO REFER TO FINISHES SCHEDULE

ACoustic BATT INSULATION REQUIRED IN WASHROOMS, KITCHEN, RESTURANT, BOARD RM. & OFFICES

ALSO SEE INTERNAL ELEVATIONS FOR PANELING DETAILS

W7

INT. WALL - CERAMIC TILE

136 [0' - 5 3/8"]

STC: 46

INT.

EXT.

CERAMIC TILE FINISH

-

* WATERPROOF MEMBRANE*

1/2"

1 LAYER CEMENT BOARD, TAPED W/ FIBREGLASS MESH

4"

2X4 WOOD STUDS @ 16" O/C

1/2"

1 LAYER CEMENT BOARD, TAPED W/ FIBREGLASS MESH

-

* WATERPROOF MEMBRANE*

CERAMIC TILE FINISH

ALSO REFER TO FINISHES SCHEDULE

ACoustic BATT INSULATION REQUIRED IN WASHROOMS, KITCHEN, RESTURANT, BOARD RM. & OFFICES

* WATERPROOF MEMBRANE*

USE SCHLUTER-KERDI WATERPROOFING MEMBRANE SYSTEM TO CREATE WATERPROOF TUB

W8

INT. WALL - CERAMIC TILE & GWB

125 [0' - 4 7/8"]

STC: 46

INT.

EXT.

CERAMIC TILE FINISH

-

* WATERPROOF MEMBRANE*

1/2"

1 LAYER CEMENT BOARD, TAPED W/ FIBREGLASS MESH

4"

2X4 WOOD STUDS @ 16" O/C

1/2"

1 LAYER GWB,

ALSO REFER TO FINISHES SCHEDULE

ACoustic BATT INSULATION REQUIRED IN WASHROOMS, KITCHEN, RESTURANT, BOARD RM. & OFFICES

* WATERPROOF MEMBRANE*

USE SCHLUTER-KERDI WATERPROOFING MEMBRANE SYSTEM TO CREATE WATERPROOF TUB

W9

PRE-FAB WALK-IN FREEZER AND COOLER PANELS

89 [0' - 3 1/2"]

PRE-FABRICATED FREEZER/COOLER WALK-INS

NOBEC CAMLOCK PANELS W/ INTEGRATED DOOR, CEILING AND FLOOR.

PROVIDE DETAILED SHOP DRAWINGS FOR REVIEW BY CONSULTANT TEAM.

W10

CHAIN-LINK SECURE FENCE

76 [0' - 3"]

PROPRIETARY SECURE CHAIN-LINK "FENCE" LOCKABLE SYSTEM (TYP. FROST FENCE OR SIMILAR APPROVED)

SPANNING FLOOR TO CEILING.

TO INCLUDE LOCKABLE/OPERABLE "GATE/DOOR"

FRAMING, FASTENING AND CONNECTION DETAILS TO BE PROVIDED VIA DETAILED SHOP DRAWINGS FOR REVIEW BY CONSULTANT TEAM.

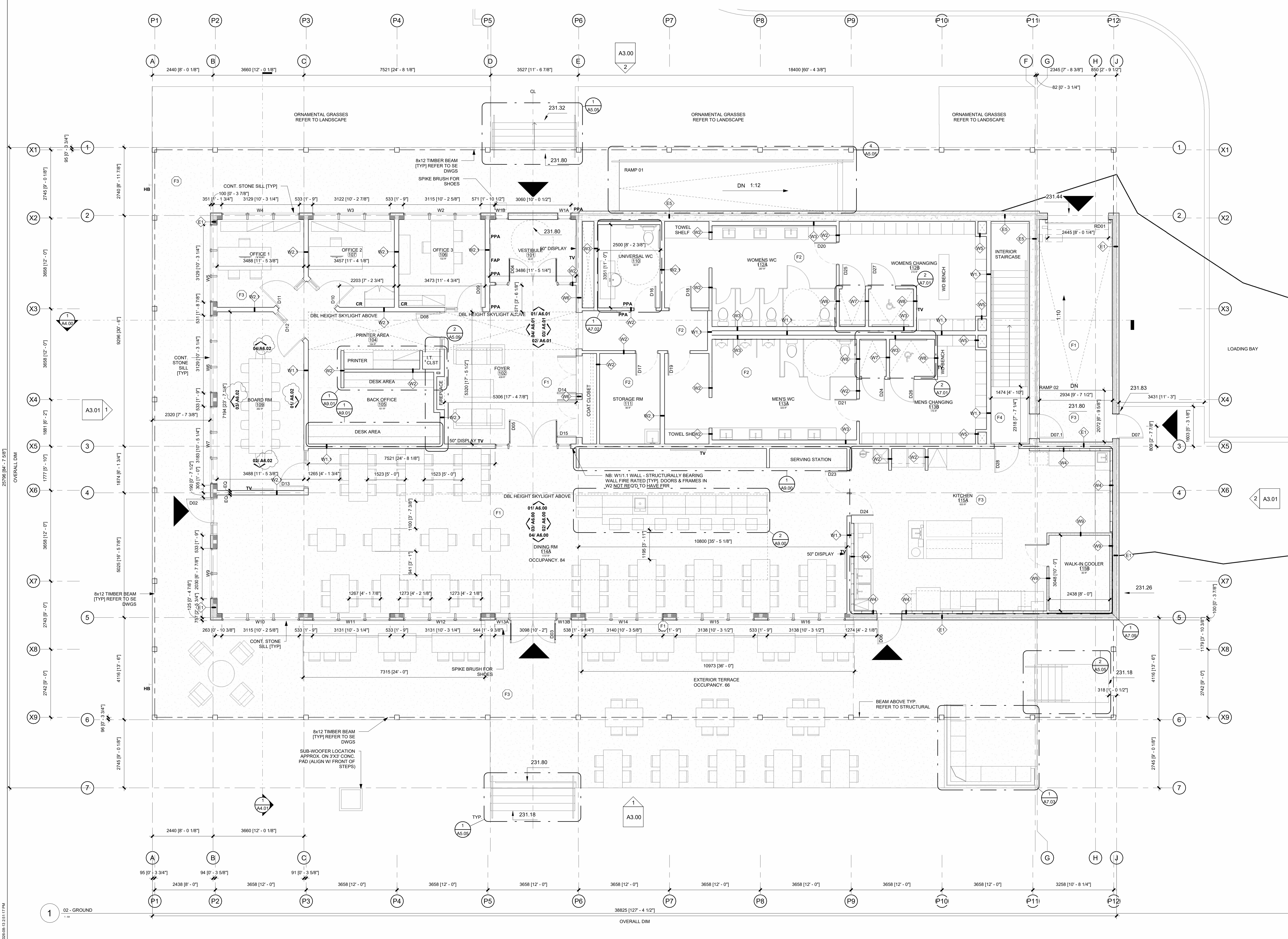
NOTES TO ACHIEVE STC AND FRR RATINGS:

1. PROVIDE CONTINUOUS ACOUSTIC SEALANT TO THE ENTIRE PERIMETER OF WALL ON BOTH SIDES OF WALL.
2. PROVIDE ACOUSTIC SEALS TO BOTH SIDES OF WALL AT ALL PENETRATIONS, AT FLOORS AND CONCRETE SLABS ABOVE, AND PERIMETER OF ALL BUTTING WALLS.
3. REMOVE CLEATS/BRIDGING BETWEEN DOUBLE WALL ASSEMBLIES. IF CLEATS ARE REQUIRED FOR STRUCTURAL STABILITY, USE ACOUSTIC SWAY BRACES [INCLUDE RUBBER OR NEOPRENE ISOLATION ELEMENT].
4. INSTALL CONTINUOUS CLOSED CELL NEOPRENE ISOLATION GASKET BETWEEN WALL PLATES AND FLOOR/CEILING
5. THRU-WALL PENETRATIONS MUST BE PROTECTED BY APPROVED ULC FIRE-STOP ASSEMBLIES TO ENSURE CONTINUITY OF FIRE SEPARATION.
6. FIRE RATED WALLS TO BE EFFECTIVELY FIRESTOPPED AROUND THE ENTIRE PERIMETER OF THE WALL ON BOTH SIDES OF THE WALL WITH APPROVED ULC FIRE-STOP ASSEMBLIES TO ENSURE CONTINUITY OF FIRE SEPARATION.

DRAWING SHOULD NOT BE SCALED

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GRIDLINES:
ALL GRIDLINES ARE TO THE OUTSIDE FACE OF POURED CONCRETE UNLESS NOTED BELOW.

GRID 3 IS TO THE CENTRELINE

GRIDS P & X ARE TO THE CENTRELINE OF TERRACE POSTS AND POSTS BETWEEN WINDOWS.

BLDG AREA 5890SF / 547m2
TERRACE 3276SF / 304.4m2
MECH. ENCLOSURE 280SF / 26.0m2

INTERIOR AREAS

GRILL ROOM 1522SF / 131.0m2
SEATING [INSIDE] 74
SEATING [OUTSIDE] 70
TOTAL SEATING FOR DINING 144
KITCHEN 614SF / 57.0m2
CHANGE ROOMS 725SF / 67.5m2
ADMIN 978SF / 90.9m2
MECHANICAL 130SF / 12.0m2
CIRCULATION 735SF / 68.3m2
OCCUPANT LOAD
OFFICE AREA 978SF / 90.9m2

OCCUPANT LOAD [IT 3.7.4.7]

ONE PERSON PER 9.3m3 10 PERSONS

PUB [OCCUPANT LOAD BY DESIGN] 146

WASHRM REQUIREMENTS

OFFICE [IT 3.7.4.7] OCCUPANT LOAD 16 PPL

ONE FIXTURE FOR EACH SEX

DINING [IT 3.7.4.3] OCCUPANT LOAD 146 PPL

THREE FIXTURES FOR EACH SEX

STAFF [PUB/KITCHEN] ONE FIXTURE

DRAWING ISSUE

Rev.	Description	Date
1	PRELIM. COORDINATION	260626
2	PRELIM. TENDER ISSUE	260720
3	Revision Add: 03	260811

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True North Professional Seal

Issued for:	JUNE 2026	1: 64
Drawing title:	26003	Scale:
Project:	26003	Author:
Client:	26003	Owner:

NEW CLUB HOUSE

777 CONSILLA AVE,
PETERBOROUGH, K9J 6Z6

Project

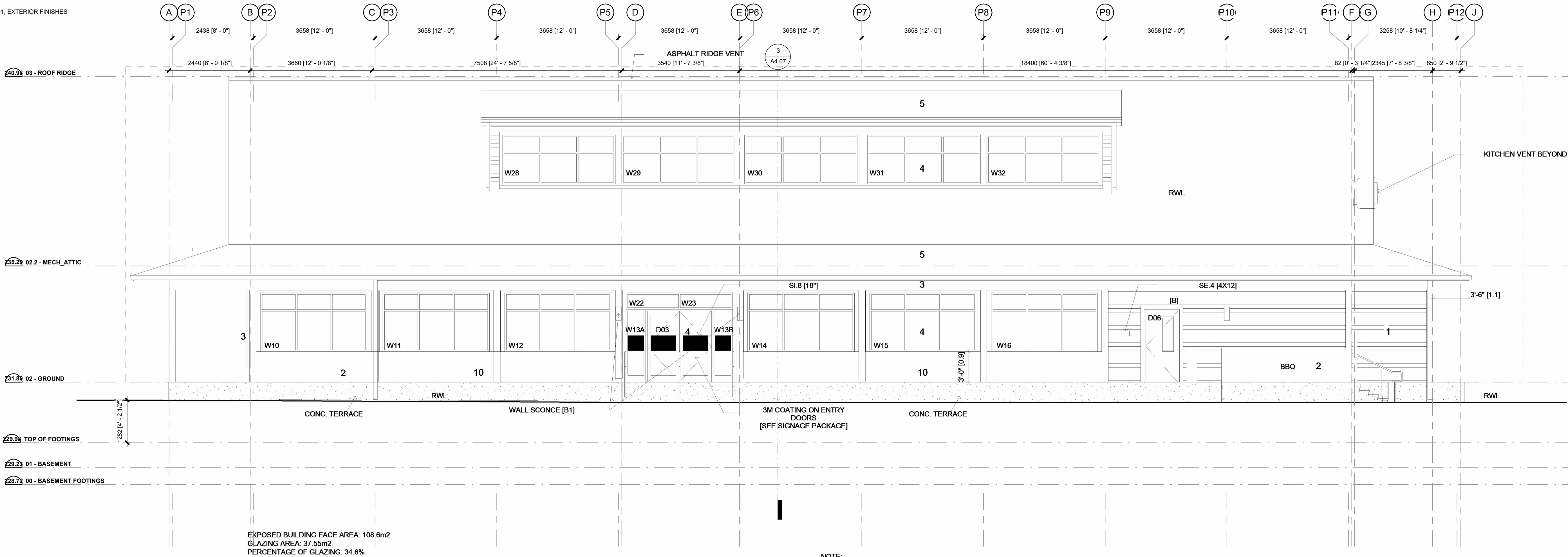
GROUND FLR PLAN

Drawing title

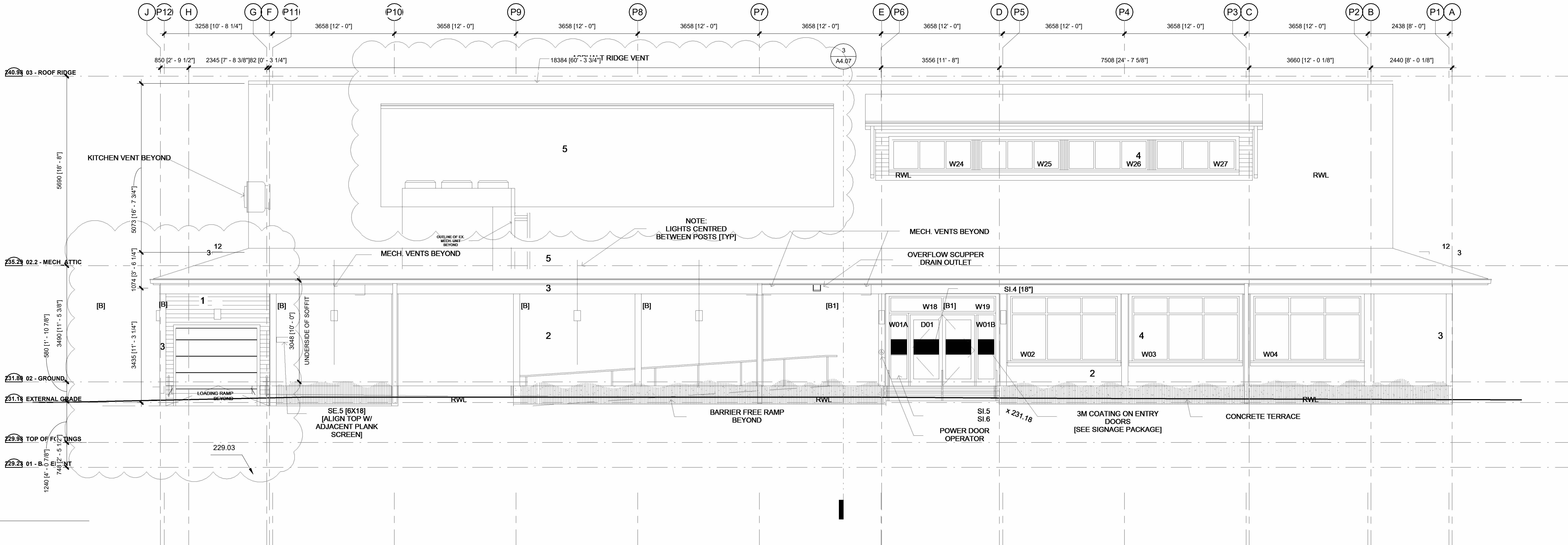
Sheet no.

A2.03

- MATERIAL LEGEND**
1. PRE-FINISHED MAIBEC SHIPLAP SIDING (SG-1)
 2. SHOULDER COMPOSITE STONE (SV-1)
 3. POST-AND-BEAM STAINED TIMBER
 4. PRE-FINISHED WINDOWS
 5. ASPHALT SHINGLES
 6. -
 7. -
 8. COMPOSITE PLANK SCREEN (CR-1)
[5.5" x 1.25" x 1/4" GAP BETWEEN BOARDS]
 9. CONCRETE UPSTAND
 10. WOOD SEATING
- REFER TO ARCHITECTURAL APPENDIX 01, EXTERIOR FINISHES



1 SOUTH ELEVATION Copy 1



2 NORTH ELEVATION Copy 1

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Rev.	Description	Date
1	SPA	150626
2	PRELIM. COORDINATION	260626
3	PRELIM. TENDER ISSUE	260720
4	Revision Add: 03	260811

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Issued for:	JUNE 2026	Drawing title:	1: 64
Drawn by:	26003	Project no:	Author
Checked by:		Reviewed by:	Owner

NEW CLUB HOUSE

777 CONSILLA AVE,
PETERBOROUGH, K9J 6Z6

**NORTH SOUTH
ELEVATIONS**

Drawing title:
Sheet no:
A3.00

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1. PRE-FINISHED MAIBEC SHIPLAP SIDING [SG-1]
2. SHOULDICE COMPOSITE STONE [SV-1]
3. POST AND BEAM STAINED TIMBER
4. PRE-FINISHED WINDOWS
5. ASPHALT SHINGLES
6. -
7. -
8. COMPOSITE PLANK SCREEN [CR-1]
[5/8" x 1/2" x 1/4" GAP BETWEEN BOARDS]
9. CONCRETE UPSTAND
10. WOOD SEATING

REFER TO ARCHITECTURAL APPENDIX 01, EXTERIOR FINISHES



v.	Description	Date
	SPA	150626
	PRELIM. COORDINATION	260626
	PRELIM. TENDER ISSUE	260720
	Revision Add. 03	260811

NE 2028	1 : 64
ing date	Scale
003	Author
of no.	Drawn by

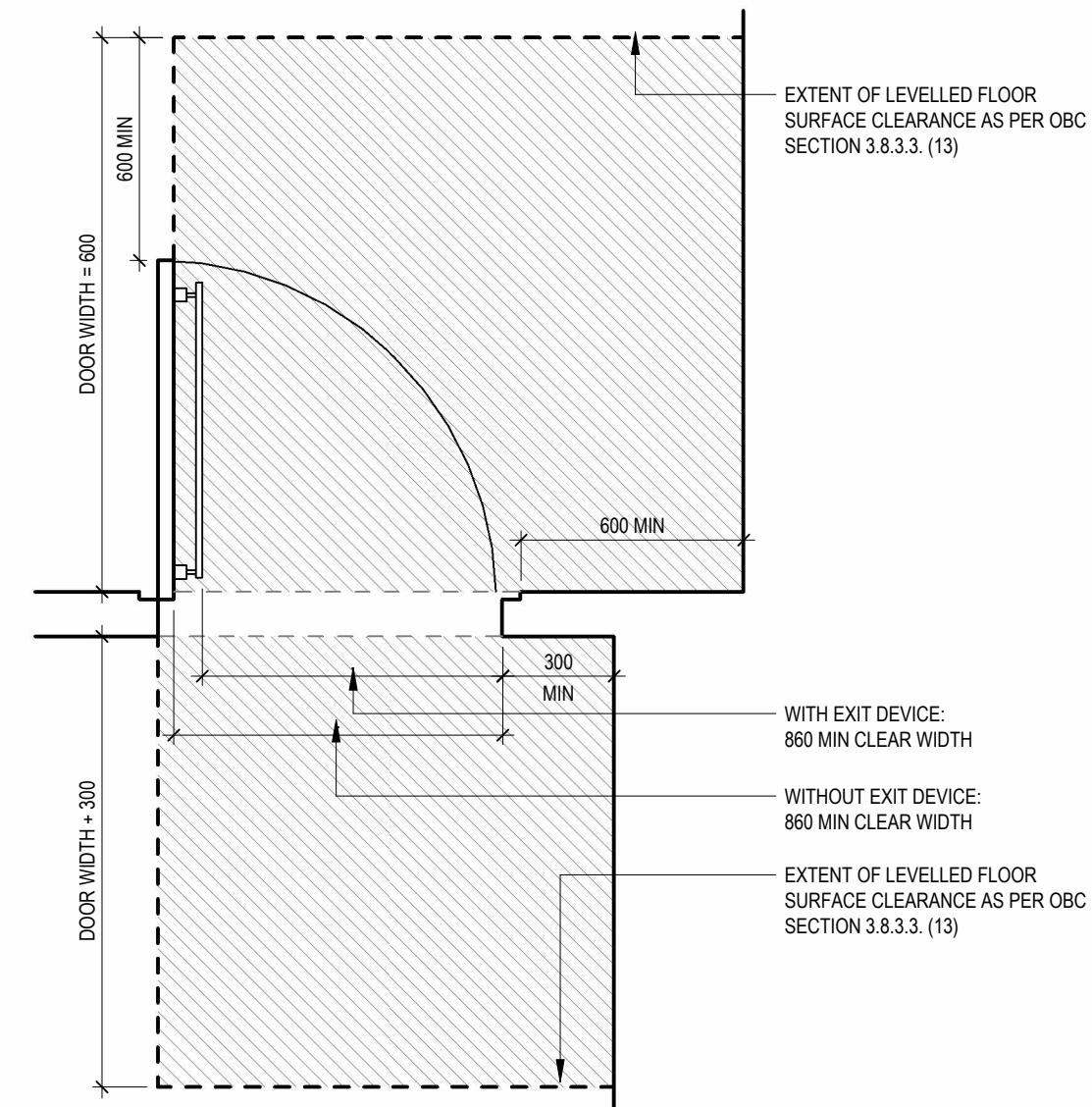
EAST WEST ELEVATIONS

710.01

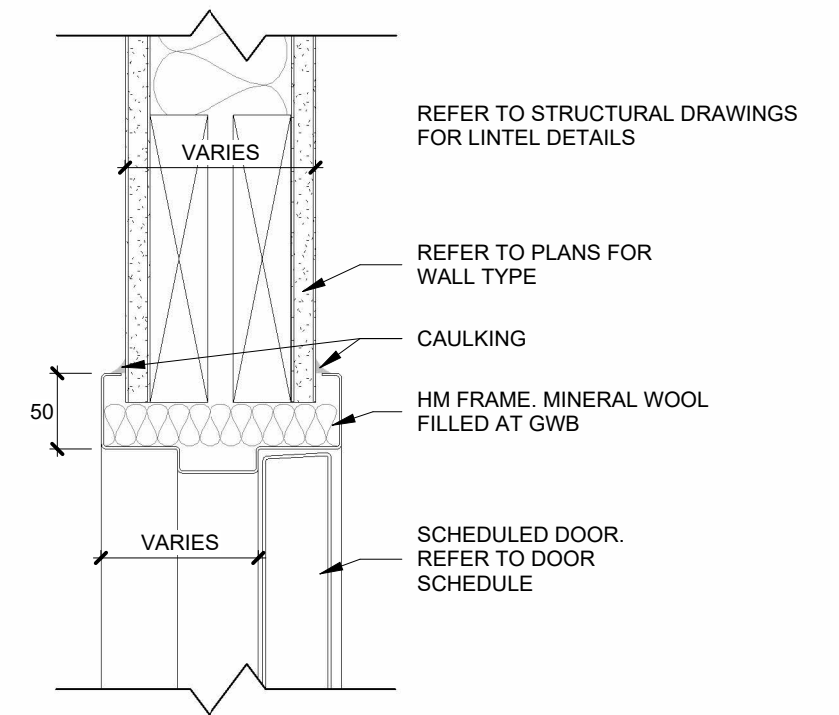
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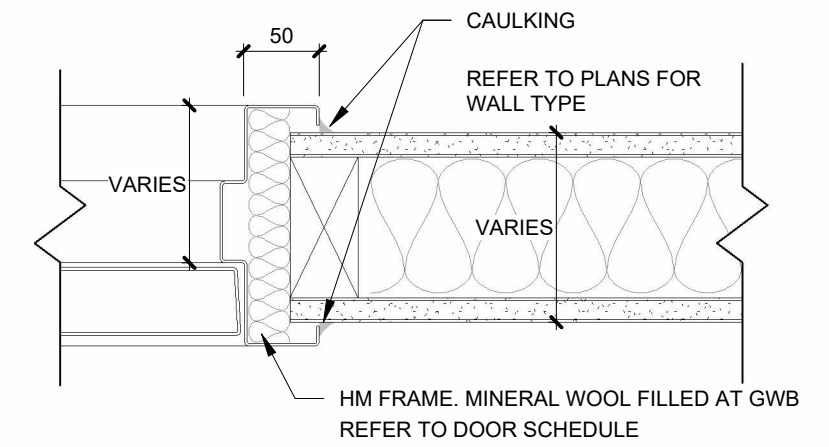
600mm MIN. CLEARANCE REQUIRED ON LATCH SIDE WHEN PULLING DOOR OPEN.	300mm MIN. CLEARANCE REQUIRED ON LATCH SIDE WHEN PUSHING DOOR OPEN	

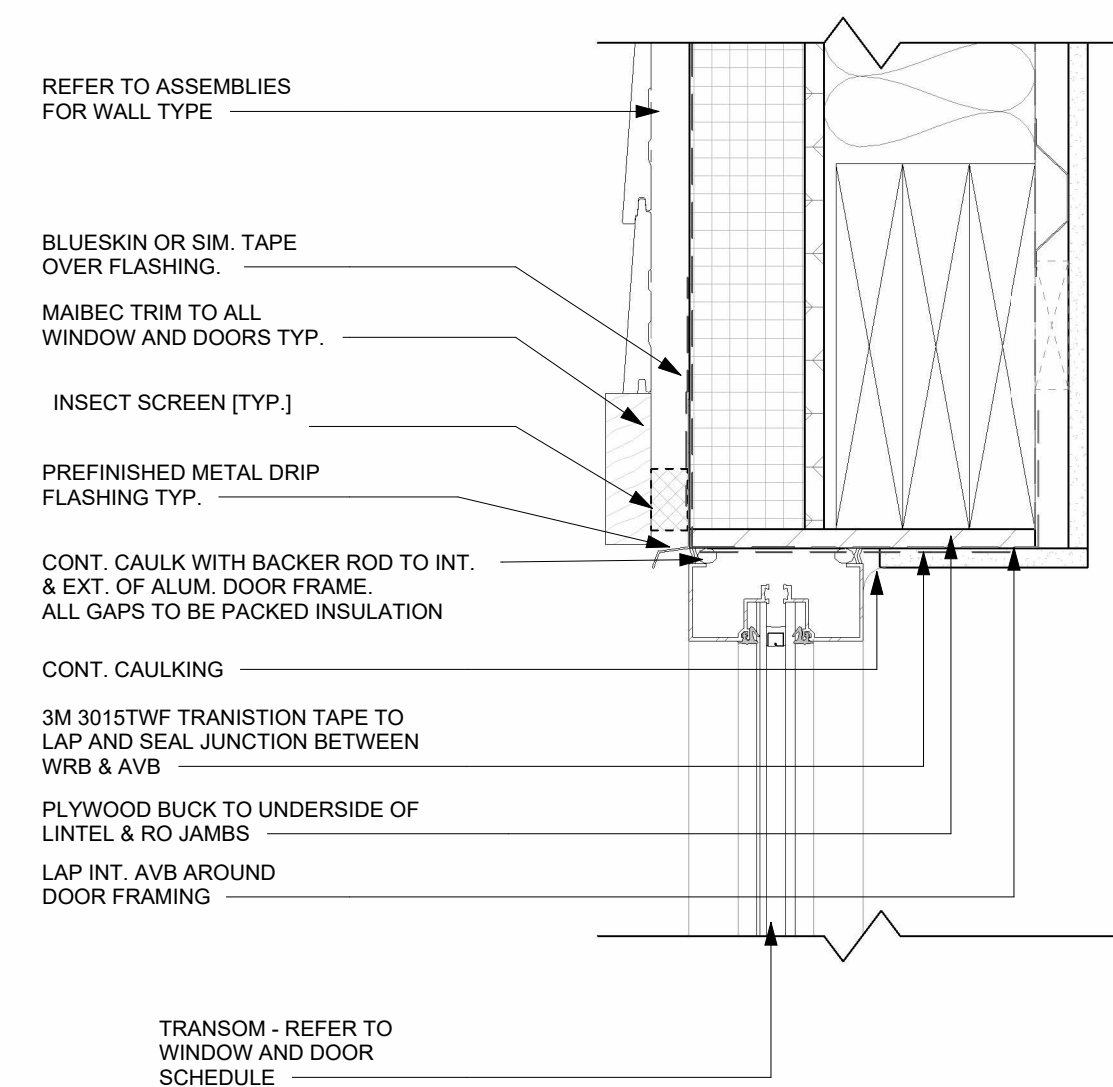
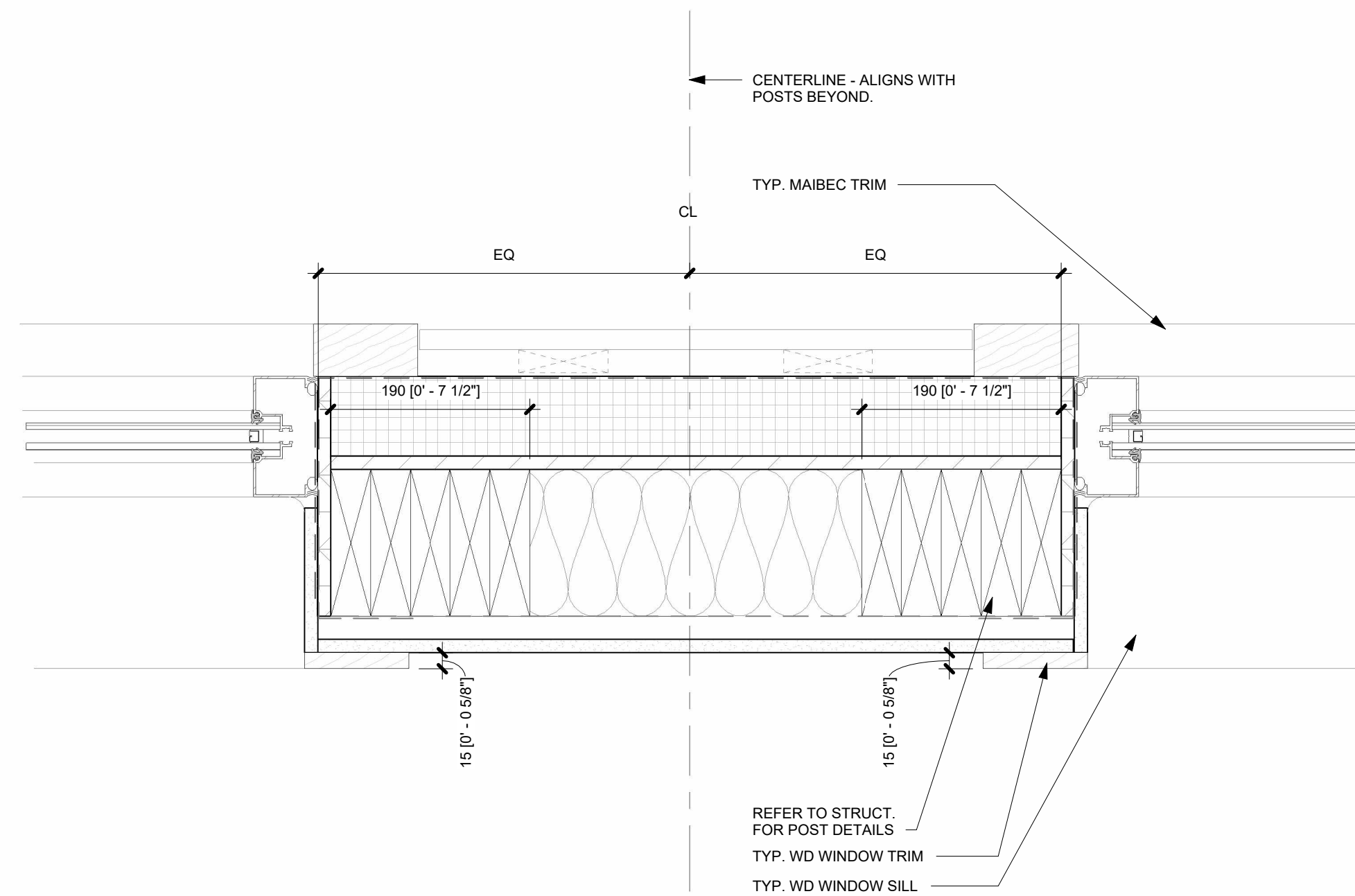
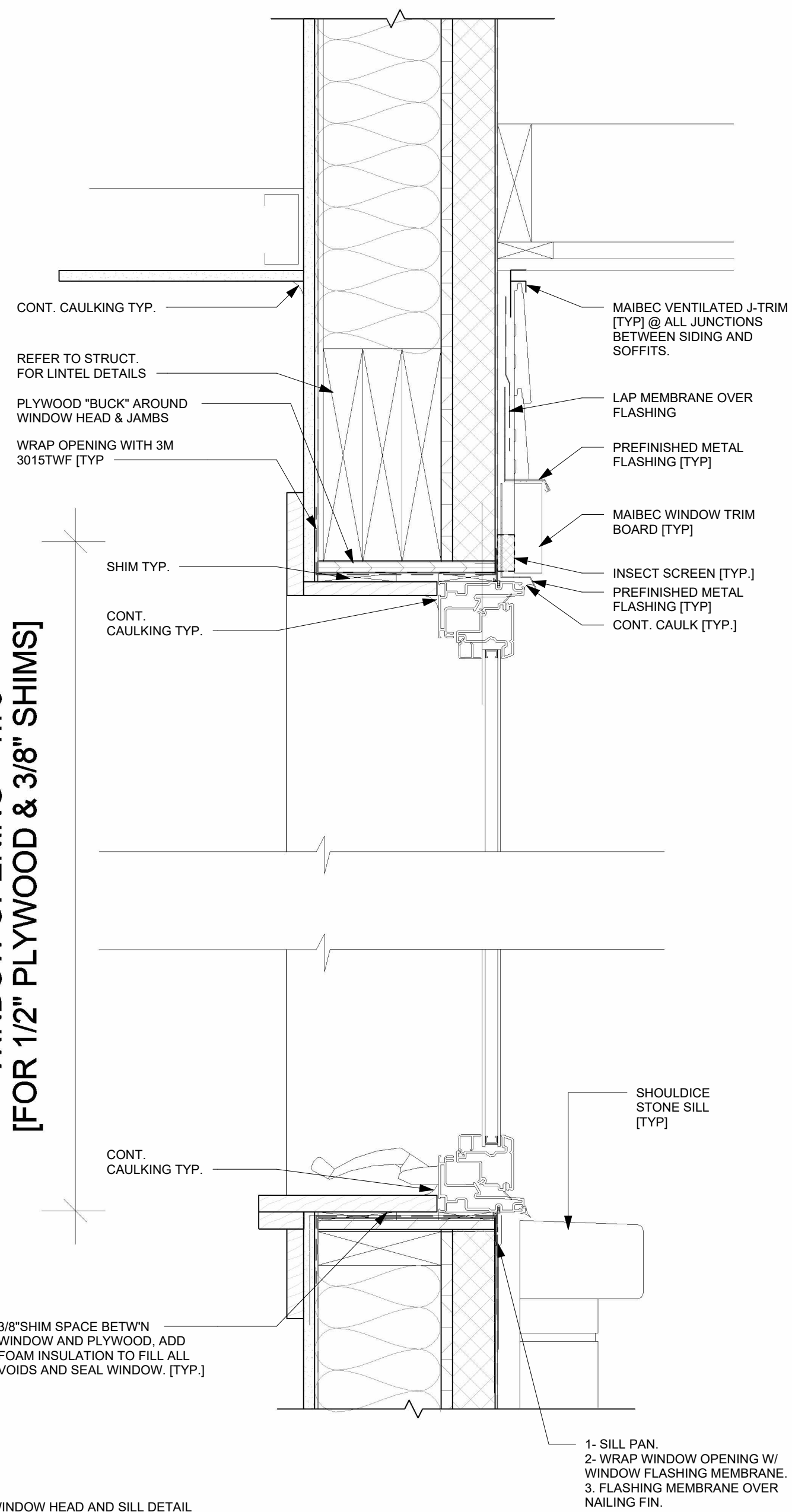
TYPICAL CLEARANCE BEHIND HOLLOW METAL FRAMES	TYPICAL CLEARANCE BEHIND WOOD FRAMES	TYPICAL POWER DOOR OPERATOR TO BE MOUNTED ON CENTRE 900MM TO 1050 MM A.F.F.

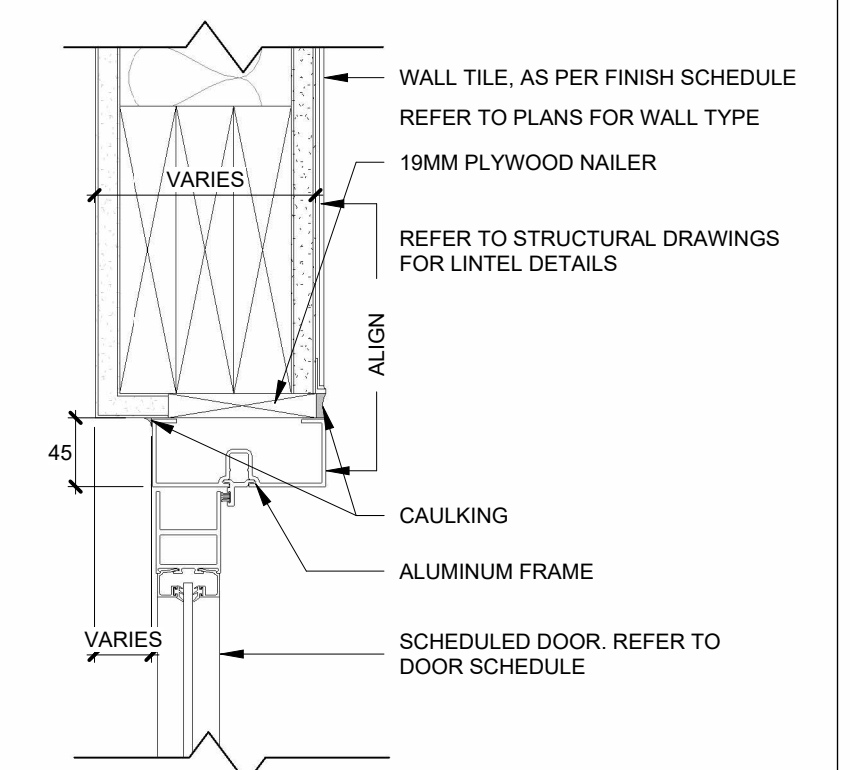
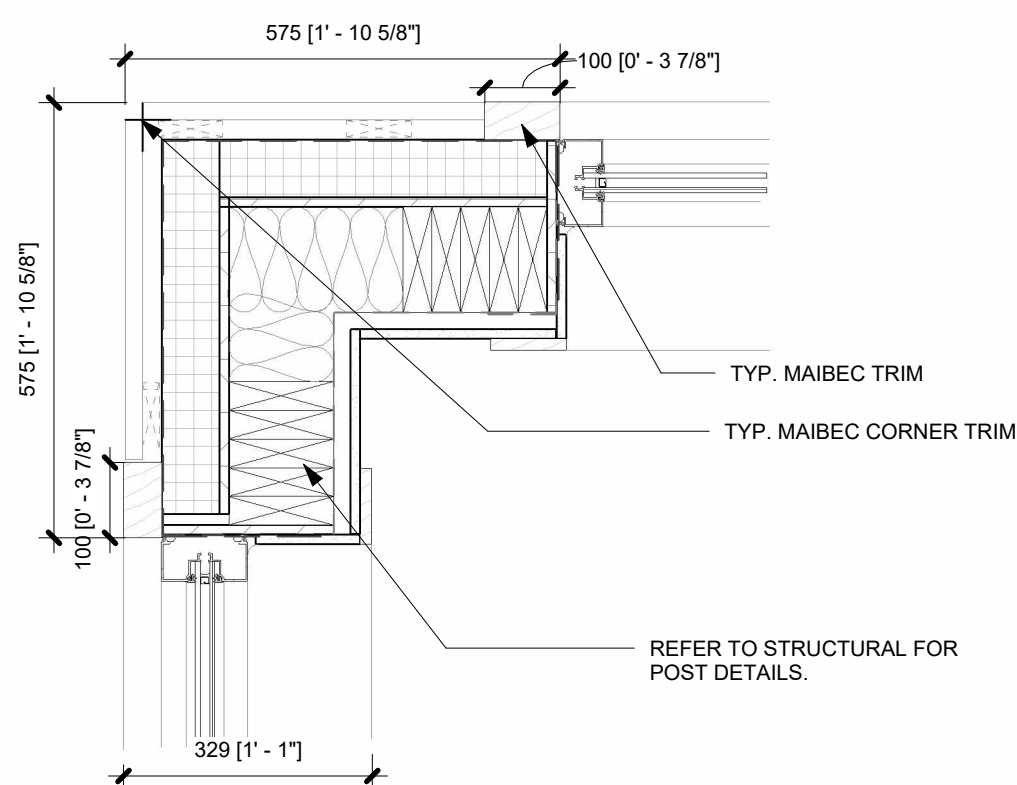
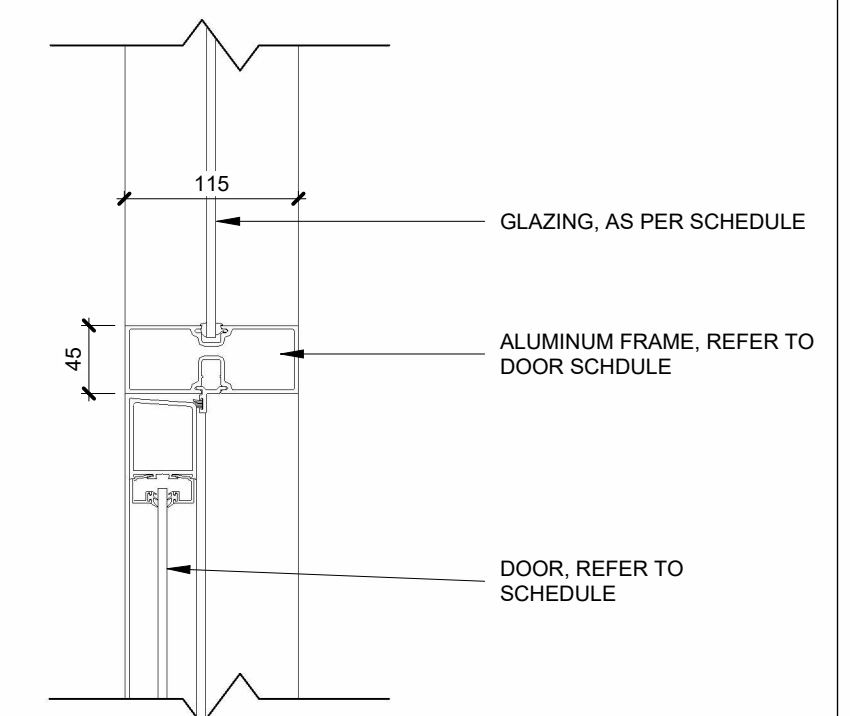
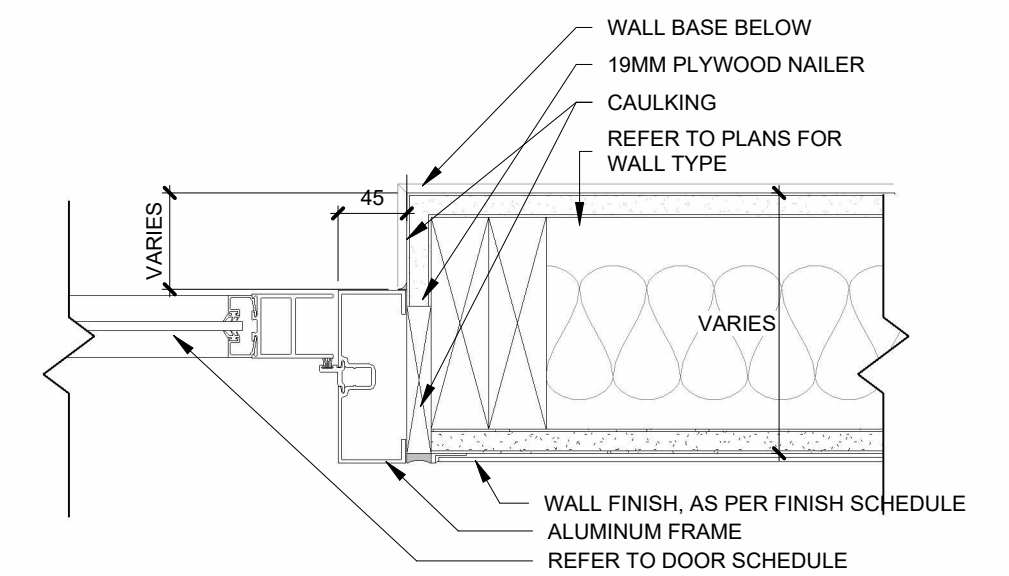


1. ALL DOORS IN A BARRIER FREE PATH OF TRAVEL MUST MAINTAIN THE MINIMUM CLEARANCES NOTED IN THE DIAGRAM AS PER OBC SECTION 3.8.3.3.
2. COORDINATE ALL EXIT DEVICES AND DOOR THICKNESSES TO MAINTAIN A MINIMUM 850MM BARRIER FREE PATH OF TRAVEL AS NOTED IN THE DIAGRAM AS PER OBC SECTION 3.8.3.3.
3. ALL DOORS THAT OCCUR IN A BARRIER FREE PATH OF TRAVEL ARE TO RECEIVE LEVER TYPE DOOR HANDLES THAT MEET THE REQUIREMENTS OF THE ONTARIO BUILDING CODE.
4. THRESHOLDS IN A BARRIER FREE PATH OF TRAVEL TO BE MAXIMUM 13 MM HIGH









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[illegible]

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IE 2026	As indicated
g date	Scale
03	Author
na	Drawn by

NEW CLUB HOUSE

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ETERBOROUGH, K9J 6Z6

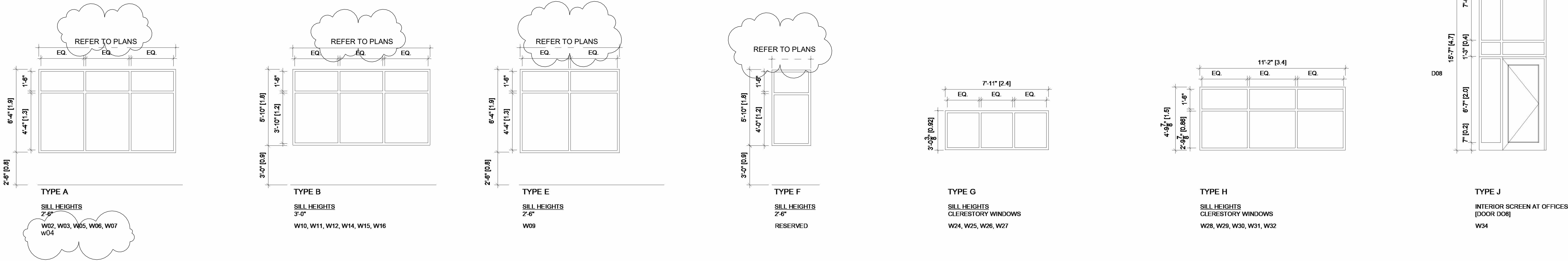
DETAILS - WINDOW AND DOORS

ing life

A5 10

A5 12

WINDOW TYPES



WINDOW NOTES

- ALL WINDOWS AND EXTERIOR DOORS NEED TO BE IN CONFORMANCE OF SB10 REQUIREMENTS AS PER TABLE SB5.5-6 (SEE PAGE A0.01) WINDOW SUPPLIER TO PROVIDE ENGINEERED SHOP DRAWINGS, STAMPED.
- ALL WINDOWS TO BE NORTH STAR WHITE PVC WINDOW AND FRAME. DOUBLE PANE ARGON FILLED OR SIM. APPROVED
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS OF INSTALLED WINDOW & SPEC CUT SHEETS FOR ARCHITECT REVIEW.
 - USE EXPANDING FOAM GASKET TAPE AND FIBREGLOSS SHIMS FOR ALL MOUNTING [CONTEGA FIDEN EXO OR SIM.] OR SUPPLIER RECOMMENDED.
 - ENSURE WINDOW AIRSEALS ARE TESTED WITH AIRTIGHTNESS TEST BEFORE FINALIZING INSTALLATION.
 - ON INTERIOR: APPLY CONTINUOUS TESCON VANA TAPE BY PROCLIMA OR SIM. OVER WD FRAME TO WINDOW FRAME
 - ON EXTERIOR: CONTEGA EXO WINDOW SEALING TAPE FOR EXTERIOR.
 - SECURE WINDOWS TO METAL SUB-FRAME WITH COUNTERSUNK LOW PROFILE TEK SCREWS. SPACING AND FASTENERS TBC BY WINDOW SUPPLIER. PLUG COUNTERSUNK HOLE W/WOOD DOWEL. PRE-DRILL HOLES.
 - REFER TO MANUFACTURER SUPPLIED INSTALLATION DIRECTIONS AND DETAILS/DRAWINGS.
 - DIMENSIONS INDICATE WINDOW FRAME DIMENSIONS. CONTRACTOR TO CONFIRM ROUGH OPENING DIMENSIONS WITH WINDOW SUPPLIER.

DOOR NOTES

- NOTES:
- ALL EXTERIOR DOORS TO BE OPTIMA-ALU BY VETTA OR SIM. W/TRIPLE PANE ARGON FILLED WINDOWS WHERE REQUIRED. DOUBLE AIRSEALS AND COMMISSIONING OF MULTI-AXIS HINGES TO BE DONE ON-SITE.
 - ALL INTERIOR DOORS TO BE SOLID WOOD VENEER DOORS. INCLUDE SOLID WOOD TRIM, J-TRIM DRYWALL REVEAL TO WOOD SIDING.
 - REFER TO TYPICAL WINDOW/DOOR DETAIL FOR DETAILS..
 - EXTERIOR DOOR FRAME COLOUR TO BE RAL 9006
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS OF DOORS FOR CLIENT REVIEW. INCLUDE HARDWARE SCHEDULES.
 - ENSURE WINDOW AIRSEAL IS TESTED WITH BLOWER DOOR AIRTIGHTNESS TEST BEFORE FINALIZING INSTALLATION.
 - ENSURE WINDOW AIRSEAL IS TESTED WITH BLOWER DOOR AIRTIGHTNESS TEST BEFORE FINALIZING INSTALLATION.
 - DIMENSIONS INDICATE CLEAR-OPENING SIZE. CONTRACTOR TO CONFIRM ROUGH OPENING DIMENSIONS WITH WINDOW SUPPLIER.
 - CONTRACTOR TO PROVIDE SHOP DRAWINGS OF DOORS & HARDWARE SCHEDULES. FOR REVIEW.
 - USE EXPANDING FOAM GASKET TAPE AND PLASTIC SHIMS FOR ALL MOUNTING.
 - ENSURE WINDOW AIRSEAL IS TESTED WITH BLOWER DOOR AIRTIGHTNESS TEST BEFORE FINALIZING INSTALLATION.
 - FOR DOOR THRESHOLD CAULKING USE TREMCO DYMONIC 100 OR SIM.
 - EXTERIOR ROLLER DOORS TO BE SECTIONAL INSULATED STEEL DOORS W/3" INSULATED CORE. FROM CANDLOOR OR SIM. COLOUR TO MATCH ALL OTHER EXTERIOR DOORS. PROVIDE SHOP DRAWINGS AND CUT SHEET FOR REVIEW.
 - GC TO CONFIRM ALL REQUIRED ROUGH OPENING SIZES W/ MANUFACTURERS..

- DIMENSIONS FOR DOORS
- 1 DIMENSIONS SHOWN ON PANEL DOORS TYPICAL FOR ALL PANEL DOORS.
 - 2 ALL DIMENSIONS MAY VARY SLIGHTLY TO SUIT MANUFACTURER'S STANDARD, EXCEPT WHERE SHOWN AS MAX. OR MIN.
 - 3 ALL GLASS IN FRR DOORS TO BE GEORGIAN WIRE GLASS.
 - 4 WHERE LOCATION OF DOOR IS NOT INDICATED ON DRAWINGS WITH A DIMENSION:
 - a. CENTRE DOOR BETWEEN WALLS, WHERE APPROPRIATE, OR
 - b. PROVIDE, A MINIMUM OF 67150mm BETWEEN DOOR [HINGE SIDE] AND NEAREST WALL OR OBSTACLE.

- GENERAL
- 1 HARDWARE SUPPLIER TO PROVIDE HARDWARE LIST AND SUBMIT SPEC/ CUT SHEETS OF ALL HARDWARE PROVIDED FOR REVIEW PRIOR TO APPROVAL.
 - 2 ALL HARDWARE IN COMMON AREAS TO BE MEDIUM DUTY COMMERCIAL GRADE.
 - 3 PROVIDE THREE HINGES AND FLOOR OR WALL STOP ON ALL DOORS UNLESS OTHERWISE NOTED.
 - 4 GLASS IN ALL DOORS, SIDE LITES, TRANSOMS WHERE INDICATED, TO BE TEMPERED GLASS, EXCEPT WHERE OTHERWISE NOTED. GLASS IS TO BE MOUNTED IN METAL STOPS.
 - 5 ALL HARDWARE SHALL BE LEVER HANDLES UNLESS OTHERWISE NOTED.
 - 6 ALL KICK PLATES ARE TO BE 10" HIGH, BRASS OR BRASS IN APPEARANCE. AND THE WIDTH OF THE DOOR LESS 1 ". EASE ALL EDGES.
 - 7 DOOR CLOSERS NOT MOUNTED ON DOOR CASING.
 - 8 SEE FLOOR PLAN DRAWINGS FOR PLACEMENT OF ALL POWER DOOR OPERATORS.
 - 9 ALL PASSAGE SETS, LOCKSETS, AND PULLS TO MATCH AND BE OF A LEVER HANDLE TYPE FOR BARRIER FREE ACCESS THROUGHOUT.
 - 10 WHERE A MORTISE LOCK IS PROVIDED, IT MAY OR MAY NOT REQUIRE A KEY TO GET INTO A ROOM. HOWEVER, IT MUST ALWAYS BE POSSIBLE FOR A PERSON TO GET OUT OF THE ROOM WITH A SIMPLE DOWNWARD PUSH ACTION ON THE LEVER HANDLE TO RELEASE THE MORTISE LOCK.
 - 11 ALL EXTERIOR DOORS TO BE PROVIDED WITH WEATHERSTRIPPING AND BOTTOM DOOR SEAL.
 - 12 ADJUST DOOR FRAMES TO ALLOW DOORS TO MEET WHEN CLOSED. WEATHERSTRIP DOORS AND FRAME.

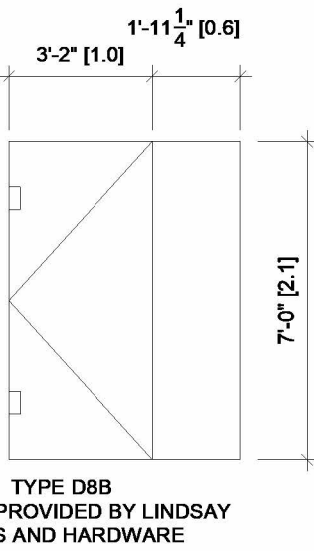
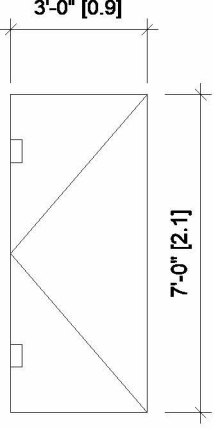
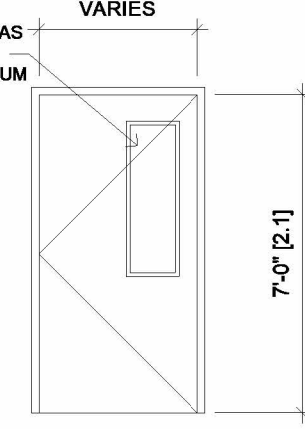
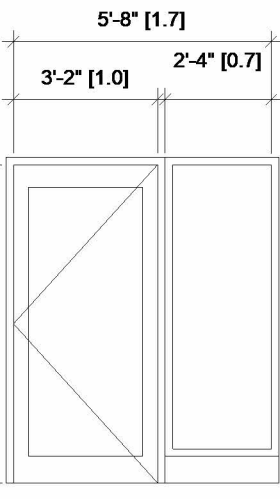
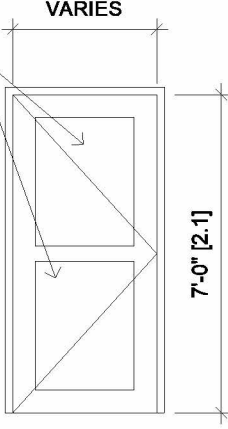
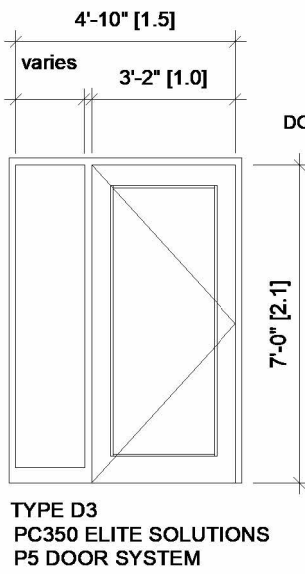
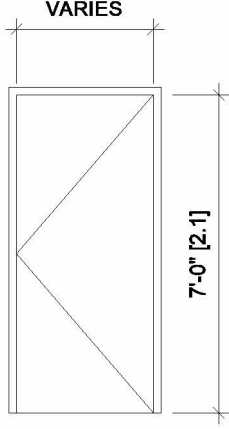
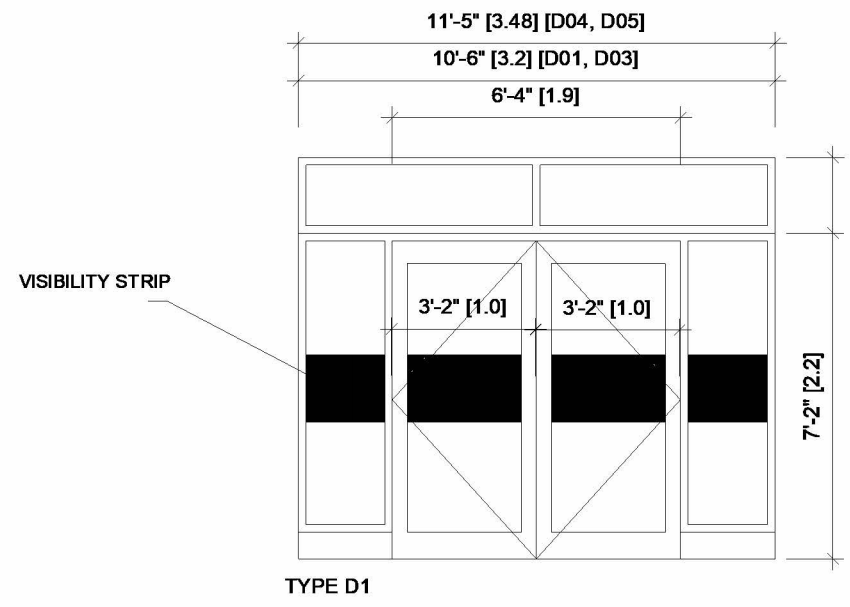
- DOOR KEYING NOTES: (TO BE CONFIRMED WITH CLIENT)
- 1 DOOR LOCKS TO BE MASTER KEYED. SUBMIT KEYING SCHEDULE TO CLIENT FOR APPROVAL.
 - 2 PROVIDE KEYS IN TRIPPLICATE FOR EVERY LOCK IN THIS CONTRACT.
 - 3 PROVIDE THREE MASTER KEYS FOR EACH MK GROUP.
 - 4 STAMP KEYING CODE NUMBERS ON KEYS AND CYLINDERS.
 - 5 PROVIDE 3 KEYS PER LOCKSET.
 - 7 MECHANICAL ROOMS, JANITOR ROOMS, SERVICE ROOMS, MACHINE ROOMS ARE ALL ON A SEPARATE LOCKSET.
 - 8 DOORS IN STAIRWELLS AND ALL EXTERIOR EXIT DOORS WITH LOCKSET, ALWAYS OPERABLE FROM THE INTERIOR WITHOUT A KEY.
- BARRIER FREE
- 1 FOR ENTRANCE DOORS IN THE BARRIER FREE PATH OF TRAVEL, PROVIDE A LOW PROFILE THRESHOLD FOR FULL WIDTH OF DOOR AND FRAME FOR BARRIER FREE ACCESS, SLOPED TO EXTERIOR.
 - 2 PROVIDE A PUSH BUTTON ON THE INTERIOR AND ON THE EXTERIOR OF THE DOOR FOR POWER ASSISTED DOOR OPENING DEVICE AT BOTH THE EXTERIOR AND INTERIOR VESTIBULE DOORS (ONE DOOR ONLY OF EACH SET OF DOORS) DOOR OPERATOR TO BE ON SIDE OF THE DOOR, WHERE THE DOOR OPENS, TOWARDS THE CONTROL OPERATOR IS TO BE A MINIMUM OF 800mm AND A MAXIMUM OF 1500mm BEYOND THE SWING OF THE DOOR.
 - 3 A DOOR CLOSURE IS NOT SPECIFIED IN CASE WHERE A POWER DOOR OPERATOR IS PROVIDED.
 - 4 DOOR PLATES TO INCLUDE INTERNATIONAL SYMBOL FOR BARRIER FREE ACCESS TO BE PROVIDED ON ALL PUBLIC BARRIER FREE WASHROOMS.

- ENTRANCE DOORS
- 1 WHEN LOOKING FROM THE OUTSIDE OF DOUBLE DOORS, THE RIGHT HAND DOOR IS TO BE THE ACTIVE LEAF WITH RESPECT TO THE POWER DOOR OPERATION, AND IN THE POWER DOOR IN A POWER ASSISTED DOOR OPERATION.
 - 2 WHERE THE VESTIBULE DOORS OR SECONDARY DOORS INSIDE THE OUTER DOORS, WEATHERSTRIPPING AND ADJUSTABLE DOOR AND BOTTOM SEALS ARE TO BE PROVIDED. AN ALUMINUM THRESHOLD ON THESE INTERIOR DOORS IS NOT REQUIRED.
 - 3 VISIBILITY STRIP TO BE ± 30% TRANSPARENT FILM APPLIED TO INSIDE OF GLAZING
 - 4 ALL ALUMINUM AND METAL DOORS AND FRAMES TO BE THERMALLY BROKEN TO REDUCE HEAT LOSS/GAIN THROUGH DOOR AND FRAME.
 - 5 ALL EXTERIOR DOORS AND ALL INTERIOR VESTIBULE DOORS ARE TO HAVE NON REMOVABLE HINGES.

DOOR & HARDWARE SCHEDULE

DOOR NO.	LOCATION	DOOR				FRAME				HARDWARE												REMARKS			
		TYPE	SIZE	FRR	MAT	FINISH	VS	GL	MAT	FINISH	CL	DS	FS	LO	WS	KP	PP	PD	LV	LS	PVS				
BASEMENT																									
D801	STAIR	D7	36" X 84"	45 MIN	HM	PT			O	HM	PT	O	O							O	O				
D802	MECH/ELEC	D2	36" X 84"	45 MIN	HM	PT				HM	PT	O			O					O					
D803	ADMIN STG	D2	36" X 84"		HM	PT				HM	PT				O						O				
D804	WASHRM	D2	36" X 84"			HM	PT		O	HM	PT		O									O			
GROUND FLOOR																									
ENTRANCE DOORS																									
D01	NORTH ENTRY	D1	2'-38" X 84"		ALUM	ANOD	O	O	ALUM	ANOD	O			O	O		O	O		O					LOW RISE THRESHOLD FOR BARRIER FREE ACCESS
D02	WEST ENTRY	D5	38" X 84"		ALUM	ANOD	O	O	ALUM	ANOD	O			O	O		O	O		O					
D03	SOUTH ENTRY	D1	2'-38" X 84"		ALUM	ANOD	O	O	ALUM	ANOD	O			O	O		O	O		O					
D04	VESTIBULE 101	D1	2'-38" X 84"		ALUM	ANOD	O	O	ALUM	ANOD	O			O	O		O	O		O					
D05	FOYER 102	D1	2'-38" X 84"		ALUM	ANOD	O	O	ALUM	ANOD	O			O	O		O	O			O				
D06	KITCHEN	D7	38" X 84"		IN STL	PT			O	TB	PT	O			O	O					O				INSULATED
D07	LOADING	D7	42" X 84"		IN STL	PT			O	TB	PT	O			O	O						O			INSULATED
D28	KITCHEN	D7	36" X 84"	45 MIN	HM	PT			O	HM	PT	O		O							O				
OFFICE DOORS [PC350]																									
D08	OFFICE	D3	38" X 84"		PC350				O	O	PC350				O	O					O				
D09	OFFICE 106	D3	38" X 84"		PC350				O	O	PC350				O	O					O				
D10	OFFICE 107	D3	38" X 84"		PC350					O	PC350									O					
D11	OFFICE 108	D3	38" X 84"		PC350					O	PC350									O					
D12	BOARDROOM	D3	38" X 84"		PC350					O	PC350										O				
D13	BOARDROOM	D3	38" X 84"		PC350					O	PC350				O						O				3M FILM ON DOOR, 30% OPACITY
OFFICE DOORS [PANELLED]																									
D14	FOYER CLST	D4	2'-24" X 84"		PW	PT				WF	PT							O			O				
D15	FOYER CLST	D4	2'-24" X 84"		PW	PT				WF	PT							O			O				
D16	UNIV WASHRM	D4	38" X 84"		PW	PT				WF	PT	O	O					O	O			O			
D17	TAP RM	D4	38" X 84"		PW	PT				WF	PT	O	O		O	O					O				
D18	WOMENS WC	D4	38" X 84"		PW	PT				WF	PT	O	O					O	O		O				
D19	MENS WC	D4	38" X 84"		PW	PT				WF	PT	O	O					O	O		O				
D20	WOMENS WC	D4	38" X 84"		PW	PT				WF	PT	O	O					O	O		O				
D21	MENS WC	D4	38" X 84"		PW	PT				WF	PT	O	O					O	O						
D22	KITCHEN/PUB	D7	38" X 84"		SC	PT				WF	PT							O	O						DUAL SWING HINGES/ PUSH PLATES/ OVERSIZED KICK PLATES
D23	KITCHEN/PUB	D7	38" X 84"		SC	PT				WF	PT							O	O						DUAL SWING HINGES/ PUSH PLATES/ OVERSIZED KICK PLATES
SHOWER DOORS																									
D24	SHWR	D8A	36" X 80"						O																TEMPERED GLASS, BLACK HARDWARE
D25	SHWR	D8A	36" X 80"						O																TEMPERED GLASS, BLACK HARDWARE
D26	BF SHWR	D8B	38" X 84"						O																TEMPERED GLASS, BLACK HARDWARE, W. SIDELITE
D27	BF SHWR	D8B	38" X 84"						O																TEMPERED GLASS, BLACK HARDWARE, W. SIDELITE

DOOR TYPES



WINDOW NOTES:

WIRED GLASS AS REQUIRED
0.8 sq.m MAXIMUM

DRAWING SHOULD NOT BE SCALED

Contractor must check and verify all dimensions on the job and report any discrepancies to the architect before proceeding with the work. This drawing shall not be used for construction purposes until stamped and signed by the consultant responsible. This drawing is an instrument of service, is provided by and is the property of CRW ARCHITECTS INC.

Rev.	Description	Date
1	PRELIM. TENDER ISSUE	260720
2	Revision Add. 03	260811

CRWA

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Issued for:	As indicated:
JUNE 2026	Date
26003	Author
26003	Checker

NEW CLUB HOUSE

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WINDOW AND DOOR
SCHEDULE

Drawing file

Sheet no.

A8.00