

Humanics Sanctuary - Phase 1B

Site Servicing Report

Type of Document

Site Plan Submission

Project Name Humanics Sanctuary

Project Number OTT-00229886-A0

Prepared By: Amr Salem, P.Eng.

Reviewed By: Bruce Thomas, P.Eng.

exp Services Inc. 100-2650 Queensview Drive Ottawa, ON K2B 8H6 Canada

Date Submitted November 25, 2022

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Amr Salem, P.Eng. Project Engineer Infrastructure Services

Date Submitted: November 25, 2022 Bruce Thomas, P.Eng. Senior Project Manager Infrastructure Services

Bruce Thomas



Legal Notification

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1 Background

Exp Services Inc. (**exp**) was retained by Humanics Universal Inc. to provide engineering services for a proposed institutional development located in the City of Ottawa (the former Township of Cumberland).

The 7.52-hectare subject property, herein referred to as Sanctuary Lands, is located on the south side of Old Montreal Road. Site access is provided from Old Montreal Road with an emergency access road to the Cumberland Estates subdivision to the south. Figure 1 in Appendix A provides the overall site location. The Sanctuary Lands is comprised of the northern section of 3400 Old Montreal Road (PIN 145340140) as well as the parcel of land at 3468 Old Montreal Road (PIN 145340141). Cumberland Estate Phase 2, to the south, is comprised of the southern section of 3400 Old Montreal Road (PIN 145340140) and the parcel of land designated as PIN 145340139.

The Site Servicing for Phase 1B of the Sanctuary Lands has been completed by exp Services Inc. along with Morrison Hershfield as noted in the reports listed in Section 2 below.

This report is prepared to illustrate the proposed servicing for Phase 1B of the proposed Sanctuary Lands. This report documents the means by which servicing will be provided for the proposed development and should be read in conjunction with the latest engineering drawings.

2 Previous Reports and Referenced Guidelines

Reports that were reviewed and referenced, include:

- Site Servicing and Stormwater Management Report, Humanics Sanctuary, Revision 3, dated July 2017, by exp Services Inc.
- Stormwater Management Design Brief Memorandum, Humanics Sanctuary & Sculpture Park, Revision 1, dated December 3, 2021, by Morrison Hershfield.
- Phase One Environmental Site Assessment 3400 Old Montreal Road, Ottawa, Ontario, dated March 2016, by exp Services Inc.
- Hydrogeology, Terrain Analysis and Impact Assessment, 3400 Old Montreal Road, Ottawa, Ontario, updated November 25, 2022, by exp Services Inc.
- Geotechnical Investigation, Proposed Humanics Sanctuary and Sculpture Park, updated November 25, 2022, by exp Services Inc.

In addition, various design documents were referred to when preparing this report including:

- Sewer Design Guidelines, Second Edition, Document SDG002, October 2012, City of Ottawa (Guidelines) including:
 - Technical Bulletin ISDTB-2012-4 (20 June 2012)
 - Technical Bulletin ISDTB-2014-01 (05 February 2014)
 - Technical Bulletin PIEDTB-2016-01 (September 6, 2016)
 - Technical Bulletin ISTB-2018-01



- Technical Bulletin ISTB-2018-04
- Technical Bulletin ISTB-2019-02
- Ontario Ministry of Transportation (MTO) Drainage Manual, 1995-1997
- Stormwater Management Planning and Design Manual, Ontario Ministry of the Environment and Climate Change, March 2003 (SMPDM).
- Low Impact Development Stormwater Management Planning and Design Guide, Version 1.0. Credit Valley Conservation and Toronto & Region Conservation (LIDSMPDG).

3 Existing Site Conditions

The site is located on the south side of Old Montreal Road, approximately 440 m west of Beckett's Creek Road as shown on Figure 1 in Appendix A. The site is zoned Rural Residential 1. The municipal address of the proposed site is 3468 Old Montreal Road (PIN 145340141) and a portion of 3400 Old Montreal Road (PIN 145340140) in the City of Ottawa.

The subject site is bisected by a hydro corridor with overhead transmission lines mounted on wooden hydro poles which are found at two locations on the subject site. Surrounding properties consist of Old Montreal Road to the north of the property, vacant land to the south (which will become Cumberland Estates Phase 2), a residential property to the east, and vacant woodlots to the west.

Phase 1A of the contemplated development consisting of a gravel road access, washrooms and septic system has been constructed. The remainder of the site remains primarily undeveloped with stone dust covered pathways and a number of stone sculptures.

4 Proposed Phased Development

As discussed, the approved contemplated development has been phased into Phase 1A and Phase 1B.

- Phase 1A has been constructed and includes the gravel roadway+ access, washrooms and septic system.
- Phase 1B proposes the extension of the existing access road and the construction of two small buildings; a proposed assembly hall located south-east of the subject lot and a workshop building located at the south-west limit of the subject lot, refer to Appendix B for architectural plans of the proposed buildings. As part of Phase 1B, contemplated LID stormwater management measures designed by Morrison Hershfield will also be constructed.

5 Stormwater Management / Drainage

The stormwater management detailed design for the overall site development has been completed by Morrison Hershfield as per the *Stormwater Management Design Brief Memorandum, Humanics Sanctuary & Sculpture Park, Revision 1, dated December 3,2021.*

The proposed development will adhere to the contemplated stormwater quantity and quality control measures specified in the above-mentioned report.



6 Water Servicing

6.1 Estimated Water Demands

Water demands for the site have been calculated based on projected population and land use. Appendix 4-A of the Sewer Design Guidelines provides estimated flows per person for public parks (20 L/day) and assembly halls (8-36 L/day). The projected population of the public park was estimated at 50 persons and maximum occupancy of the assembly hall was estimated at 100 persons.

Water demands were assumed to match the estimated sanitary flows from the proposed development as follows.

Public Park; = 50 persons x 20 L/day = 1,000 L/day

Assembly Hall; 100 persons x 36 L/day = 3,600 L/day

Total Average daily Demand = 4,600 L/day (0.05 L/sec)
 Maximum Daily Demand (x 1.5) = 6,900 L/day (0.08 L/sec)

Maximum Hourly Demand (x 1.8)
 = 12,420 L/day (0.14 L/sec)

All buildings onsite are proposed to be serviced by drilled wells.

6.2 Fire Flow Demands

Fire flow demand for the proposed assembly hall was calculated per section 4.2 in the NFPA 1142 – Standard on Water Supplies for Suburban and Rural Fire Fighting.

The minimum water supply required for the proposed assembly hall was calculated using section 4.2 - Structures Without Exposure Hazards. The equation below was used to determine the minimum required supply.

$$WS_{non} = \frac{VS_{tot}}{OHC}(CC)$$

where:

WS_{min} = minimum water supply in gal (For results in L,

multiply by 3.785.)

 $VS_{\text{tot}} = \text{total volume of structure in ft}^3$ (If volume is

measured in m³, multiply by 35.3.)

OHC = occupancy hazard classification number

CC = construction classification number

Using the following parameters; $VS_{total} = 6,360 \text{ ft}^3$, OHC = 6, and CC = 1.5, the total minimum water supply required for the assembly hall was calculated to be 1,590 gal.

As per section 4.2.2 in the *NFPA*, the minimum water supply for any structure without exposure hazards shall not be less than 2,000 gal (7,600 L). Therefore, it was determined that 7,600 L is the minimum required water supply for fire flow.



The subject property is located within near proximity of Fire Station 72 located at 1442 old Montreal Rd within District 7.

The Ottawa Fire Services (OFS) have obtained the *Superior Tanker Shuttle* accreditation as part of the FUS. The purpose of the testing is to measure OFS' ability to deliver an uninterrupted water supply of over 400GPM at the five (5) minute mark of arriving on scene in rural areas without hydrants. OFS exceeded test requirements, maintaining water flows of over 500GPM for an indefinite period. Therefore, it is anticipated the Ottawa Fire Services will have enough capacity to meet the proposed fire flow demands.

6.3 Well Yields

Two wells have been drilled onsite. The first well, Well #1, has been drilled to the west of the parking lot. The second well, Well #2, has been drilled to the north of the proposed assembly hall building.

The well yield for Test Well # 1 was determined to be above 27 L/min (0.45 L/sec) and the well yield for Test Well # 2 was determined to be 45 L/min (0.75 L/sec). Based on the safe well yields noted in the "Hydrogeology, Terrain Analysis and Impact Assessment Report", the onsite wells can supply the calculated maximum hourly demand of 8.63 L/min (or 0.14 L/sec) anticipated for the development of Phase 1B.

7 Sanitary Servicing

For sewage treatment an onsite septic system constructed as part of Phase 1A will be used to service the proposed assembly hall and existing washrooms. The existing septic system was sized to treat maximum sanitary flows of 4,600 L/day. Refer to Appendix C for a copy of the approved septic permit.

Proposed flows from Phase 1B adhere to the contemplated flows of the existing septic system.

8 Erosion & Sediment Control During Construction

During all construction activities, erosion and sedimentation shall be controlled by the following techniques:

- Limiting the extent of exposed soils at any given time.
- Re-vegetation of exposed areas as soon as possible.
- Minimization of area to be cleared and disruption to adjacent areas.
- Sediment control barriers are to be installed in the locations as shown on drawings.
- A visual inspection shall be completed of the sediment control barriers and outlets and any damage repaired immediately. Care will be taken to prevent damage during construction operations.
- In some cases, barriers may be removed temporarily to accommodate the construction operations. The affected barriers will be reinstated at night when construction is completed.
- The sediment control devices, ditches, swales, culverts and perforated pipes will be cleaned of accumulated silt as required. The deposits will be disposed of as per the requirements of the contract.



- During the course of construction if the engineer believes that additional prevention methods are required to control erosion and sedimentation, the contractor will install additional silt fences or other methods as required to the satisfaction of the engineer.
- Construction and maintenance requirements for erosion and sediment controls to comply with Ontario Provincial Standard Specification (OPSS) OPSS 805, and City of Ottawa specifications F-1005.
- The contractor shall seed the swale channel and side slopes as soon as possible, regularly monitor and provide erosion control measures as required, to allow for the establishment of the grass.
- Rip-rap protection shall be installed at the swale outlet locations, as noted on the drawings.

9 Conclusions

The proposed development, referred to as Humanics Sanctuary Phase 1B, is a phased institutional development which proposes the extension of the existing access road and the construction of two small buildings on the south side of Old Montreal Road, approximately 440 m west of the intersection between Beckett's Creek Road and Old Montreal Road.

The following summarizes the stormwater management, water system, and sanitary collection and treatment design for this proposed development.

- The proposed assembly hall will be serviced by the existing septic system. Flows from the proposed assembly hall adhere to contemplated flow of the existing septic system.
- Water supply for the site will be serviced by two wells that have been drilled onsite.
- It is anticipated that Ottawa Fire Services will meet the estimated minimum required water supply of 7,600 L for fire flow.
- Stormwater quantity and quality measures are proposed to achieve the design criteria as per Stormwater Management Design Brief Memorandum, Humanics Sanctuary & Sculpture Park, Revision 1, dated December 3, 2021, by Morrison Hershfield.

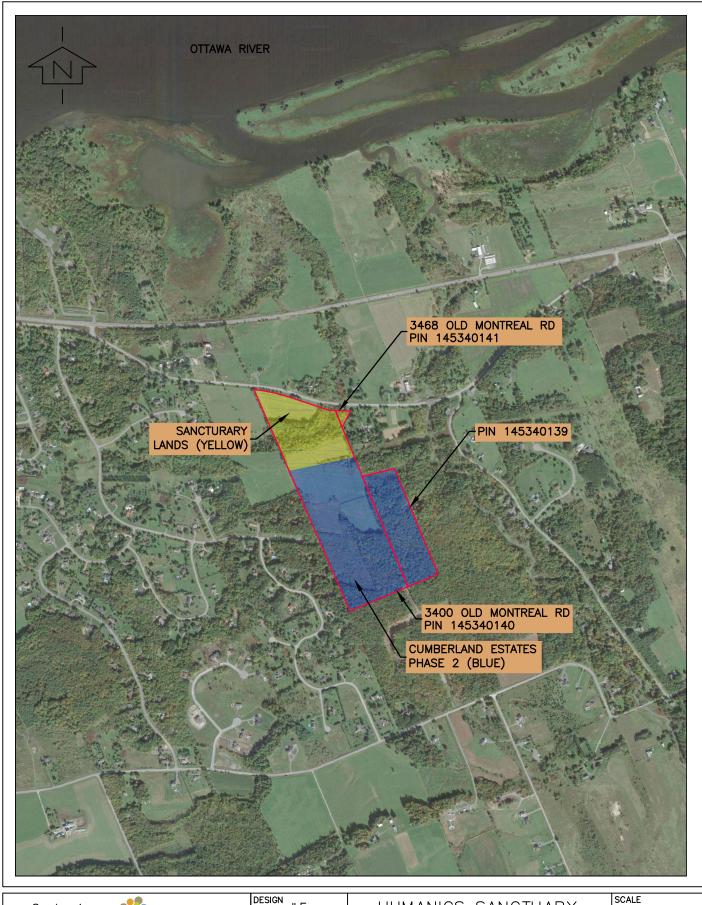


Appendix A – Figures

Figure 1: Site Location Plan

Figure 2: Site Plan





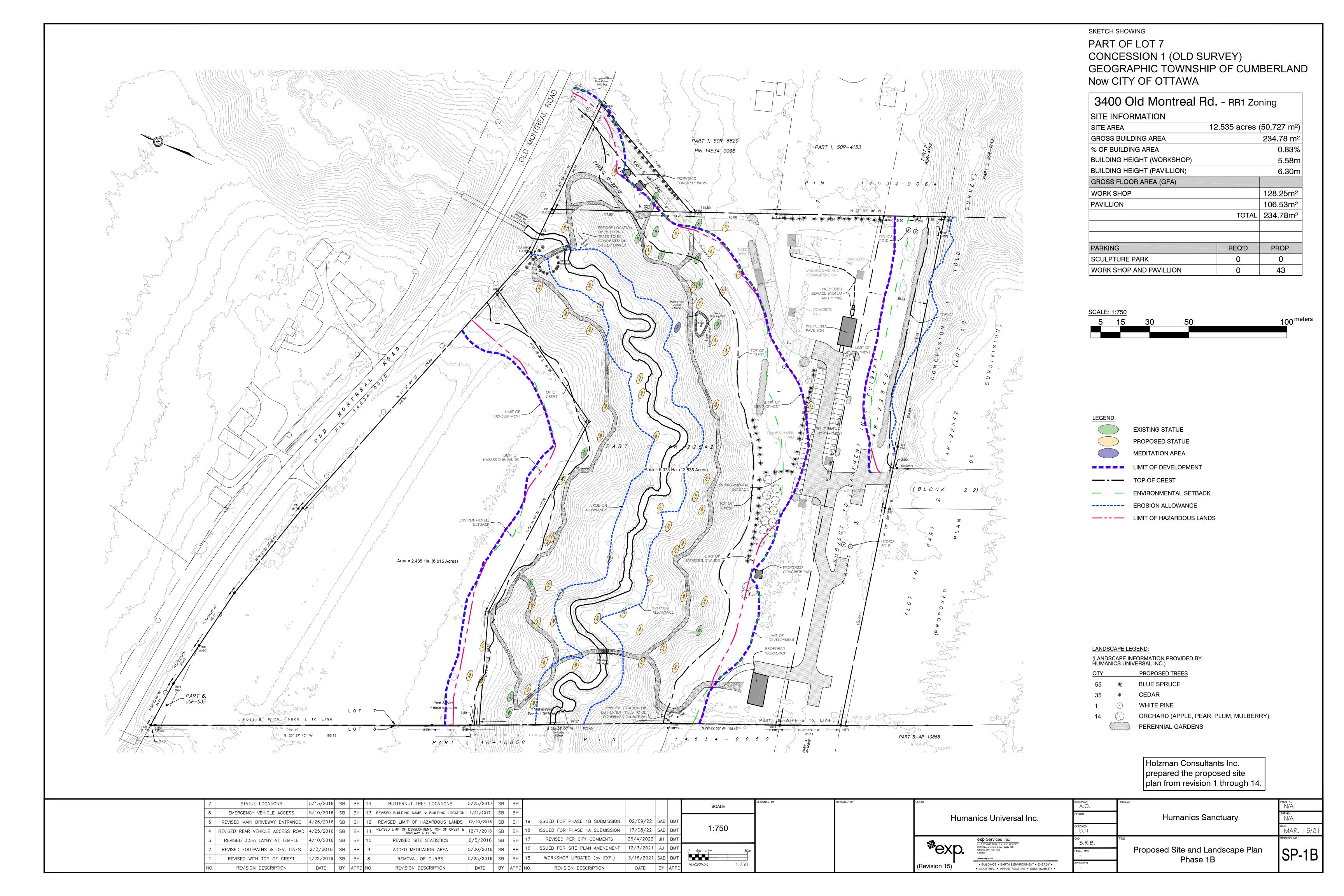


DESIGN JLF	HUMANICS SANCTUARY
DRAWN SAB	3400, 3468 OLD MONTREAL RD
DATE JAN 2017	SITE
FILE NO 229886	LOCATION PLAN

1:25,000

FIG 1

SKETCH NO



exp Services Inc.

Humanics Universal Inc. Humanics Sanctuary-Phase 1B Site Servicing Report OTT-00229886-A0 November 25, 2022

Appendix B – Architectural Plans





REVISION TABLE
REVISED BY DESCRIPTION



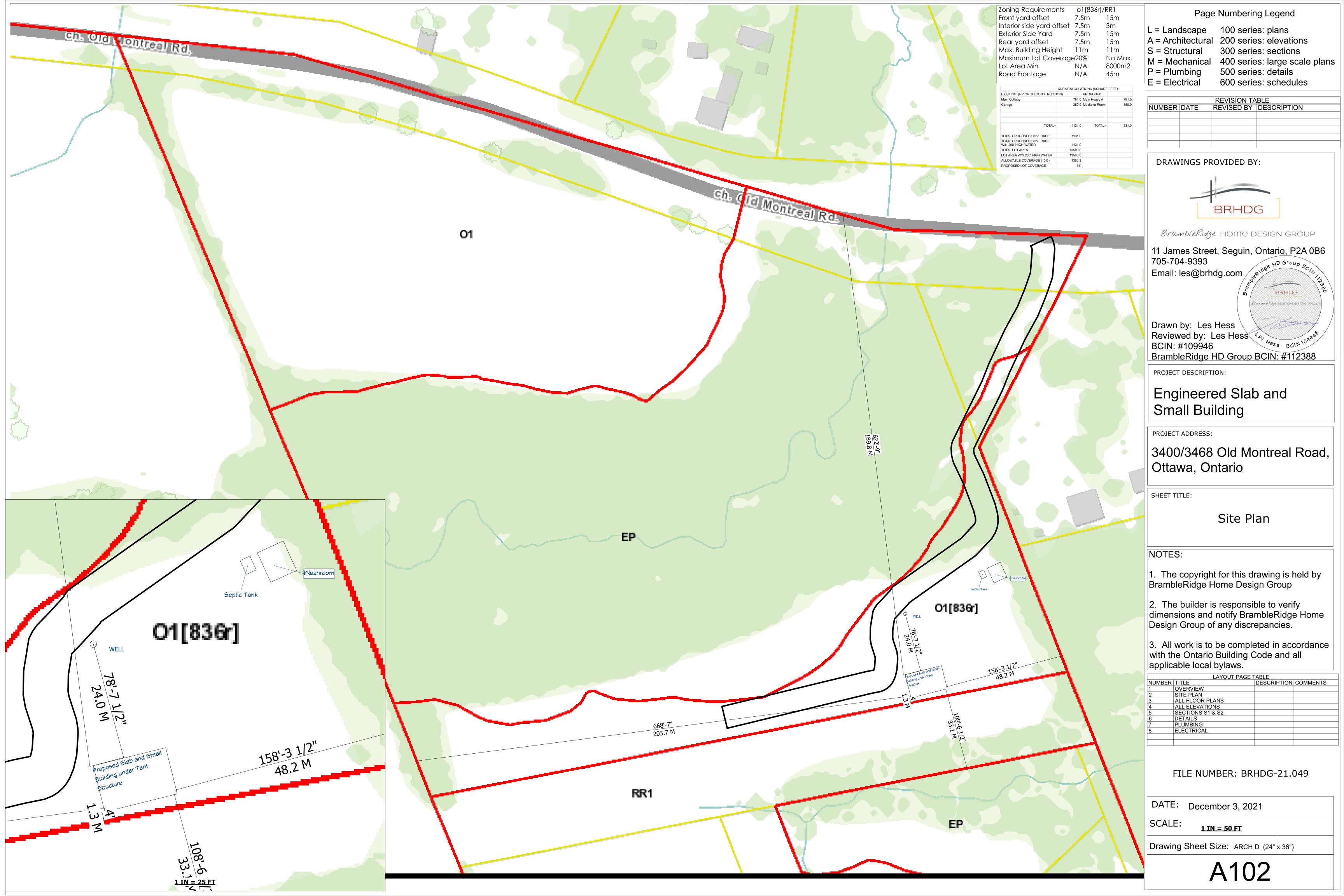
3400/3468 Old Montreal Road,

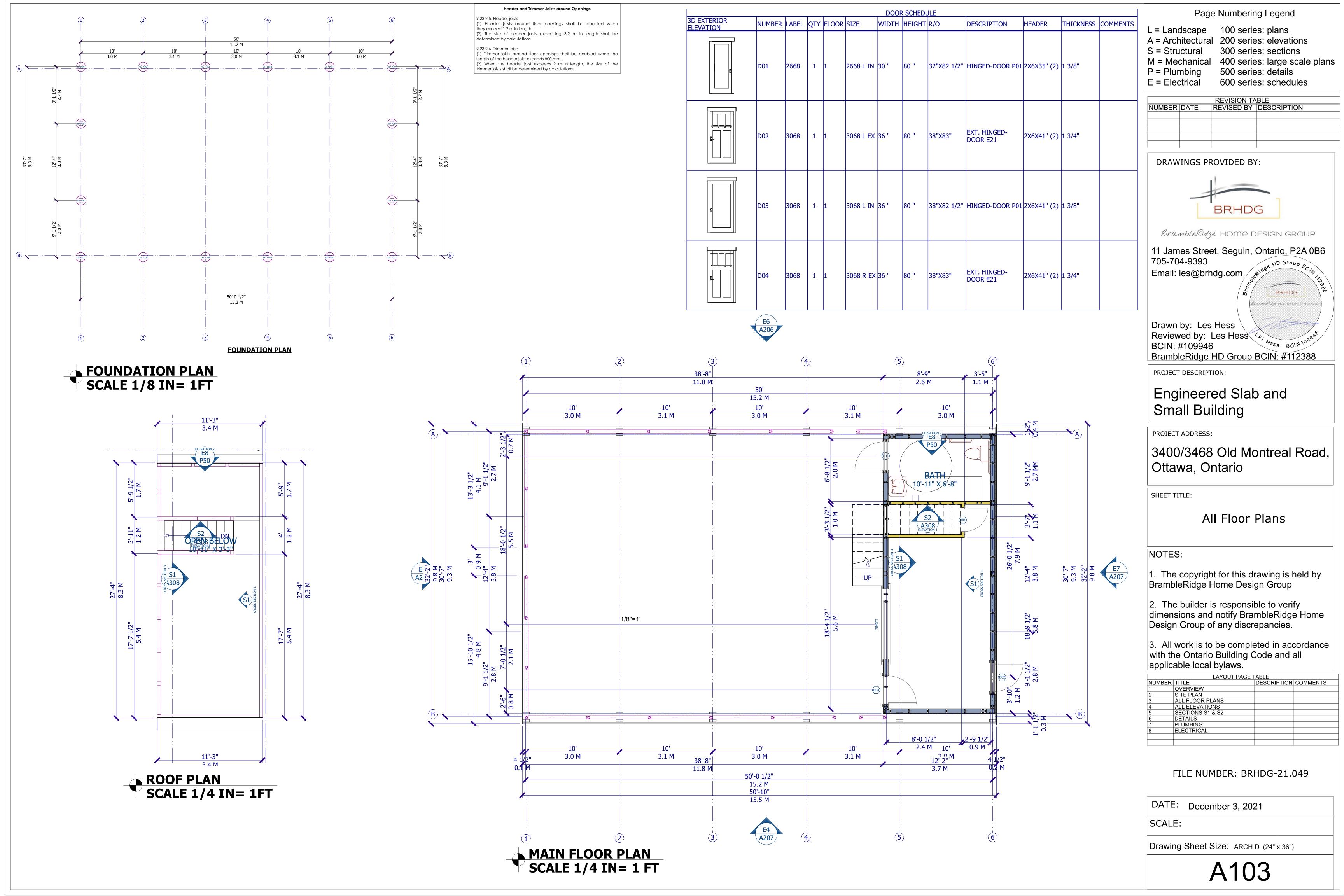
- 1. The copyright for this drawing is held by BrambleRidge Home Design Group
- 2. The builder is responsible to verify dimensions and notify BrambleRidge Home Design Group of any discrepancies.
- 3. All work is to be completed in accordance with the Ontario Building Code and all applicable local bylaws.

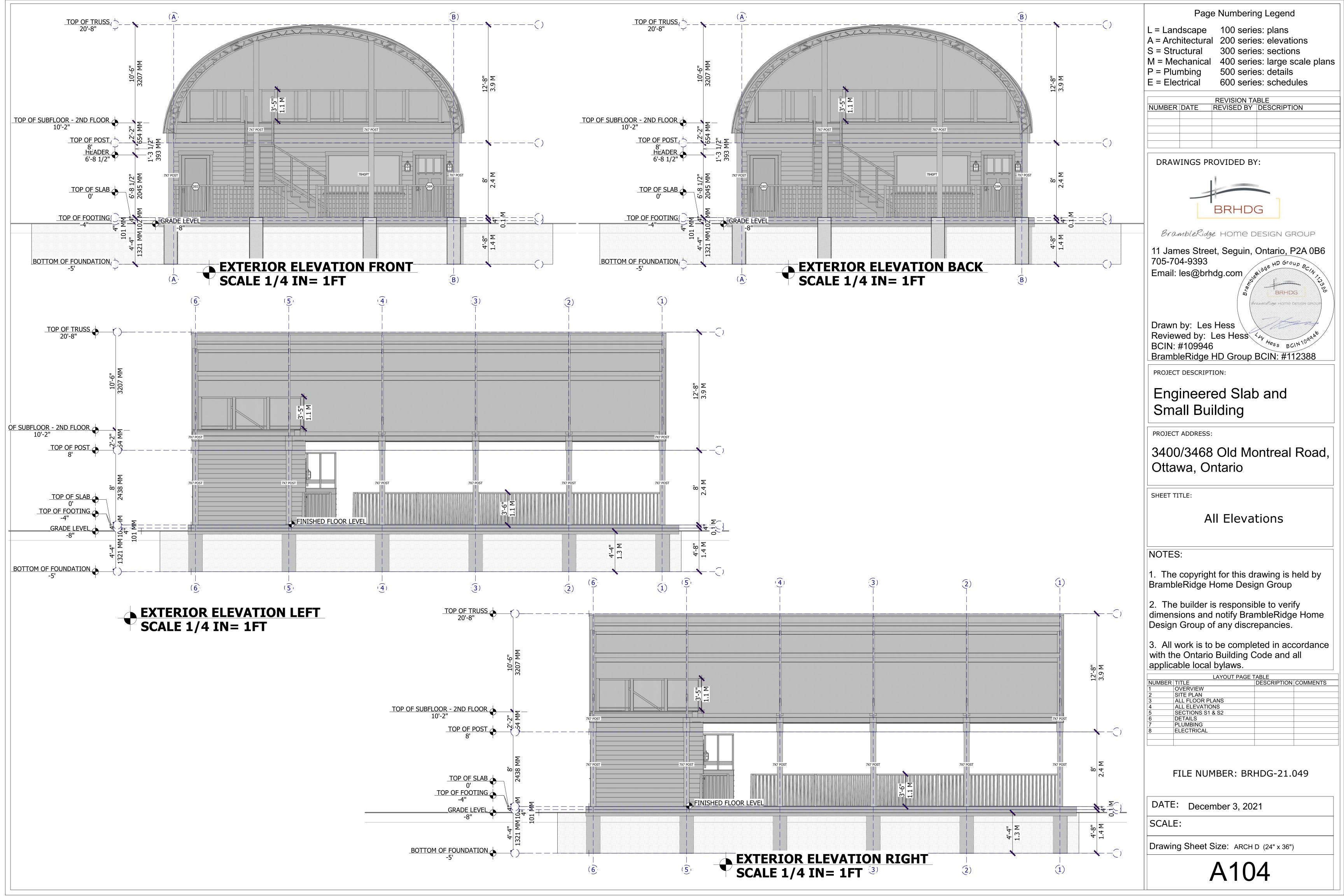
	LAYOUT PAGE TABLE						
UMBER	TITLE	DESCRIPTION	COMMENTS				
	OVERVIEW						
	SITE PLAN						
	ALL FLOOR PLANS						
	ALL ELEVATIONS						
	SECTIONS S1 & S2						
	DETAILS						
	PLUMBING						
	ELECTRICAL						

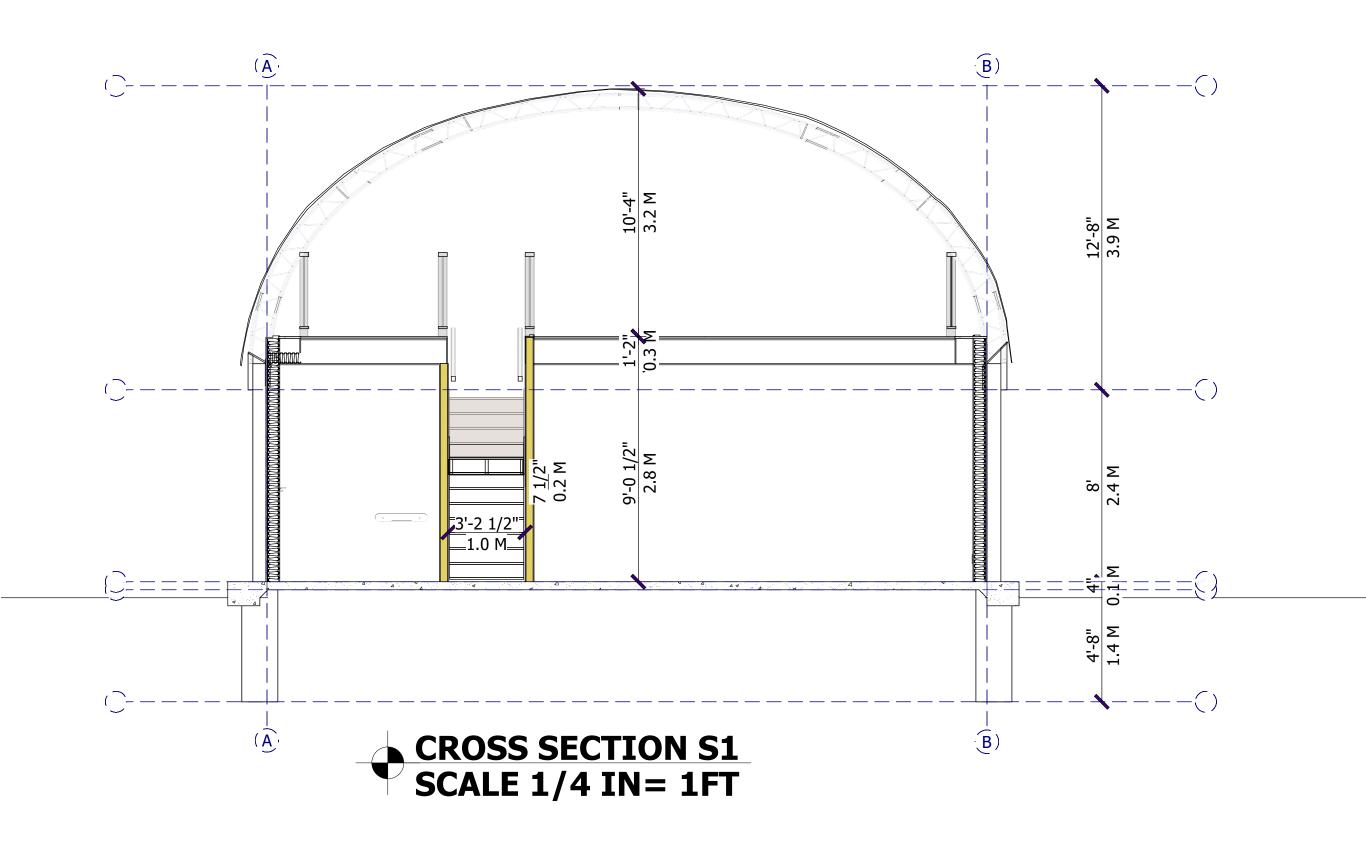
FILE NUMBER: BRHDG-21.049

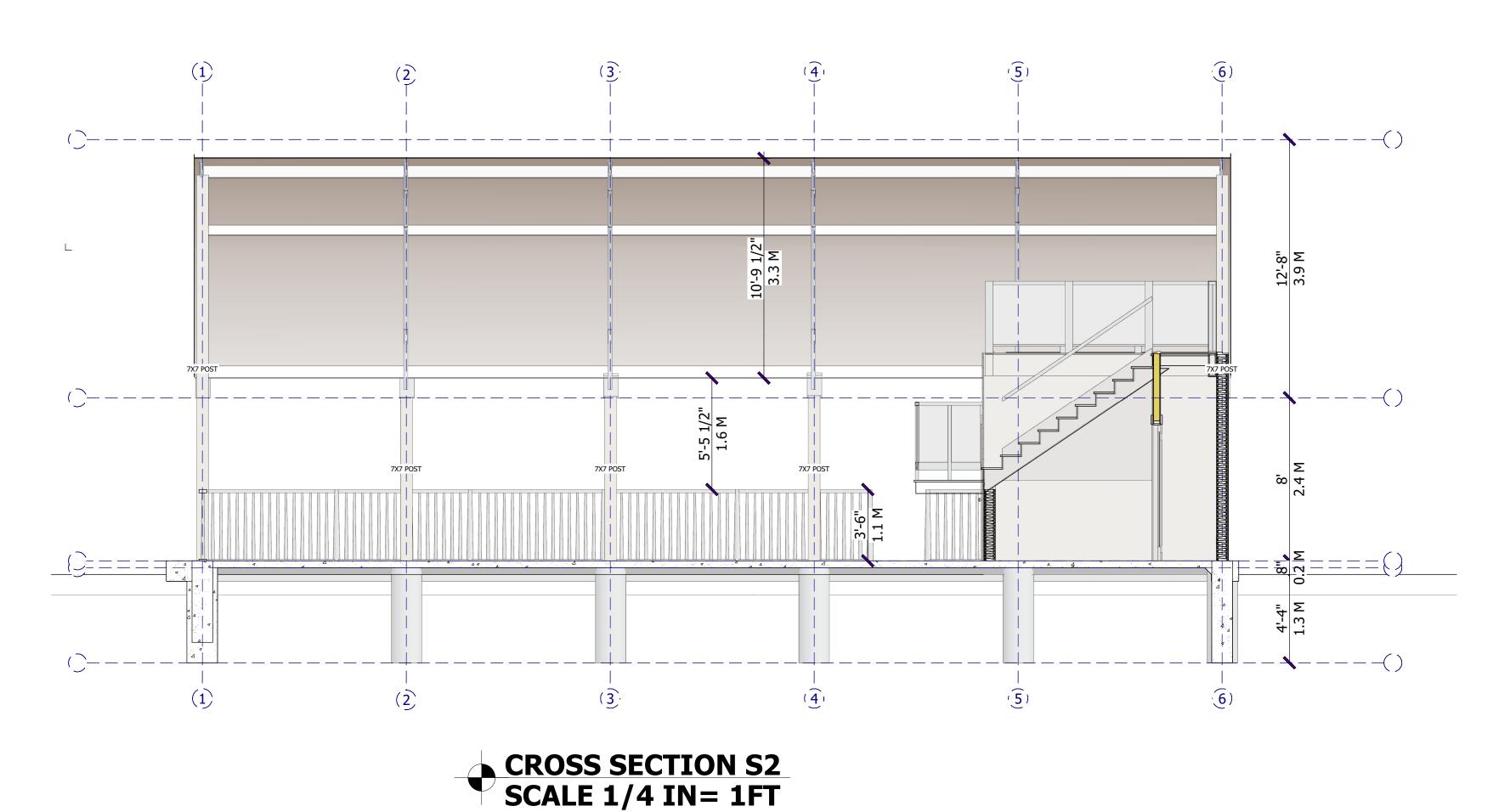
Drawing Sheet Size: ARCH D (24" x 36")









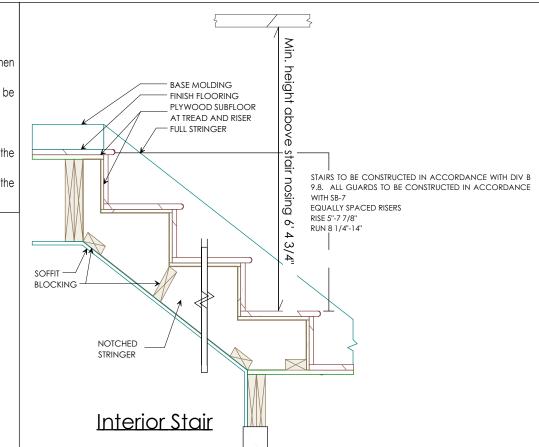


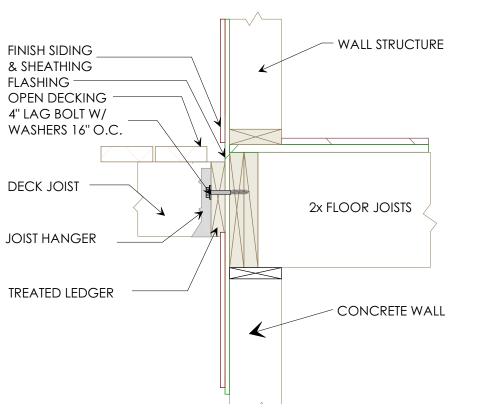
Header and Trimmer Joists around Openings

(1) Header joists
(1) Header joists around floor openings shall be doubled when they exceed 1.2 m in length.
(2) The size of header joists exceeding 3.2 m in length shall be determined by calculations.

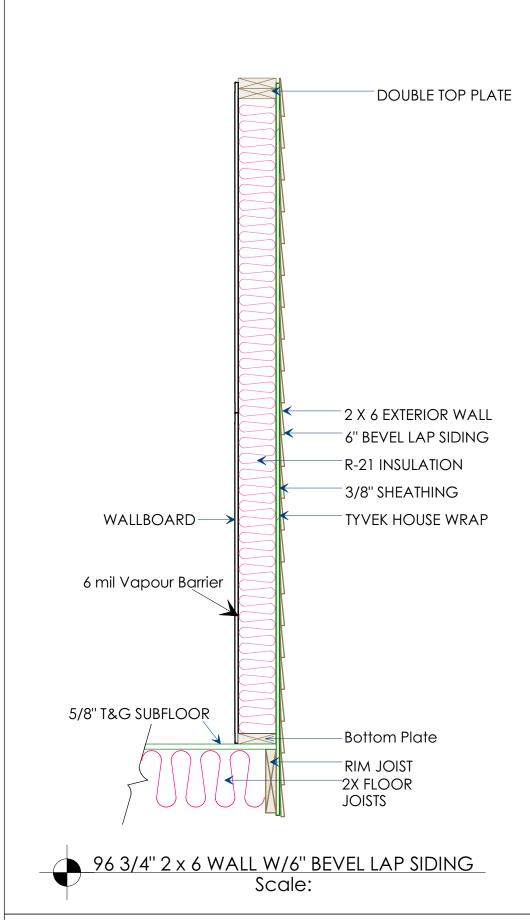
9.23.9.6. Trimmer joists
(1) Trimmer joists around floor openings shall be doubled when the length of the header joist exceeds 800 mm.
(2) When the header joist exceeds 2 m in length, the size of the

rimmer joists shall be determined by calculations.





Deck Anchored to Wood Wall



DOOR AND WINDOW NOTES:

EVERY WINDOW WITH SHALL HAVE FINISHED SILL HEIGHT NLT 19"
ABOVE THE FINISH FLOOR HEIGHT WHERE THE FINISHED FLOOR TO
GRADE HEIGHT EXCEEDS 24"

DOORS BETWEEN GARAGE AND LIVING AREA SHALL BE TIGHT FITTING DOORS NOT OPENING INTO A BEDROOM AREA AND BE EQUIPED WITH A SELF CLOSING DEVICE.

EXTERIOR EXIT DOORS SHALL BE OPENABLE FROM INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.

ALL DOORS AND WINDOWS TO HAVE FLASHING INSTALLED ON THE TOP EDGE. SIDES OF DOORS AND WINDOWS ARE TO BE ADEQUATELY CAULKED

Page Numbering Legend

L = Landscape 100 series: plans
A = Architectural 200 series: elevations
S = Structural 300 series: sections
M = Mechanical 400 series: large scale plans

P = Plumbing 500 series: details E = Electrical 600 series: schedules

REVISION TABLE
NUMBER DATE REVISED BY DESCRIPTION

DRAWINGS PROVIDED BY:



Bramble Ridge HOME DESIGN GROUP

11 James Street, Seguin, Ontario, P2A 0B6 705-704-9393
Email: les@brhdg.com

BRHDG

Example Right Home DESIGN GROUP

Example Right Home DESIGN GROUP

Reviewed by: Les Hess (4) Hess BCIN: #109946

BrambleRidge HD Group BCIN: #112388

PROJECT DESCRIPTION:

Drawn by: Les Hess

Engineered Slab and Small Building

PROJECT ADDRESS:

3400/3468 Old Montreal Road, Ottawa, Ontario

SHEET TITLE:

Sections S1 & S2

NOTES:

- 1. The copyright for this drawing is held by BrambleRidge Home Design Group
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	LAYOUT PAGE TABLE						
JMBER	TITLE	DESCRIPTION	COMMENTS				
	OVERVIEW						
	SITE PLAN						
	ALL FLOOR PLANS						
	ALL ELEVATIONS						
	SECTIONS S1 & S2						
	DETAILS						
	PLUMBING						
	ELECTRICAL						

FILE NUMBER: BRHDG-21.049

DATE: December 3, 2021

SCALE:

Drawing Sheet Size: ARCH D (24" x 36")

A305

Connection Notes

All connections columns or piers to post and Post to Beams shall be secured using an approved Simpsons Strong Tie or equivalent.

(i) not less than 0.41 mm in thickness,

(ii) spaced not more than 1.2 m apart, and

(iii) fastened at each end with at least two 63 mm nails.

| Item | Column 1 | Column 2 | Minimum Length of Nails, mm | Minimum Diameter of Nails, mm | 1. | 57 | 2.87 | 2. | 62 | 3.25 | 3. | 76 | 3.66 | 4. | 82 | 3.66 | 5. | 101 | 4.88 |

	Fasteners for Sheathing and Subflooring, mm							
Item	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6		
	Element	Minimum Length of Fas	teners, mm	•		Minimum Number or Maximum Spacing		
		Common or Spiral Nails	Ring Thread Nails o Screws	r Roofing Nails	Staples	Fasteners		
1.	Board lumber 184 mm or less wide	51	45	N/A	51	2 per support		
2.	Board lumber more than 184 mm wide	51	45	N/A	51	3 per support		
3.	Fibreboard sheathing up to 13 mm thick	N/A	N/A	44	28	150 mm (o.c.) along edges and 300 mm (o.c along intermediate supports		
4.	gypsum sheathing up to 13 mm thick	N/A	N/A	44	N/A			
5.	Plywood, OSB or waferboard up to 10 mm thick		45	N/A	38			
6.	Plywood, OSB or waferboard over 10 mm and up to 20 mm thick		45	N/A	51			
7.	Plywood, OSB or waferboard over 20 mm and up to 25 mm thick		51	N/A	N/A			

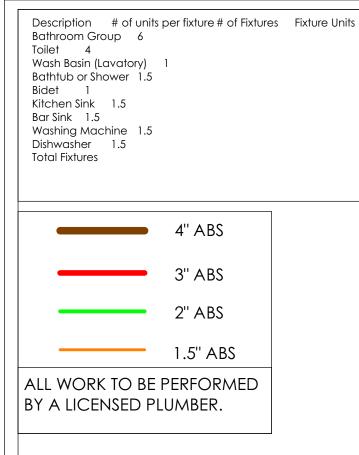
Mailina	Nailing for Framing		
	g for Framing ng Part of Sentence 9.23.3.4.(1)		
	Column 1		Column 3
	Construction Detail		Minimum Number or Maximum Spacing of Na
	floor joist to plate – toe nail	82	2
	wood or metal strapping to underside of floor joists	57	2
	Cross bridging to joists		2 at each end
	Double header or trimmer <mark>joists</mark>		300 mm (o.c.)
	floor joist to stud (balloon construction)	76	2
	Ledger strip to <mark>wood</mark> beam		2 per joist
	Joist to joist splice (See also Table 9.23.13.8.)		2 at each end
	Header joist end nailed to <mark>joists</mark> along perimeter	101	3
	Tail joist to adjacent header joist	82	5
	(end nailed) around <mark>openings=</mark> "http://thehandyforce.com/windows/" title ="Window installer in Toronto">openings	101	3
10. I	Each header joist to adjacent trimmer joist	82	5
	(end nailed) around openings="http://thehandyforce.com/windows/" title ="Window installer in Toronto">openings	101	3
11.	stud to wall plate (each end) toe nail	62	4
(or end nail	82	2
	Doubled studs at openings="http://thehandyforce.com/windows/" title ="Window installer in Toronto">openings, or studs at walls or wall intersections and corners	76	750 mm (o.c.)
13. I	Doubled top <mark>wall</mark> plates	76	600 mm (o.c.)
14. I	Bottom wall plate or sole plate to joists or blocking (exterior walls)(1)	82	400 mm (o.c.)
	nterior walls to framing or subflooring="http://thehandyforce.com/flooring/" title ="Handyman flooring install Toronto">flooring	82	600 mm (o.c.)
	Horizontal member over openings="http://thehandyforce.com/windows/" title ="Window installer	82	2
i	n Toronto">openings in non-loadbearing walls – each end		
1 <i>7</i> . l	Lintels to <mark>stud</mark> s	82	2 at each end
18.	ceiling joist to plate – toe nail each end	82	2
19. I	Roof rafter, roof truss or roof joist to plate – toe nail	82	3
20. I	Rafter plate to each <mark>ceiling</mark> joist	101	2
21. I	Rafter to joist (with ridge <mark>support</mark> ed)	76	3
22. I	Rafter to joist (with ridge un <mark>support</mark> ed)	76	See Table 9.23.13.8.
23.	Gusset plate to each rafter at peak	57	4
24. I	Rafter to ridge board – toe nail – end nail	82	3
25.	Collar tie to rafter – each end	76	3
26.	Collar tie lateral <mark>support</mark> to each collar tie	57	2
27	Jack rafter to hip or valley rafter	82	2
28. I	Roof strut to rafter	76	3
29. l	Roof strut to loadbearing wall – toe nail	82	2
30.	38 mm × 140 mm or less plank decking to <mark>support</mark>	82	2
31. I	Plank decking wider than 38 mm × 140 mm to support	82	3
	38 mm edge laid plank decking to <mark>support</mark> (toe nail)	76	1
33.	38 mm edge laid plank to each other	76	450 mm (o.c.)
	to Table 9.23.3.4.:	•	

(a) having plywood, OSB or waferboard sheathing extend down over floor framing and fastened to the floor framing by nails or staples conforming to Article 9.23.3.5., or (b) tying the wall framing to the floor framing by 50 mm wide galvanized-metal strips,

Page Numbering Legend L = Landscape 100 series: plans A = Architectural 200 series: elevations S = Structural 300 series: sections M = Mechanical 400 series: large scale plans 500 series: details P = Plumbing E = Electrical 600 series: schedules REVISION TABLE
NUMBER DATE REVISED BY DESCRIPTION DRAWINGS PROVIDED BY: BRHDG Bramble Ridge Home DESIGN GROUP 11 James Street, Seguin, Ontario, P2A 0B6 705-704-9393 Email: les@brhdg.com/ Drawn by: Les Hess Reviewed by: Les Hess 4 Hess BCIN 100046 BrambleRidge HD Group BCIN: #112388 PROJECT DESCRIPTION: Engineered Slab and Small Building PROJECT ADDRESS: 3400/3468 Old Montreal Road, Ottawa, Ontario SHEET TITLE: Details NOTES: 1. The copyright for this drawing is held by BrambleRidge Home Design Group 2. The builder is responsible to verify dimensions and notify BrambleRidge Home Design Group of any discrepancies. 3. All work is to be completed in accordance with the Ontario Building Code and all applicable local bylaws. LAYOUT PAGE TABLE

DESCRIPTION COMMENTS NUMBER TITLE

1 OVERVIEW
? SITE PLAN
ALL FLOOR PLANS
ALL ELEVATIONS
SECTIONS S1 & S2
DETAILS
PLUMBING
ELECTRICAL ELECTRICAL FILE NUMBER: BRHDG-21.049 DATE: December 3, 2021 SCALE: Drawing Sheet Size: ARCH D (24" x 36")



UNIVERSAL WASHROOM NOTES

TOTI ET.

THE TOILET IS TO HAVE A HAND OPERATED FLUSHING DEVICE THAT IS EASILY ACCESSIBLE TO A WHEELCHAIR USER. THE FLUSHING DEVICE IS TO BE OPERATED WITH A CLOSED FIST AND SHALL NOTE REQUIRE A FORCE OF MORE THAN 22.2 N TO OPERATE.

LAVATORY:

INSULATE PIPES WHERE TEMPERATURES EXCEED 43 DEGREES C.

SINK FAUCETS SHALL BE OPERATED BY LEVER TYPE HANDLES THAT ARE NOT SPRING LOADED. HANDLES SHALL BE LOCATED NO MORE THAN 450mm FROM THE FRONT OF THE BASIN. THE LAVATORY IS TO BE EQUIPPED WITH A SOAP DISPENSER THAT IS OPERABLE WITH ONE HAND.

GRAB BARS:

GRAB BARS TO RESIST 1.3 kN APPLIED VERTICALLY OR HORIZONTALLY

GRAB BARS TO BE 35-40mm IN DIAMETER

GRAB BARS TO HAVE 50mm CLEARANCE FROM THE WALL
GRAB BARS ARE TO BE FINISHED SO THAT THE SURFACE IS GRASPABLE
PROVIDE SOLID WOOD BLOCKING IN THE WALL ASSEMBLY TO ACCOMMODATE LOADS

MISCELLANEOUS ITEMS:

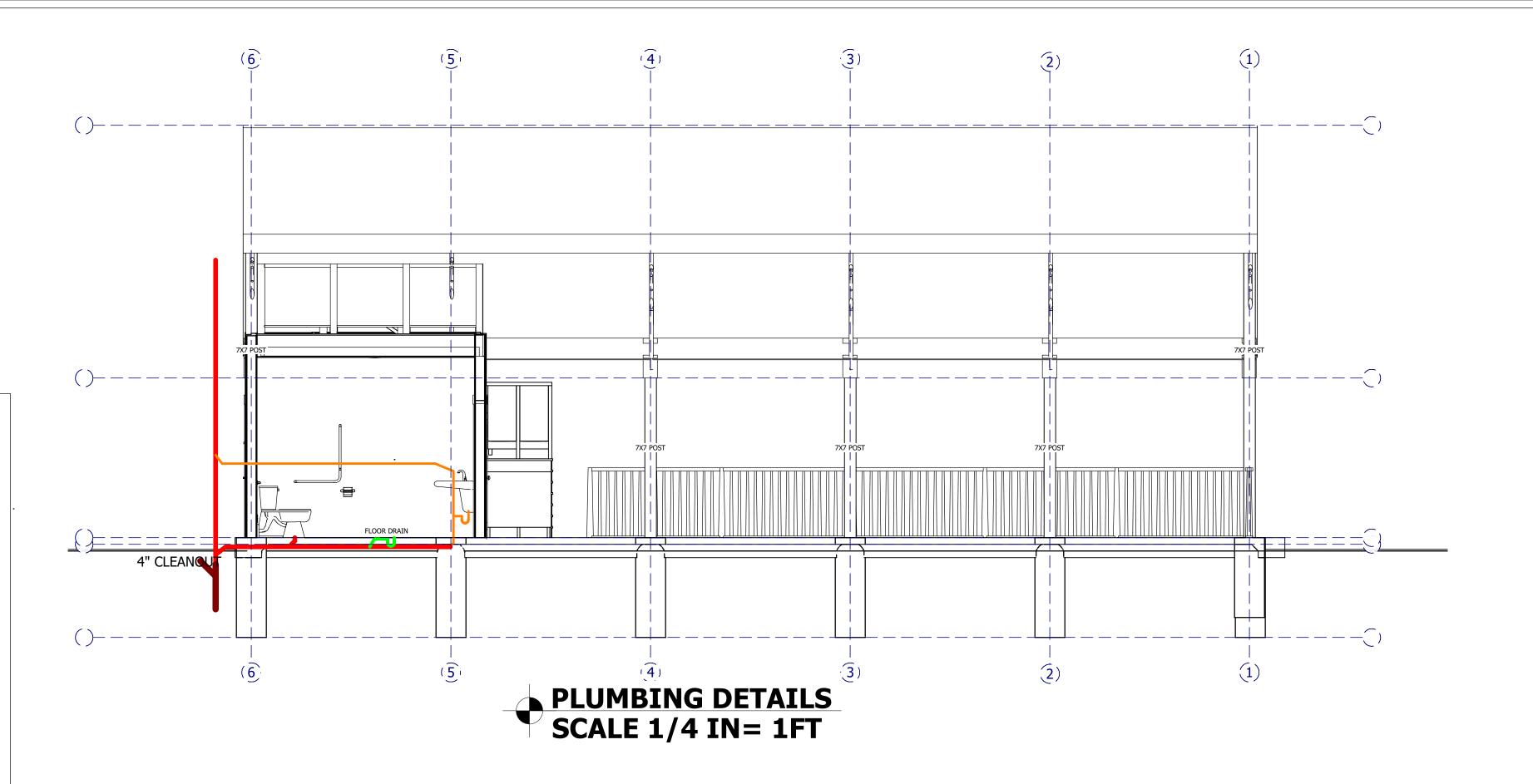
A COAT HOOK IS TO BE INSTALLED AND MUST PROJECT A MINIMUM OF 50mm FROM THE

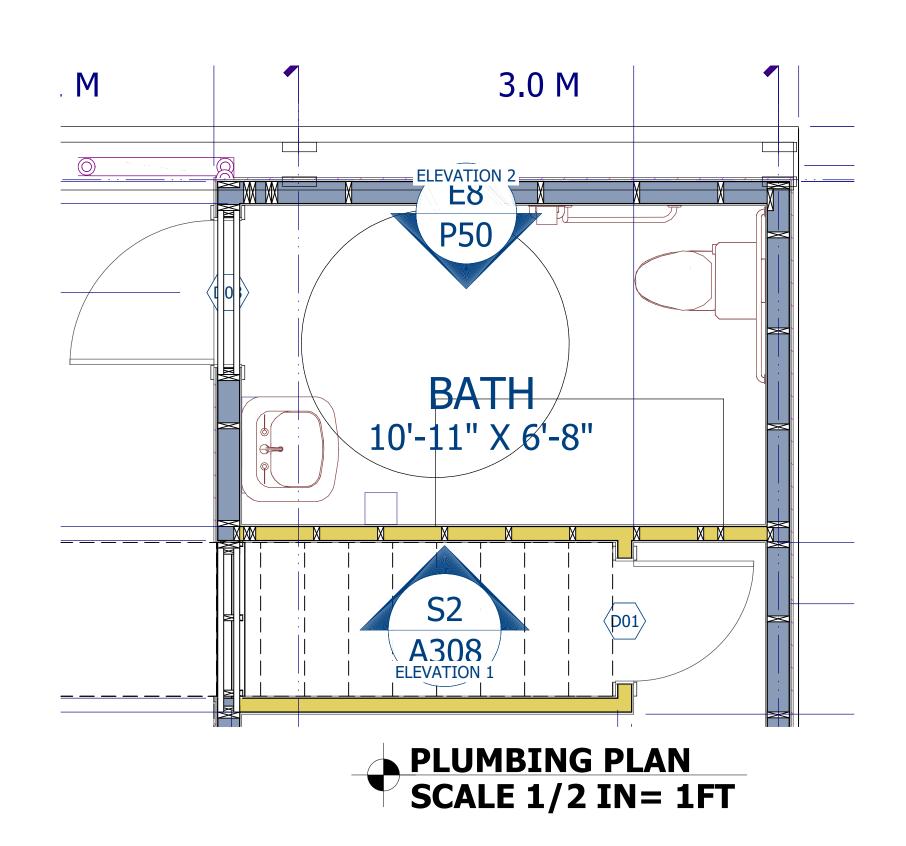
MOTION SENSOR LIGHTING MUST BE PROVIDED IN A UNIVERSAL WASHROOM

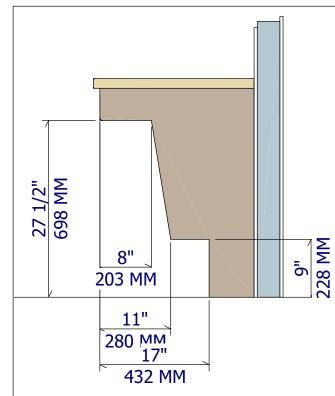
PROVIDE AN AUDIBLE/VISUAL SIGNAL DEVICE INSIDE AND OUTSIDE THE WASHROOM THAT CAN BE ACTIVATED FROM INSIDE THE WASHROOM. PROVIDE A SIGN STATING: "IN THE EVENT OF AN EMERGENCY PUSH EMERGENCY BUTTON AND AUDIBLE/VISUAL SIGNAL WILL ACTIVATE". THE SIGN SHALL BE MOUNTED ABOVE THE DEVICE. LETTERING TO BE 25mm HIGH AND 5mm WIDE.

PROVIDE TACTICAL SIGNS TO INDICATE LOCATION OF BATHROOM. PROVIDE SIGNS IN HALL AND ON BATHROOM DOOR. SIGNS TO INCLUDE INTERNATIONALLY ACCEPTED SYMBOL OF ACCESSIBILITY AND INDICATE THAT THE WASHROOM IS FOR MALE AND

PLUMBING FIXTURES ARE TO BE LOCATED AS SHOWN ON THE PLAN.





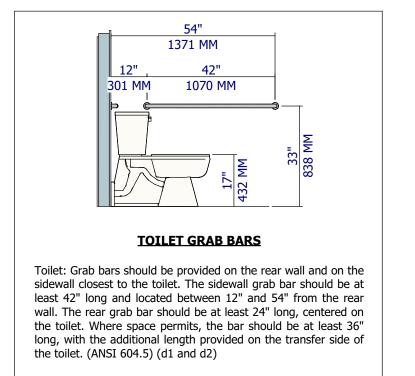


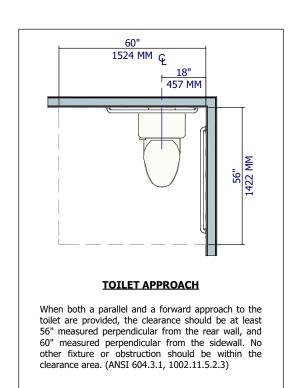
KNEE CLEARANCE

Knee clearance must be a minimum 30" wide (36" to use as part of the T-turn) and maintain a 27" clear space under the cabinet, counter or sink for a depth of 8". The next 3" of depth may slope down to a height of 9", with a clear space of at least 17" extending beneath the element. (ANSI 306.3)

TOE CLEARANCE

Toe clearance space under a cabinet or appliance is between the floor and 9" above the floor. Where toe clearance is required as part of a clear floor space, the toe clearance should extend 17" minimum beneath the element. (ANSI A117.1 306.2)





Page Numbering Legend L = Landscape 100 series: plans

A = Architectural 200 series: elevations
S = Structural 300 series: sections
M = Mechanical 400 series: large scale plans
P = Plumbing 500 series: details
E = Electrical 600 series: schedules

REVISION TABLE
NUMBER DATE REVISED BY DESCRIPTION

DRAWINGS PROVIDED BY:



Bramble Ridge HOME DESIGN GROUP

11 James Street, Seguin, Ontario, P2A 0B6 705-704-9393
Email: les@brhdg.com

Drawn by: Les Hess
Reviewed by: Les Hess
BCIN: #109946

BCIN: #109946

BrambleRidge HD Group BCIN: #112388

PROJECT DESCRIPTION:

Engineered Slab and Small Building

PROJECT ADDRESS:

3400/3468 Old Montreal Road, Ottawa, Ontario

SHEET TITLE:

Plumbing

NOTES:

- 1. The copyright for this drawing is held by BrambleRidge Home Design Group
- 2. The builder is responsible to verify dimensions and notify BrambleRidge Home Design Group of any discrepancies.
- 3. All work is to be completed in accordance with the Ontario Building Code and all applicable local bylaws.

	LAYOUT PAGE TABLE						
NUMBER	TITLE	DESCRIPTION	COMMENTS				
1	OVERVIEW						
2	SITE PLAN						
3	ALL FLOOR PLANS						
4	ALL ELEVATIONS						
5	SECTIONS S1 & S2						
6	DETAILS						
7	PLUMBING						
8	ELECTRICAL						

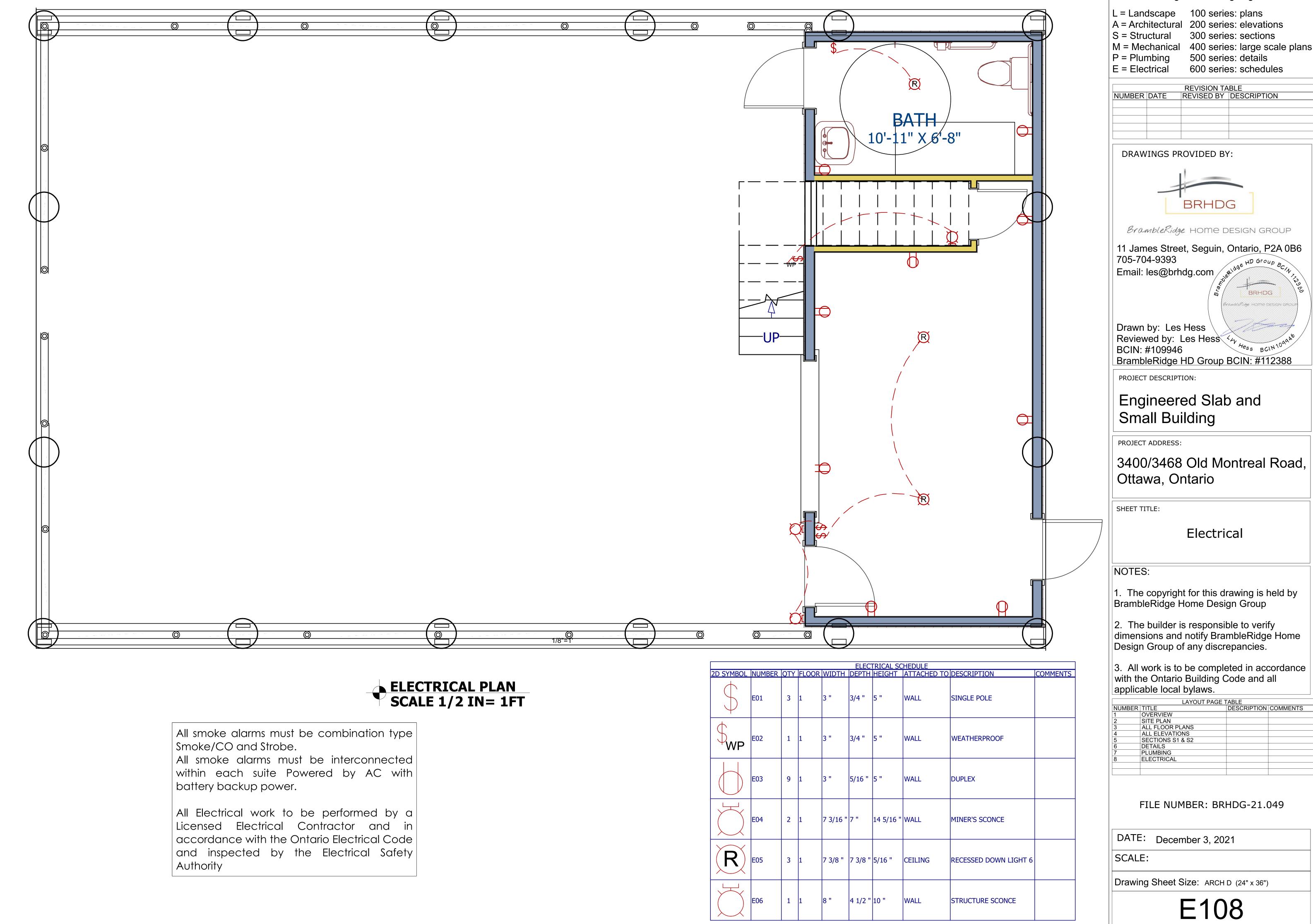
FILE NUMBER: BRHDG-21.049

DATE: December 3, 2021

SCALE:

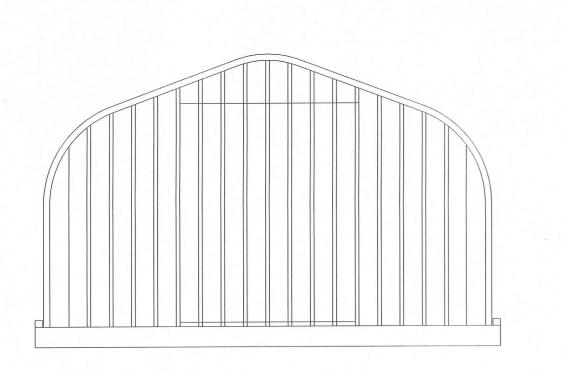
Drawing Sheet Size: ARCH D (24" x 36")

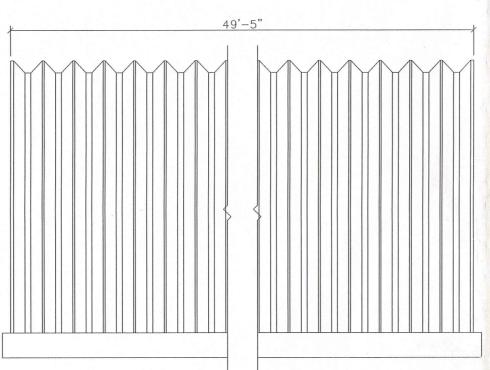
P507

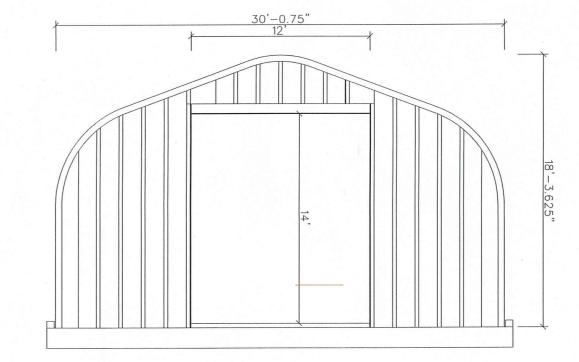


Page Numbering Legend

	LAYOUT PAGE TABLE						
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6	DETAILS						
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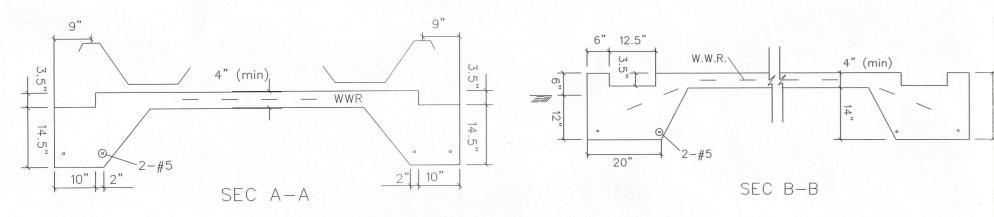


FRONT ELEVATION

OVERHEAD DOOR TO BE DESIGNED AND SUPPLIED BY OTHERS

REAR ELEVATION

SIDE ELEVATION



WARNING: DO NOT REMOVE OR REDUCE THE CONCRETE FLOOR OR THE REINFORCING STEEL, AND/OR RAISE THE TOPS OF THE FOOTERS ABOVE THE FLOOR OR BUILDING FAILURE MAY RESULT

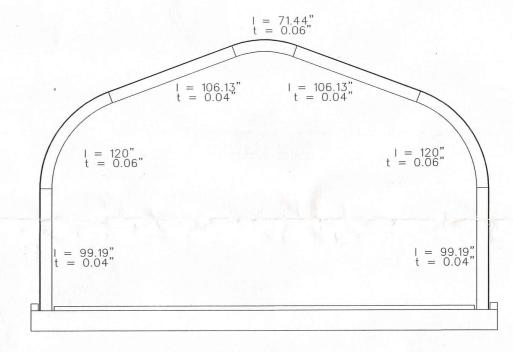
Minimum Concrete Cover:

FOUNDATION PLAN

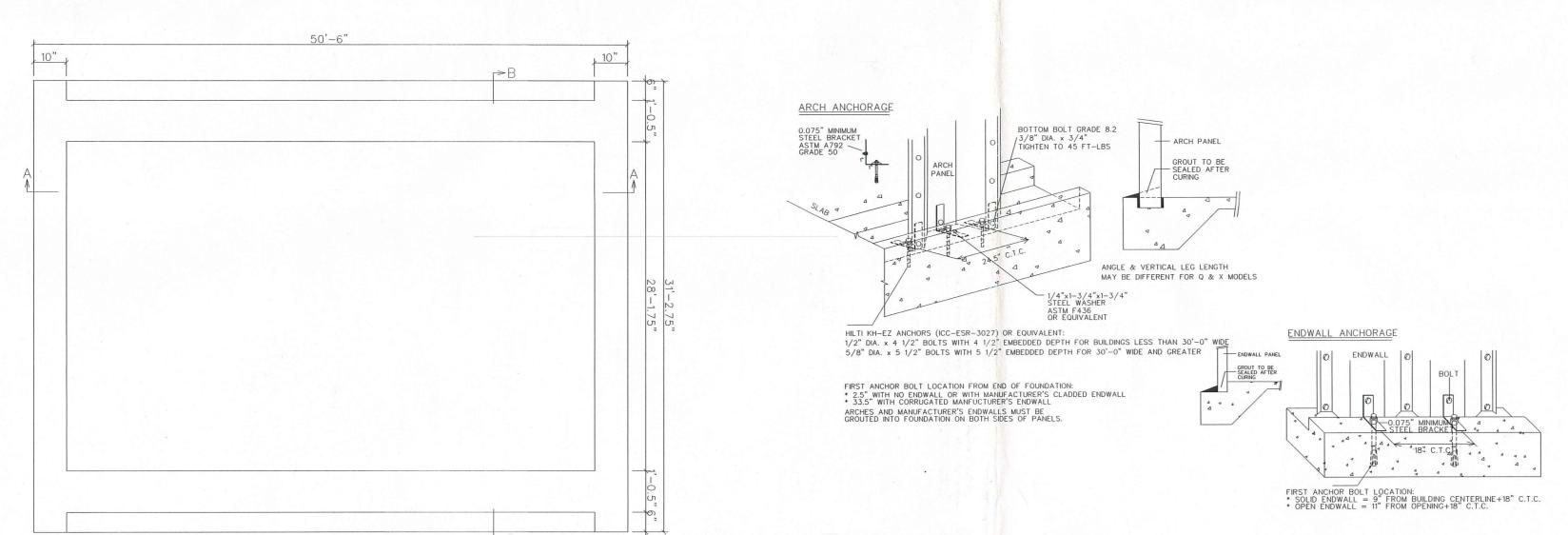
(a) Concrete Cast against earth:

(b) Concrete exposed to earth or weather: No. 6 through No. 10 bars:

No. 5 bar and smaller:
(c) Concrete not exposed to earth or weather:
0.



ARCH PROFILE



P. GUO

MAY 0 6 2020

GENERAL NOTES

1. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM WITH
THE REQUIREMENTS OF THE LATEST REVISION OF THE
NBC 2015 & OBC 2012. DESIGN
ACCORDING TO CSA STANDARD CAN/CSA S136-16w/S1-19

NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS (APPENDIX B).

2. NO LOADS OTHER THAN THOSE GIVEN UNDER "DESIGN

3. SPECIFIC NOTES AND DETAILS SHOWN ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER THE BUILDING MANUAL SUPPLIED.

DATA" BELOW SHALL BE IMPOSED ON THE "STRUCTURE"

4. THE BUILDING, INCLUDING THE FOUNDATION, MUST BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE DRAWING AND ERECTION INSTRUCTIONS. ANY DEVIATION, UNLESS APPROVED BY US IN WRITING, SHALL NULLIFY OUR CERTIFICATE AND SEAL AND SHALL BE THE SOLE RESPONSIBILITY OF THE ERECTOR.

5. A PROFESSIONAL ENGINEER SHOULD BE RETAINED WHERE SITE INSPECTIONS ARE WARRANTED.

6. NO ARCH PANEL MAY BE CUT OR MODIFIED UNLESS IT IS TO ACCOMMODATE AN ACCESSORY PROVIDED BY THE MANUFACTURER IN ACCORDANCE WITH ITS INSTRUCTIONS AND/OR THIS DRAWING.

 MINIMUM SEPARATION FROM THIS BUILDING TO ANY TALLER BUILDING MUST BE THE SMALLER OF 20 FEET AND 6 TIMES THE HEIGHT DIFFERENCE.

FOUNDATION NOTES

NOTE: THE FOUNDATION ON THE DRAWING SPECIFIES THE MINIMUM REQUIREMENTS. LOCAL BUILDING CODE AND SITE CONDITIONS MAY REQUIRE A STRONGER FOUNDATION, WHICH MUST BE DESIGNED BY A LOCAL ENGINEER.

1. THE FOUNDATION SHALL BE FOUNDED ON NATURAL UNDISTURBED SOIL CAPABLE OF SAFELY SUSTAINING 75 kPg. THIS SHALL BE DESIGNED TO FULLY RESIST ALL ROTATION AT THE BASE OF THE ARCH.

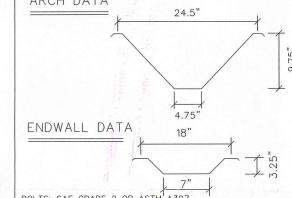
2. SLAB ON GRADE SHALL BE PLACED ON WELL COMPACTED SOIL CAPABLE OF SUSTAINING 75 kPg WITHOUT APPRECIABLE SETTLEMENT.

DESIGN DATA (MATERIALS)

1. CONCRETE F'C = 25 MPa @ 28 DAYS, CSA A23.3
2. REINFORCING STEEL GRADE 400, Fy = 400 MPa, ASTM A615
3. W.W.R. Fy = 450 MPa, ASTM A1064.

4. W.W.R. 152x152 - MW9xMW9.

ARCH DATA



BOLTS: SAE GRADE 2 OR ASTM¹A307

ARCH STEEL THICKNESS — SEE ARCH PROFILE
ENDWALL STEEL THICKNESS = 0.76 mm

GALVALUME SHEET STEEL
STRUCTURAL QUALITY ASTM SPECIFICATION A792M
55% ALUMINUM—ZINC ALLOY—COATED BY THE

HOT-DIP PROCESS

345 MPa MINIMUM YIELD

450 MPa MINIMUM TENSILE

HSS SECTIONS SHALL CONFORM TO:

ASTM A500 GRADE C (Fy = 345 MPa)
W SECTIONS SHALL CONFORM TO:

ASTM A992 GRADE 50 (Fy = 345 MPa) OTHER SECTIONS SHALL CONFORM TO: ASTM A36 (Fy = 250 MPa)

ARCH DESIGN DATA IN ACCORDANCE WITH NBC 2015:
L: ROOF LIVE LOAD (kPa) = 1
Ss: GROUND SNOW (kPa) = 2.40
Cb: ROOF SNOW FACTOR = 0.80
Cw: WIND EXPOSURE FACTOR = 1.0
Cs: MAX. SLOPE FACTOR = 1.0
Sr: RAIN LOAD (kPa) = 0.40
IMPORTANCE FACTOR (SNOW) = 0.8
p: WIND EXTERNAL PRESSURE (KPa) = 0.29
q: VELOCITY PRESSURE (1/50) (KPa) = 0.40
Ce: EXPOSURE FACTOR = 0.9

Cg: GUST EFFECT FACTOR = 2.0Sa(0.2): SPECTRAL RESPONSE ACCELERATION = 0.64

LEGAL NOTE

This drawing is the property of Future Steel Buildings Intl. Corp. Any duplication of this drawing in whole or in part is strictly forbidden. Anyone doing so will be prosecuted under the full extent of the law.

Future Steel Buildings Intl. Corp.

220 Chrysler Drive, Brampton, Ontario, Canada, L6S 6B6, Phone: (905) 790–8500

N.T.S. P.G.

SCALE: APPROVED BY: STGC

DATE: CHECKED BY:

PROJECT: RANJIT PERERA

CUMBERLAND , ON

(A30-18

20-0929

exp Services Inc.

Humanics Universal Inc. Humanics Sanctuary-Phase 1B Site Servicing Report OTT-00229886-A0 November 25, 2022

Appendix C – Septic Permit



LETTER OF AUTHORIZATION

Owner:	Hamanics Univer	SAL CN	C - HUMA	NETNE	571TW
Address:	3468 O Ro Hon he				
	Cemberland			149	
		1	697		
hone No.:	613 824 1825	Cell No.:	613 697	1525	
Work No.:		Fax No.:			
OCATI	ON OF PROPERTY:				
	Lot No.:				
Conce	ssion No.:				
Sub lot	/Part No.:				
R.	Plan No.:				
Civic	Address:				
Mui	nicipality: OTT NO A	_			
	Roll No.:				
Cor	nmercial: (provide description of building and intended use)				
	DUT DOOT Forlik	uit.			
	ove – mentioned authorize Green Vapply for and obtain a sewage system				
Sionatu	re: Herer	Date	2. 29 Time	12020)

Application for a Permit to Construct or Demolish This form is authorized under subsection 8(1.1) of the Building Code Act, 1992

	For use by I	Principa	I Authority		
Application number:		Permit	number (if differen	t):	
Date received:		Roll nui	mber:		
Application submitted to:(Name of municipal			SYSTEM C		
A. Project information					
	ld Montra	al Ro	<i>)</i> .	Unit numb	er Lot/con.
Municipality Comberland	Postal code K4C 11	49	Plan number/oth		
Project value est. \$			Area of work (m ⁴)	
B. Purpose of application					
New construction Addition existing	building		tion/repair	Demolition	Conditional Permit
Proposed use of building	Curre	nt use of	building		
The state of the s	V	acant	Land.		
Park/Assembly Description of proposed work		-			
Install a Septic for	Proposed	Comm	nercial buil	ding/Park.	
C. Applicant Applicant is:	Owner or	-	Authorized agen		
Last name Patel	First name		Corporation or pa		1.1.1
	Davis		Green Val	ley Environi	
Street address 6107 First Line	Rd.			Unit numbe	er Lot/con.
Municipality North Gower	Postal code K4M IA7	7	Province	E-mail Enginee	ringCgvcgroup.u
Telephone number (613) 69Z - 2616	Fax ()				19 - 58 90
D. Owner (if different from applicant)					
Last name	First name		Corporation or pa		1C.
Street address 3468 Old Mont	real Rd.			Unit numbe	
Municipality Comberland.	Postal code K4C 1H	7	Province ON	E-mail	rera Crogers.com
Telephone number (613) 821 - 1525	Fax ()			Cell numbe	97 - 1525

Application for a Permit to Construct or Demolish - Effective January 1, 2014

E. Builder (optional)						
Last name	First name	Corporation or partners	hip (if applicable)			
Street address			Unit number	Lot/con.		
Municipality	Municipality Postal code Province E-mail					
Telephone number Fax Cell number ()						
F. Tarion Warranty Corporation (Ontario	New Home Warrant	y Program)				
 i. Is proposed construction for a new hom Plan Act? If no, go to section G. 	ne as defined in the Onta	rio New Home Warranties	Yes	No _		
ii. Is registration required under the Ontari	io New Home Warranties	Plan Act?	Yes	No -		
iii. If yes to (ii) provide registration number	(s):					
G. Required Schedules						
i) Attach Schedule 1 for each individual who rev	(20)					
ii) Attach Schedule 2 where application is to cons		pair a sewage system.				
H. Completeness and compliance with a	applicable law					
Building Code (the application is made in the applicable fields have been completed on the schedules are submitted).	Building Code (the application is made in the correct form and by the owner or authorized agent, all applicable fields have been completed on the application and required schedules, and all required					
regulation made under clause 7(1)(c) of the <i>B</i> application is made.	uilding Code Act, 1992, t	o be paid when the	Yes	No		
 This application is accompanied by the plans resolution or regulation made under clause 7(1)(b) of the Building Cod	e Act, 1992.		No		
law, resolution or regulation made under claus the chief building official to determine whether contravene any applicable law.	ii) This application is accompanied by the information and documents prescribed by the applicable by- law, resolution or regulation made under clause 7(1)(b) of the <i>Building Code Act</i> , 1992 which enable the chief building official to determine whether the proposed building, construction or demolition will contravene any applicable law.					
iv) The proposed building, construction or demoli	tion will not contravene a	ny applicable law.	Yes —	No		
I. Declaration of applicant						
1. The information contained in this applicated documentation is true to the best of my keep. 2. If the owner is a corporation or partnership.	nowledge.		cifications, and ot	eclare that: her attached		
Date Sep 20, 2022	Signature of ap	oplicant Down	<i>J</i>			

Personal information contained in this form and schedules is collected under the authority of subsection 8(1.1) of the *Building Code Act, 1992*, and will be used in the administration and enforcement of the *Building Code Act, 1992*. Questions about the collection of personal information may be addressed to: a) the Chief Building Official of the municipality or upper-tier municipality to which this application is being made, or, b) the inspector having the powers and duties of a chief building official in relation to sewage systems or plumbing for an upper-tier municipality, board of health or conservation authority to whom this application is made, or, c) Director, Building and Development Branch, Ministry of Municipal Affairs and Housing 777 Bay St., 2nd Floor. Toronto, M5G 2E5 (416) 585-6666.

Schedule 1: Designer Information

Use one form for each individual who revie	ews and takes re	sponsibility for design acti	ivities with respect to	the project.
A. Project Information				
Building number, street name 3468	old r	Pontreal Rd.	Unit no.	Lot/con. 7//
Municipality Cumberland	Postal code K4C IH9	Plan number/ other des	cription	
B. Individual who reviews and take	s responsibili	ty for design activities	3	
Name Pavis Patel		Firm Green Valley		ntal Inc.
Street address 6107 First	Line Rd.		Unit no.	Lot/con.
Municipality North Gover	Postal code K4MIA7	Province ON	E-mail Engineerin	acquequepa
Telephone number ()	Fax number		Cell number	
C. Design activities undertaken by Division C]	individual ide	ntified in Section B. [I	Building Code Ta	ble 3.5.2.1. of
House		- House	Building S	Structural
Small Buildings		Services	Plumbing	
Large Buildings		on, Lighting and Power		 All Buildings
Complex Buildings Description of designer's work	Fire Pro	otection	→On-site S	ewage Systems
Design a septic sys	tem 10°	1.01020 14.11		J string.
D. Declaration of Designer				
Davis Patel			declare that (choos	e one as appropriate):
(print nam	e)			,
I review and take responsibility C, of the Building Code. I am Individual BCIN:	y for the design of the design	work on behalf of a firm reger firm is registered, in the a	gistered under subse appropriate classes/	ection 3.2.4.of Division categories.
Firm BCIN: 16c	35			
I review and take responsibility under subsection 3.2.5.of Divi	for the design a sion C, of the Bu	and am qualified in the app ilding Code.	propriate category as	s an "other designer"
Basis for exemption from	registration:			
The design work is exempt fro Basis for exemption from			ments of the Building	g Code.
I certify that:				
 The information contained in this s I have submitted this application w 			e.	
Date Sep 20 20				

NOTE:

- 1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) (c).of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
- Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of practice, issued by the Ontario Association of
 Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of
 authorization, issued by the Association of Professional Engineers of Ontario.

Schedule 2: Sewage System Installer Information

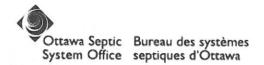
A. Project Information			
Building number, street name 3468 old M	Iontreal Rd.	Unit number	Lot/con. 7/1
Municipality Comberland Postal code K4C 1H9	Plan number/ other desc	cription	
B. Sewage system installer		100 Per 100 Pe	
Is the installer of the sewage system engaged in the busine emptying sewage systems, in accordance with Building C	ness of constructing on-site, ode Article 3.3.1.1, Division	installing, repairing, C?	servicing, cleaning or
	(Continue to Section E)		unknown at time of on (Continue to Section E)
C. Registered installer information (where answ	wer to B is "Yes")		
Name Green Valley Environmenta	1 loca	BCIN 1603	
Municipality North Gaues Postal code Kym 1A7		Unit number	Lot/con.
Municipality North Gauer Postal code Kym 1A7	Province ON	E-mail Wozabrook/	Davegroup. Co.
Telephone number (6/3) 69Z - Z6/6 ()		Cell number (613) 279 - 3	- 5
D. Qualified supervisor information (where ans	wer to section B is "Yes	3")	
Name of qualified supervisor(s)	Building Code Identification	n Number (BCIN)	
Bill Scabrook	11234		
Dill Stablook	11237		2414 - 27 1 141 1 1 1 1 1
E Destruction (A. III			
E. Declaration of Applicant:			
D			
Davis Patcl. (print name)			declare that:
I am the applicant for the permit to construct the	sewage system. If the insta	ller is unknown at tim	o of application 1
shall submit a new Schedule 2 prior to constructi	on when the installer is know	vn;	ie or application, r
OR			
I am the holder of the permit to construct the sew is known.	vage system, and am submit	ting a new Schedule	2, now that the installer
I certify that:			
1. The information contained in this schedule is true	to the best of my knowledge	y	
2. If the owner is a corporation or partnership, I have	e the authority to bind the cor	poration or partnersh	nip.
Date Sep 20, 2022	Signature of applicant	har	



Do Not Complete	
Permit #	
Revision #	
Date	

Schedule 4 Proposed Services Complete Sections 1 thru 7

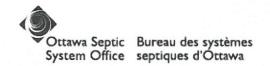
1. Engineered	2. Water supply
☐ Yes	Proposed
U No	Existing
3. Type of work proposed	4. Type of Well
New Installation	☐ Dug/bored/Sandpoint well
Replacement	Drilled well
☐ Alteration	☐ Municipal
	Other
5. Residential Sewage Design Flow Info. Bedrooms House (floor area) m²	6. Sewage Design Flow Other Occupancies Design Flow L/day Detailed sewage flow calculations:
People Total Fixture Units (Schedule 8)	Public Park: 50 people x 20 = 1000 1/day
Residential Flow L/day	Assembly Building 100 people x36=3100 400
	Class 4 – BMEC Area Bed (Schedule 11)
7. Type of System	☐ Fully raised
Treatment Unit	Partially raised
☐ Class 2 – Leaching Pit	☐ In-ground
☐ Class 3 – Cesspool	Class 4 - "Type A" Dispersal (Schedule 13)
☐ Class 4 – Shallow Buried Trench	☐ Fully raised
Class 4 – Trench (Schedule 9)	Partially raised
	☐ In-ground
☐ Fully raised	Class 4 - "Type B" Dispersal (Schedule 14)
☐ Partially raised	☐ Fully raised
☐ In-ground	Partially raised
Class 4 – Filter Media (Schedule 10) Fully raised	☐ In-ground
Partially raised	☐ Class 5 – Holding Tank (9000L min)
☐ In-ground	☐ Tank/TreatmentUnit/PumpChamber ONLY
	☐ Effluent Filter/Risers ONLY



S	5	
Sewage	System	Details

Do Not Complete	
Permit No	
Revision No	
Date	

Type of System Class 4 F	ilter Media	a E	Bool. (Schedule 4)
Septic/Holding Tank Size: 11500	Litres		Make: Mac Gregor	
Septic Tank Effluent Filter Make:	Polylok		Model: PL- 250:	
Treatment Unit – Make & Model	N/A.			
Number of Units:			Other:	
Refer to Typical Drawing #			Pump(s) required	
Mantle Information:			Pump Rate	L/15min
Native or imported =15m in	direction(s)	1	Note: Alarm require	ed for all
			pumping systems	
Slope subgrade	% slope	е		
	direction	on(s)		
Site to be Scarified (If clay)	YES/NO			
Clay Seal Required (If bedrock)	YES/XO			
□ Trench			Shallow Buried Trench	
Distribution Pipe Length	m		Pipe Length	m
Loading Area	m ²			
Type of Chamber			Filter Media Bed	
Length of Chamber	m		Stone96	m²
□ Dispersal Bed			Extended Base	16 m ²
□ BMEC □ Type A □ Type I	В		Pipe	84_ m
Stone	m²		Weight of Filter Media	Kg
Sand	m²		Loading Area	60_ m
Pipe	m²		۷	
Linear Loading	L/m ²			
□ Tank/Treatment Unit/Pump Cl □ Effluent Filter & Riser ONLY	hamber Replace	emen	t ONLY	
Construction Notes:				
<u> </u>				



Do Not C	omplete
Revision	#
Date	

Schedule 8 Fixture unit count

Fixtures	washrum	+ #	Pavilion	X	unit count	=	Fixture Count
Bathroom Bathroom group (toilet, sink and tub or shower) installed in the same room		+		X	6	=	
Bathtub with/without overhead shower		+		X	1.5	=	
Urinal	1	+		X	1.5	=	1.5
Wash basin (SINK) (1½inch trap)	2	+		X	1.5	=	3
Watercloset (TOILET) tank operated	3	+		X	4	=	12
Bidet		+		X	1	=	
Kitchen Dishwasher	1	+		X	1	=	١
Sink with/without garbage grinder(s), domestic and other small type single, double or 2 single with a common trap	١	+		X	1.5	П	1.5
Other							
Domestic washing machine		+		X	1.5	=	
Combination sink and laundry tray single or double (Installed on 1½ trap)		+		X	1.5	=	

*Insert the TOTAL	in section 5	of Schedule 4	(0.Reg 151/13	Table 7.4.9.3)
			(

- 1. Sump pumps and floor drains are not to be connected to the sewage system. Connection of such fixtures to a sewage system may lead to a hydraulic failure of the said system. The above mentioned fixtures should be discharged separately to an approved Class 2 (leaching pit) sewage system.
- 2. Where laundry waste is not more than 20% of the total daily design sanitary sewage flow, it may discharge to a sewage system (Part 8, OBC, 8.1.3.1(2)).

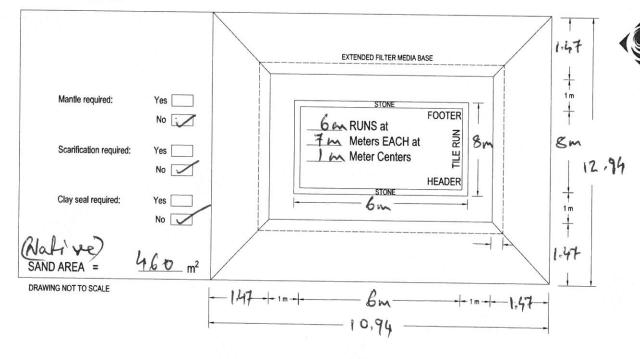
Agent/Owner signature Sep 20, 2022

Date

*Total:

Plan View

DRAWING NOT TO SCALE

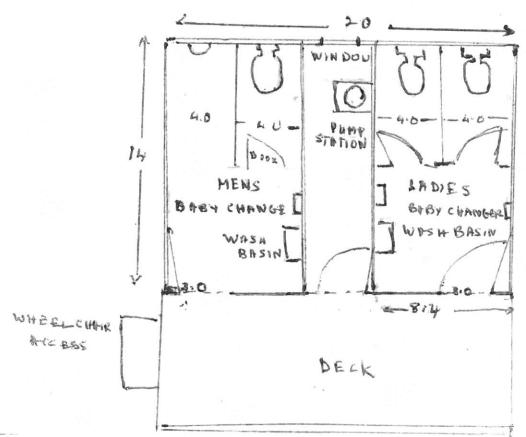


Do Not Complete
Permit #
Revision #
Date

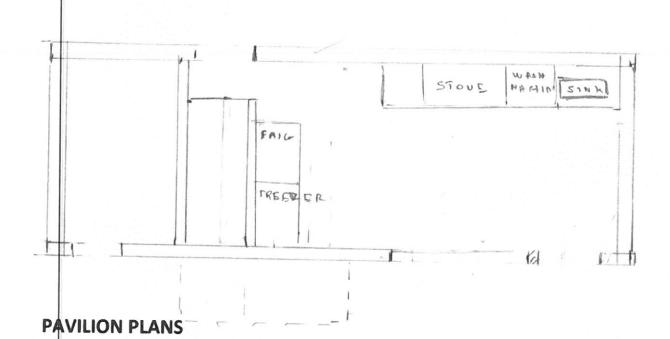
Ottawa Septic Bureau des systèmes System Office septiques d'Ottawa TYPICAL DRAWING B

> **BURIED OR RAISED TILE BED** FILTER MEDIA METHOD

Cross-Section Profile Proposed Approved Installation Installation Existing Sand Mantle Grades Grades Grade FINISHED GRADE 62,95 Finished Grade Non-woven Geotextile 1m or Paper 62,50 Pipe invert Stone Layer - Minimum Thickness of 300mm 62.35 Top of Filter Media Sand Extended Base — Filter Media Sand - Minimum Thickness of 750mm 61,60 Bottom of Filter Media Sand Minimum Separation distance of 900mm 250mm (min) MANTLE (if required) 61.45 between HGWT and Stone Layer Toe of mantle Nation High Ground Water Table/ Impermeable Surface/ Bedrock



TOILETS AT THE HUMANICS SANCTURRY



Scale 1 Centimeter = 2 feet.

Seating Capacity

9 Tables of 8 seats at ground level

2 Tables of 8 seats on the loft

Total 11 tables with accommodation for 96 guests

Server 4

Total capacity 100 persons; The pavilion will probably be in full capacity at most only for about 6-10 times per year for at most 5 hours per seating.

Expected average use for 6 months will be only about 25 persons

