

Energy Efficiency Design Summary: Prescriptive Method
(Building Code Part 9, Residential)

This form is used by a designer to demonstrate that the energy efficiency design of a house complies with the building code using the prescriptive method described in Subsection 3.1.1. of SB-12. This form is applicable where the ratio of gross area of windows/sidelights/skylights/glazing in doors and sliding glass doors to the gross area of peripheral walls is not more than 22%.

Application No: _____ For use by Principal Authority
Model/Certification Number: _____

A. Project Information

Building number, street name: 29 Yates Street Unit number: _____ Location: _____
Municipality: St. Catharines Postal code: _____ Reg. plan number / other description: _____

B. Prescriptive Compliance (indicate the building code compliance package being employed in this house design)
SB-12 Prescriptive (input design package): Package: 3.1.1.2.A Table: A1

C. Project Design Conditions

Climatic Zone (SB-1): ☐ Zone 1 (< 5000 degree days) ☐ Zone 2 (> 5000 degree days)	Heating Equipment Efficiency ☑ ≥ 92% AFUE ☐ ≥ 84% < 92% AFUE	Space Heating Fuel Source ☑ Gas ☐ Propane ☐ Oil ☐ Electric ☐ Solid Fuel ☐ Earth Energy
Ratio of Windows, Skylights & Glass (W, S & G) to Wall Area Area of walls = _____ m ² or 6104.79 ft ² W, S & G % = 17.4	Other Building Characteristics ☐ Log/Post&Beam ☐ ICF Above Grade ☐ ICF Basement ☐ Slab-on-ground ☐ Walkout Basement ☐ Air Conditioning ☐ Combo Unit ☐ Air Sourced Heat Pump (ASHP) ☐ Ground Sourced Heat Pump (GSHP)	
Area of W, S & G = _____ m ² or 1063.5 ft ²	Utilize window averaging: ☐ Yes ☑ No	

D. Building Specifications (provide values and ratings of the energy efficiency components proposed)

Energy Efficiency Substitutions

☐ ICF (3.1.1.2.(5) & (6) / 3.1.1.3.(5) & (6))
☐ Combined space heating and domestic water heating systems (3.1.1.2.(7) / 3.1.1.3.(7))
☐ Airtightness substitution(s)
☐ Table 3.1.1.4.B Required: _____ Permitted Substitution: _____
Airtightness test required (Refer to Design Guide Attached) ☐ Table 3.1.1.4.C Required: _____ Permitted Substitution: _____

Building Component	Minimum RSI / R values or Maximum U-Value ⁽¹⁾	Building Component	Efficiency Ratings
Thermal Insulation		Windows & Doors Provide U-Value ⁽¹⁾ or ER rating	
Ceiling with Attic Space	60	Windows/Sliding Glass Doors	.28
Ceiling without Attic Space	31	Skylights/Glazed Roofs	n/a
Exposed Floor	31	Mechanicals	
Walls Above Grade	22	Heating Equip.(AFUE)	96%
Basement Walls	20ci	HRV Efficiency (SRE% at 0°C)	n/a
Slab (all >600mm below grade)	-	DHW Heater (EF)	.80
Slab (edge only ≤600mm below grade)	10	DWHR (CSA B55.1 (min. 42% efficiency))	yes # Showers 3
Slab (all ≤600mm below grade, or heated)	10	Combined Heating System	yes see mech' dwgs

(1) U value to be provided in either W/(m²K) or Btu/(h².F) but not both.

E. Designer(s) (name(s) & BCIN(s), if applicable, of person(s) providing information herein to substantiate that design meets the building code)

Qualified Designer Declaration of designer to have reviewed and take responsibility for the design work.

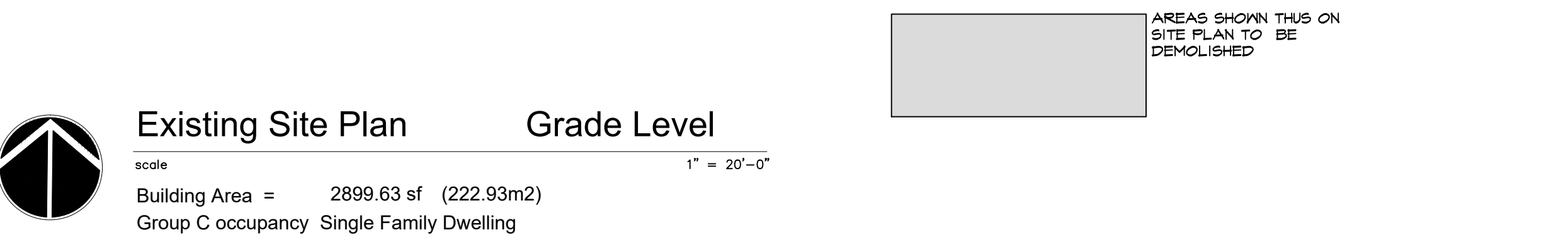
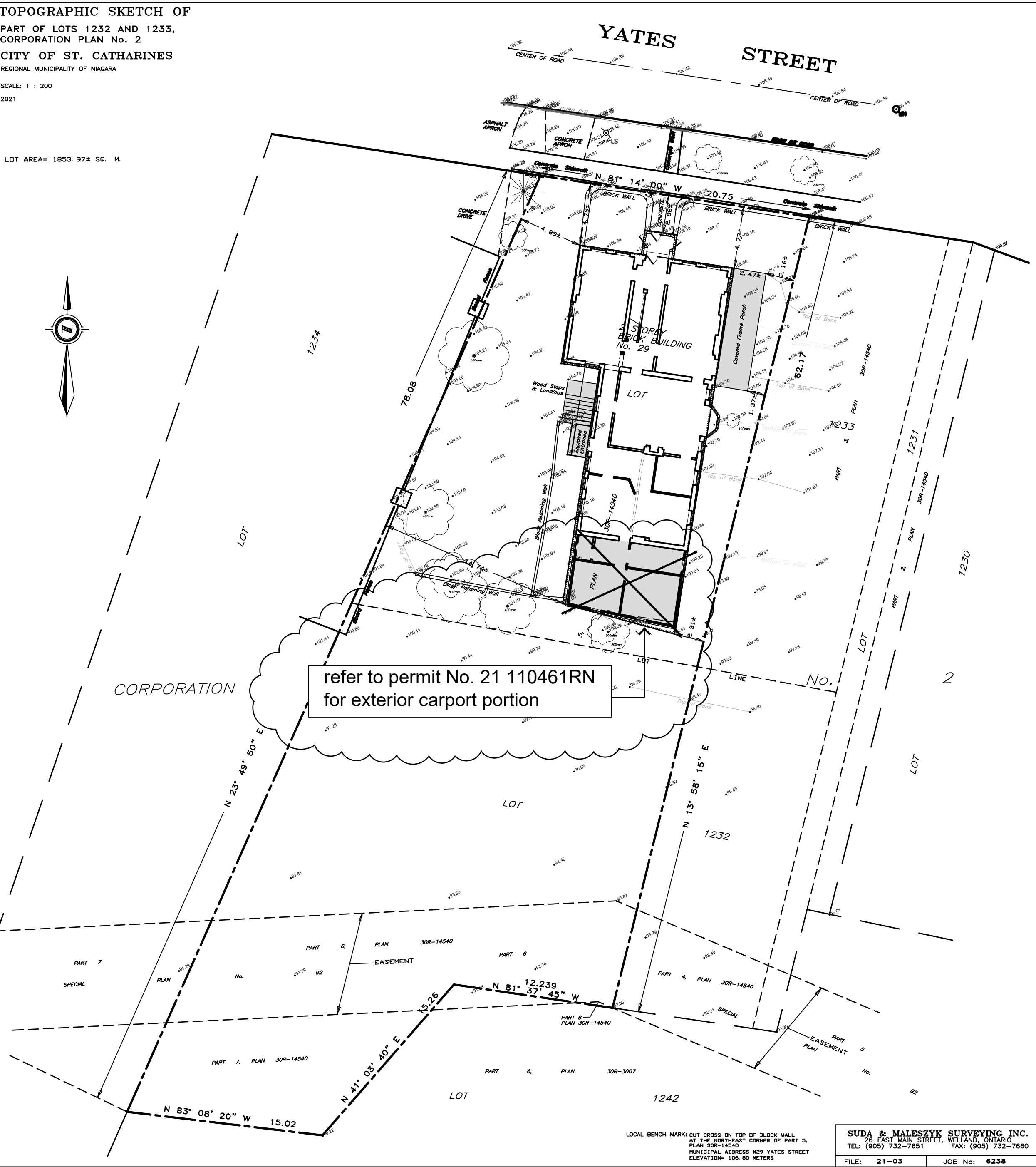
Name Andrew Allen Hellwig	BCIN 114357	Signature
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Digitally signed by Andrew Hellwig
Date: 2021.07.22 08:31:48 -04'00'

Form authorized by OHSB, OHSB, LMC80, Revised December 1, 2016.

ENERGY EFFICIENCY DESIGN SUMMAERY

NOTE:
REFER TO MECHANICAL ENGINEERING DRAWINGS FOR ENVIRONMENTAL CONDITIONS OF THE EXISTING BUILDING. THIS SUMMARY SHALL BE USED TO OBTAIN INSULATION R VALUES AS CLOSE AS POSSIBLE DUE TO EXISTING BUILDING CONDITIONS AND ASSEMBLIES.



Project Summary - Renovated Floor areas

Area of Basement to be renovated	798.98 SF (68.65M2)	Area of New Carport	refer to permit No. 21 110461RN
Area of Main Floor be renovated	2092.13 SF (194.36M2)	Area of Exterior Terrace	refer to permit No. 21 110461RN
Area of upper floor to be renovated	2107.14 SF (195.75M2)		

total renovated floor area = 4199.27SF (390.12M2)
total main floor exterior uncovered terrace = 535.30 (49.73M2)
total renovated basement area = 798.98SF (68.65M2)

29 Yates Street



consultant

notes
Interior alterations phase
permit ref : 21 114654 RN

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirements set out in the Ontario Building Code to be a designer.

QUALIFICATION INFORMATION
Required unless design is exempt under Div. C, Article 3.2.5.1 of the Building Code
ANDREW HELLWIG 18776
NAME SIGNATURE BCIN

REGISTRATION INFORMATION
Required unless design is exempt under Div. C, Article 3.2.4.1 of the Building Code
Andrew Allen Hellwig Design Consultants Inc. 114357
FIRM NAME BCIN

drawing

Site Plan

disclaimer
Do not take drawings, verify all dimensions and information prior to construction report any errors and/or discrepancies to the maker of these plans immediately. All construction must meet or exceed all applicable current building codes including all revisions. Contractor shall be responsible for proceeding with work not fully checked or verified on site to ensure intent of the drawings are fully adhered to in respect to the latest design intent.

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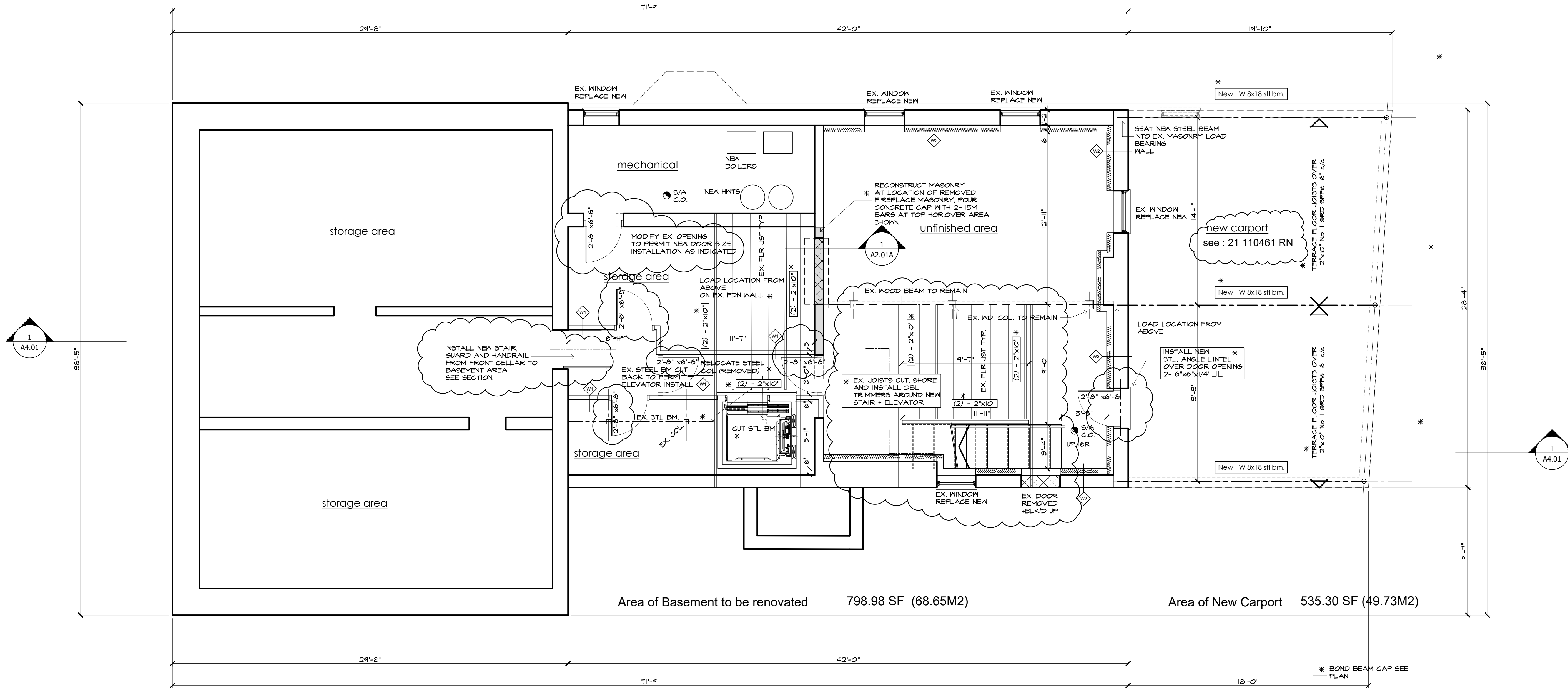
date of issues and revisions

A. ISSUED FOR BUILDING PERMIT 2021-05-17
AAH

B. PERMIT SEPARATION (INTERIOR) AND ITEMS ADDRESSED OF CITY'S LETTER DATED JUNE 23 2021 - AAH

drawn _____ drawing no. **A2.00**
reviewed _____
plot

notes
Interior alterations phase
permit ref : 21 114654 RN

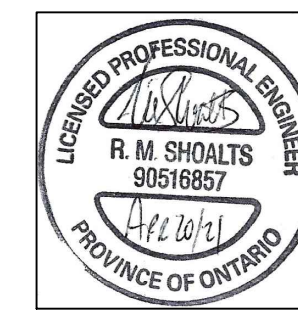


Area of Basement to be renovated 798.98 SF (68.65M2)

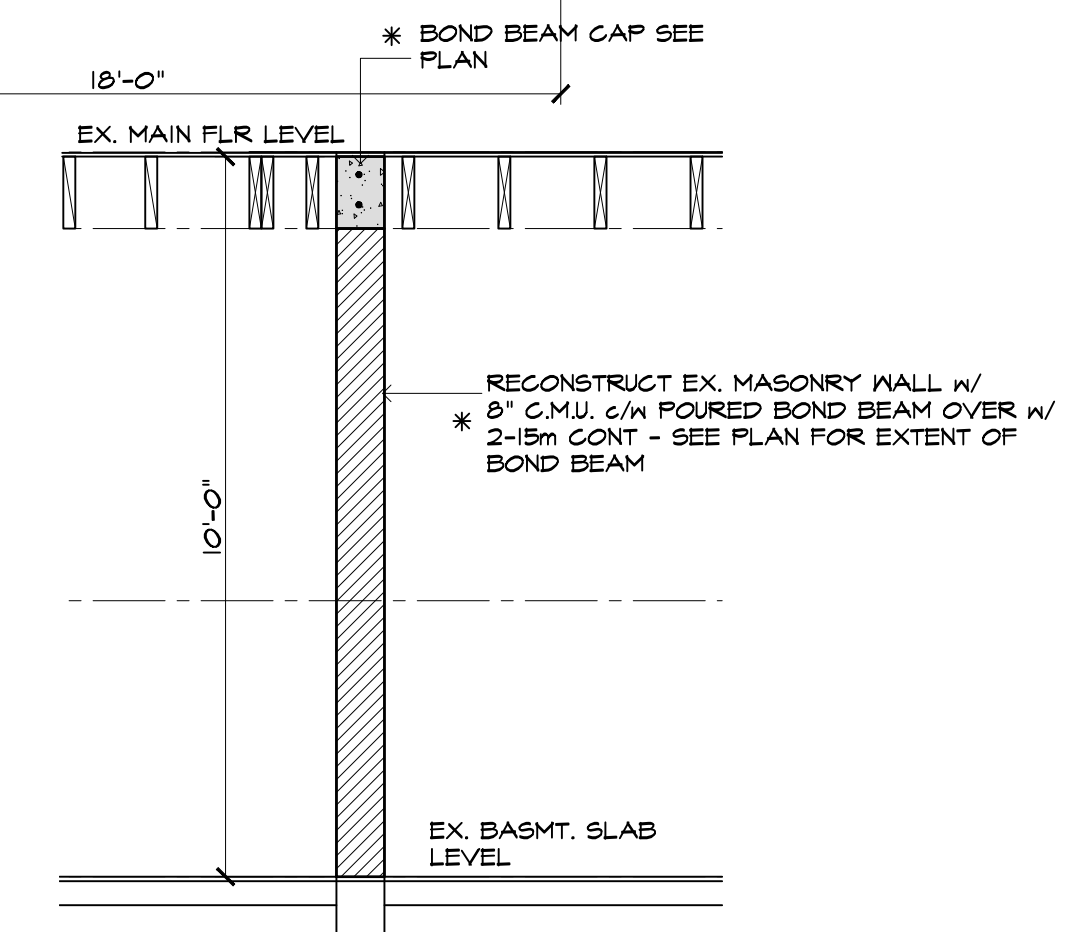
Area of New Carport 535.30 SF (49.73M2)

WALL LEGEND

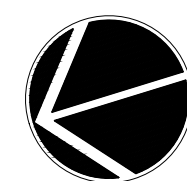
- INTERIOR NON-LOAD BEARING WALL**
 1/2" GYP BRD.
 2"x4" WOOD STUDS @ 16" O.C.
 1/2" GYP BRD.
- EXTERIOR WALL - EX. MASONRY UPGRADED INSULATION**
 REFER TO DESCRIPTION SHOWN AT RIGHT
 1/2" GYP BRD.
 6mil POLY VAPOUR BARRIER
 EX. 2"x4" WOOD STUDS @ 24" O.C.
 NEAR R12 BATT INSULATION
 NEAR R10 RIGID INSULATION AGAINST MASONRY
 EX. MASONRY - CLEAN PRIOR TO APPLYING RIGID
 DRILL NEEF HOLES THROUGH EX. MASONRY AND SLOPE DOWN
 INSERT VINYL NEEF TUBES



FOR ALL STRUCTURAL ITEMS INDICATED BY ASTERISK (*) ONLY.



1 A2.01A
Detail at Wall
1/4" = 1'-0"



Existing Demolition Plan 1st Sub-Grade Level

scale 1/4" = 1'-0"
Building Area = 2899.63 sf (222.93m2)
Group C occupancy Single Family Dwelling

drawing

1st Basement Level - Existing

disclaimer

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drawn drawing no.

reviewed **A2.01A**

plot

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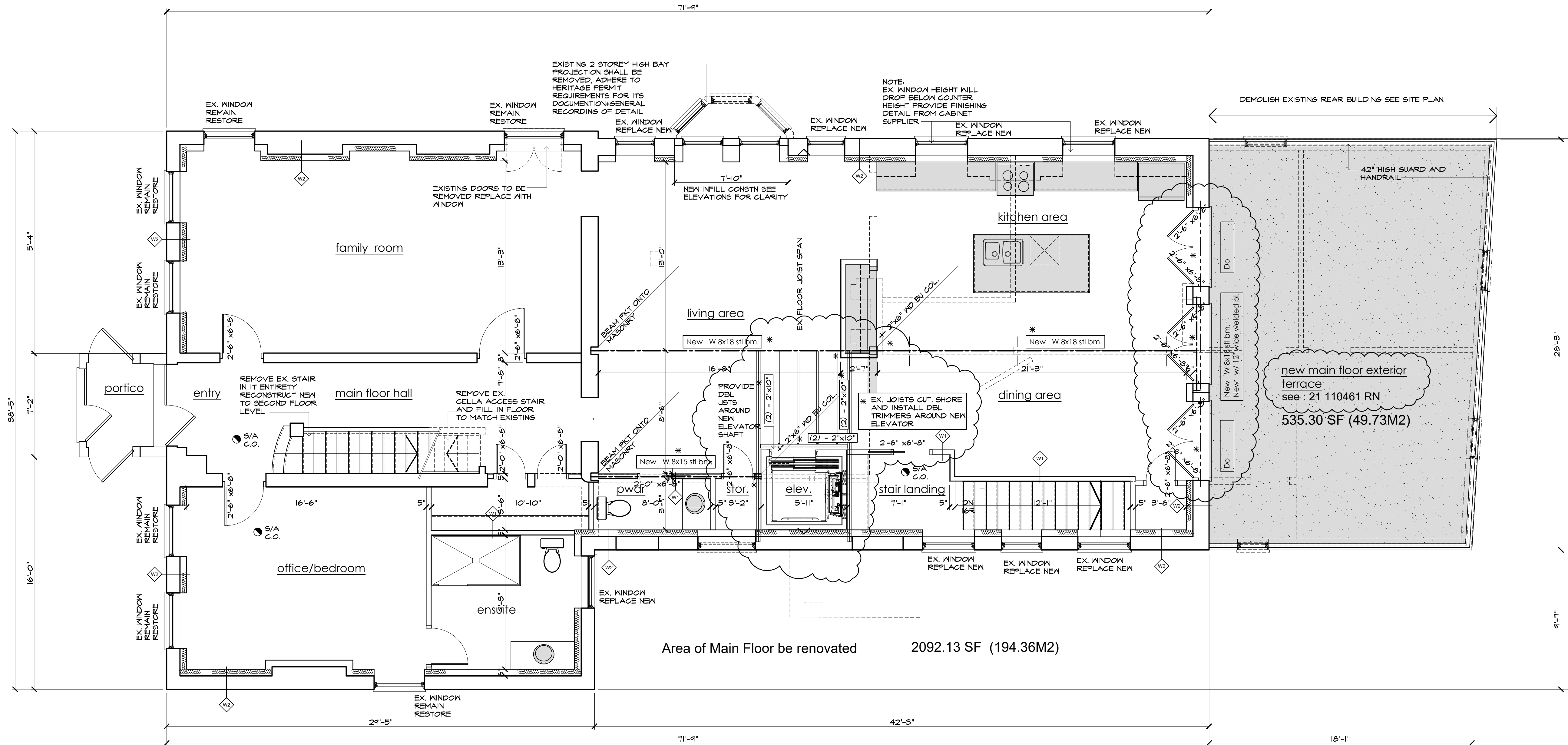
QUALIFICATION INFORMATION
 Required unless design is exempt under Div. C, Article 3.2.5.1 of the Building Code
 ANDREW HELLWIG 18776
 NAME SIGNATURE BCIN

REGISTRATION INFORMATION
 Required unless design is exempt under Div. C, Article 3.2.4.1 of the Building Code
 Andrew Allen Hellwig Design Consultants Inc. 114357
 FIRM NAME BCIN



notes

Interior alterations phase
 permit ref : 21 114654 RN



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Andrew Allen Hellwig Design Consultants Inc.	114357
FIRM NAME	BCIN

drawing

Ground (Main) Level - Existing

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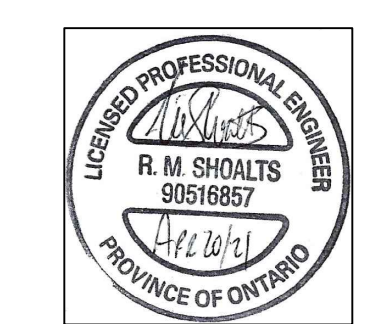
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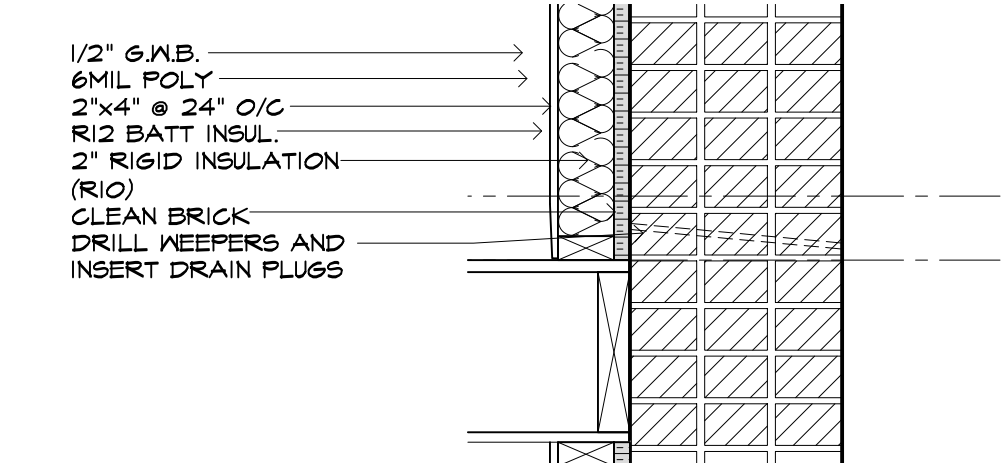
- WALL LEGEND**
- INTERIOR NON-LOAD BEARING WALL
 - 1/2" GYP BRD.
 - 2"x4" WOOD STUDS @ 16" O.C.
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 - INSERT VINYL KEEP TUBES



FOR ALL STRUCTURAL ITEMS INDICATED BY ASTERIK (*) ONLY

Perimeter interior wall insulation upgrade method

ALL EX. EXTERIOR LOAD BEARING MASONRY WALLS SHALL BE UPGRADED WITH THE FOLLOWING ASSEMBLY FOR INCREASED INSULATION VALUES.

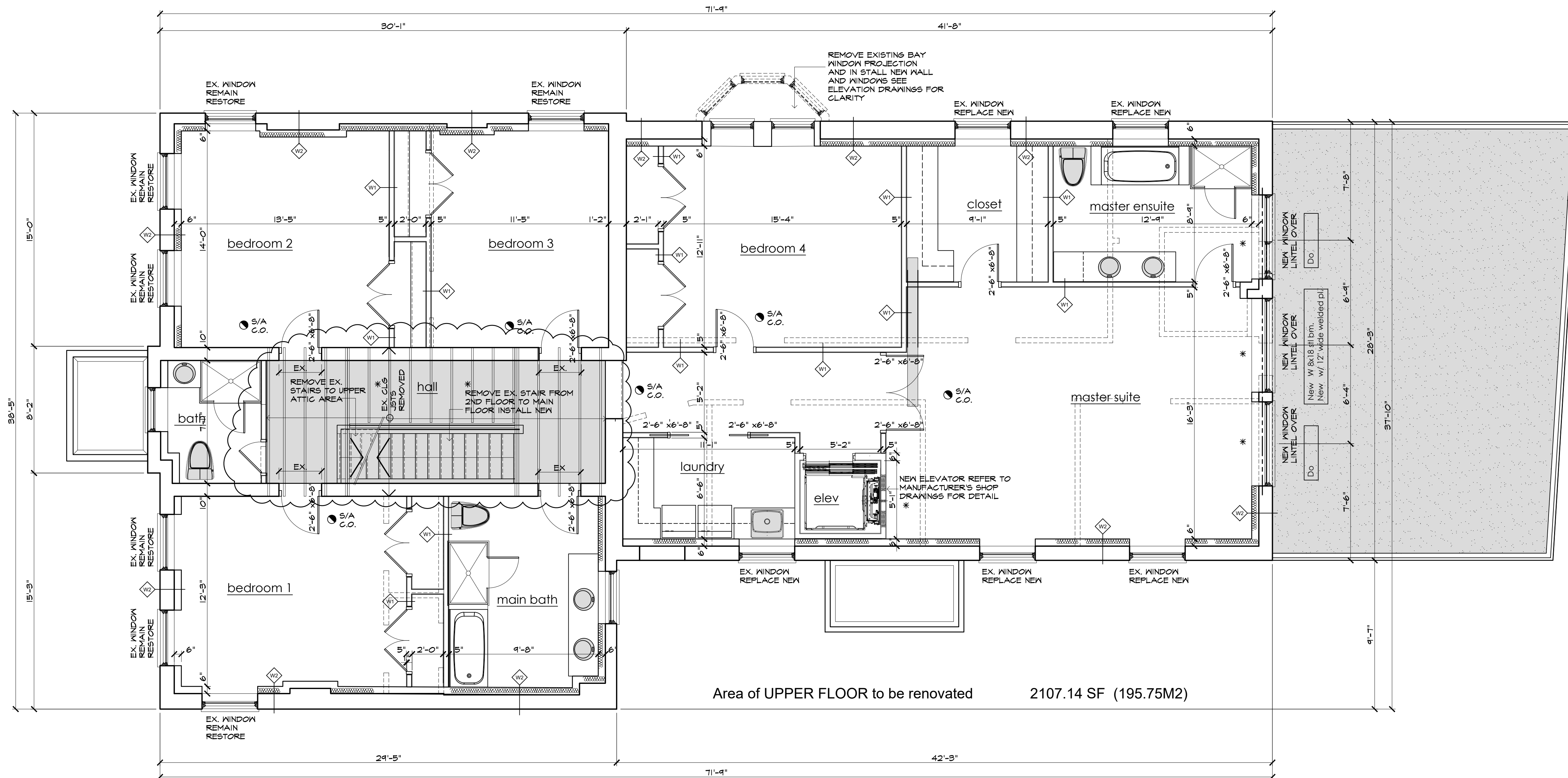


Existing Demolition Plan Proposed Grade Level
 scale 1/4" = 1'-0"
 Building Area = 2899.63 sf (222.93m²)
 Group C occupancy Single Family Dwelling

drawing no. **A2.01**
 reviewed
 plot

notes

Interior alterations phase
 permit ref : 21 114654 RN



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Andrew Allen Hellwig Design Consultants Inc.	114357
FIRM NAME	BCIN

drawing

Upper Floor Level - Existing

disclaimer

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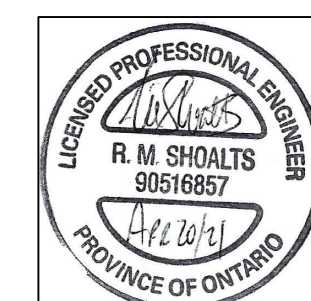


Existing Demolition Plan Proposed Upper Level

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 Building Area = 2899.63 sf (222.93m²)
 Group C occupancy Single Family Dwelling

WALL LEGEND

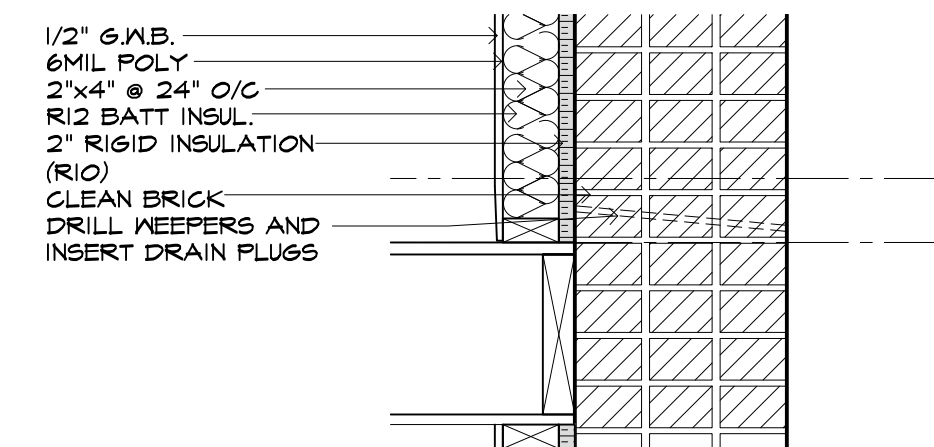
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FOR ALL STRUCTURAL ITEMS INDICATED BY ASTERISK (*) ONLY

Perimeter interior wall insulation upgrade method

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drawn

drawing no.

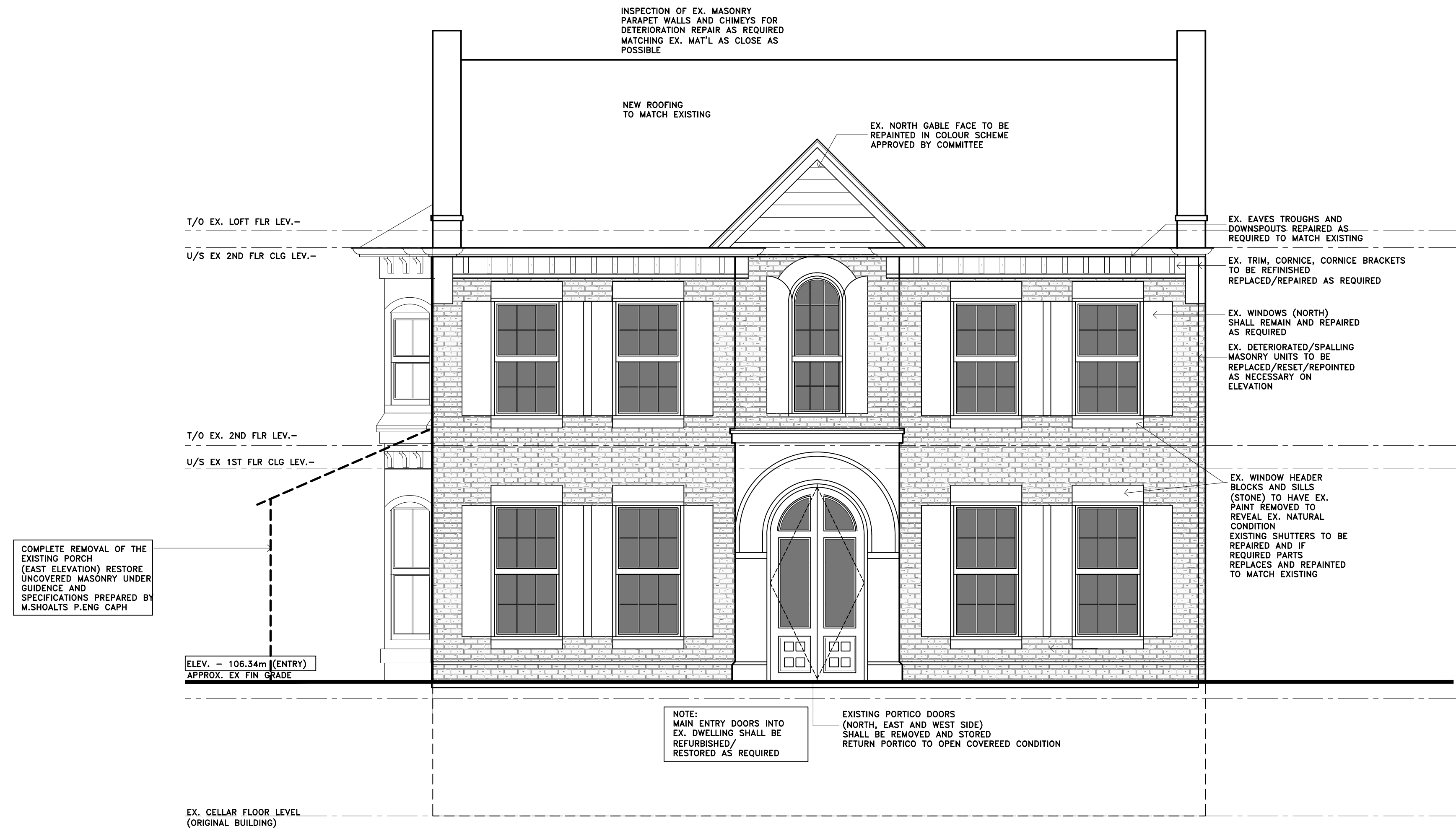
reviewed

A2.02

plot

notes

Interior alterations phase
 permit ref : 21 114654 RN



North (Front) Elevation facing Yates Street

scale 1/4" = 1'-0"

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirements set out in the Ontario Building Code to be a designer.	
QUALIFICATION INFORMATION	
Required unless design is exempt under Div. C, Article 3.2.5.1 of the Building Code	
ANDREW HELLWIG	18776
NAME	SIGNATURE BCIN
REGISTRATION INFORMATION	
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Andrew Allen Hellwig Design Consultants Inc.	114357
FIRM NAME	BCIN

drawing

North Building
 Elevation

disclaimer

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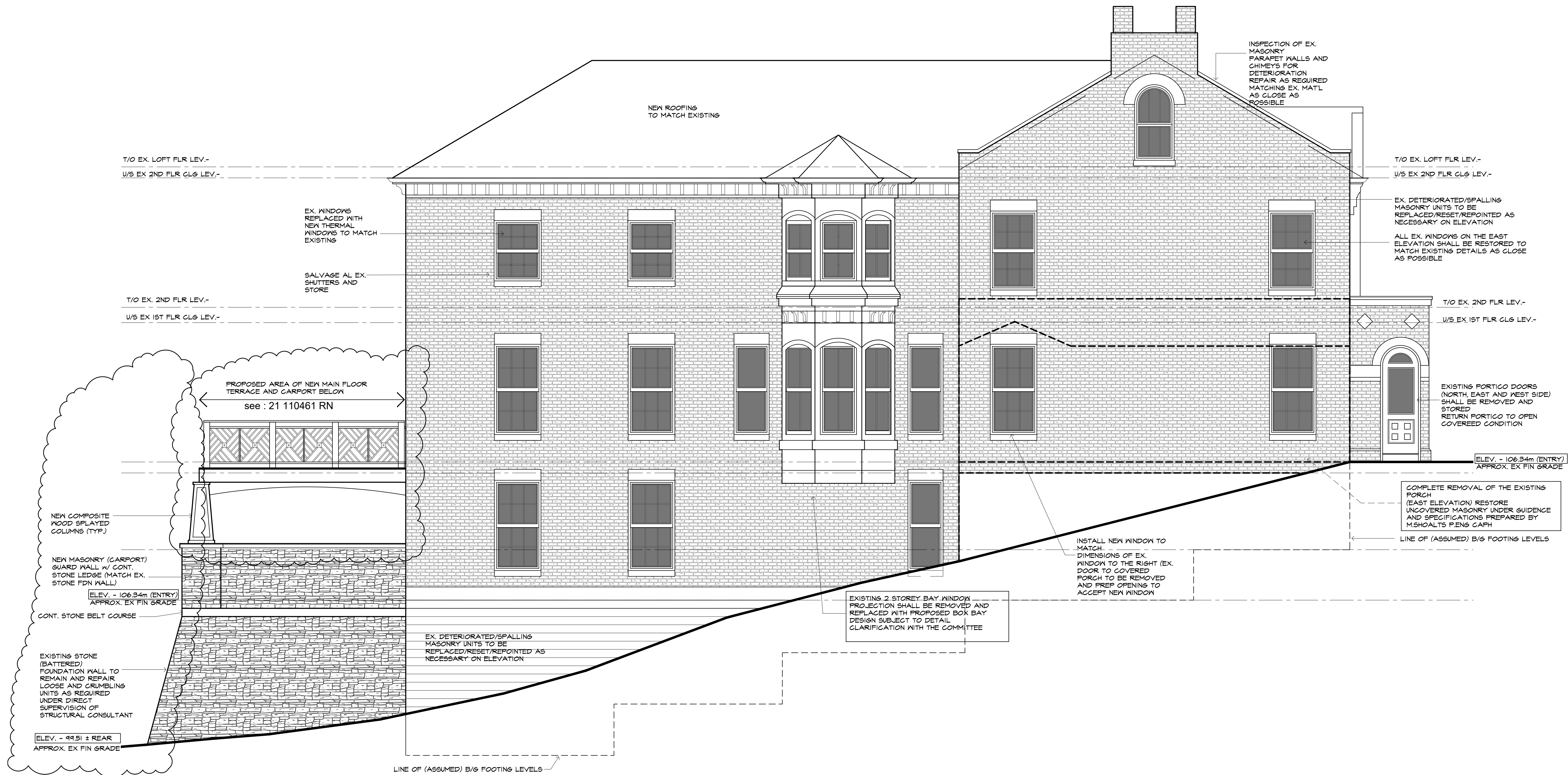
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- B. PERMIT SEPARATION (INTERIOR) AND ITEMS ADDRESSED OF CITY'S LETER DATED JUNE 21 2021 - AAH

drawn drawing no.

reviewed **A3.01**

plot



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NAME	SIGNATURE
	BCIN
REGISTRATION INFORMATION	
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Andrew Allen Hellwig Design Consultants Inc.	
	114357
FIRM NAME	BCIN

drawing

East Building Elevation

disclaimer

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date of issues and revisions

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drawn

drawing no.

reviewed

A3.02

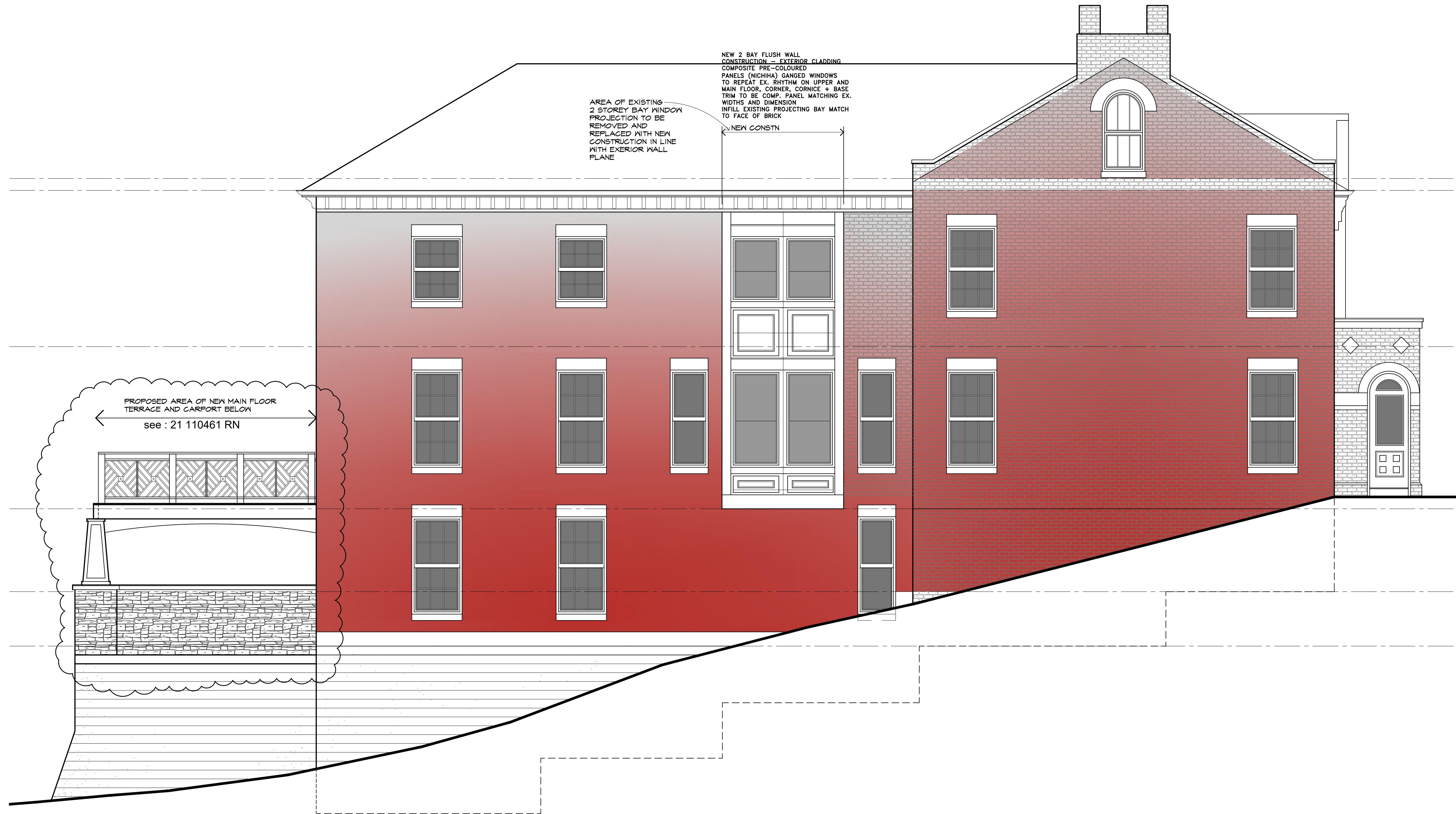
plot

East (Left-Side) Elevation EXISTING BAY

scale 1/4" = 1'-0"

notes

Interior alterations phase
 permit ref : 21 114654 RN



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QUALIFICATION INFORMATION	
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ANDREW HELLWIG	18776
NAME	SIGNATURE
	BCIN
REGISTRATION INFORMATION	
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Andrew Allen Hellwig Design Consultants Inc.	114357
FIRM NAME	BCIN

drawing

East Building
 Elevation Baywindow
 Modification

disclaimer

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date of issues and revisions

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AAH
- B. PERMIT SEPARATION (INTERIOR) AND ITEMS ADDRESSED OF CITY'S LETTER DATED JUNE 21 2021 - AAH

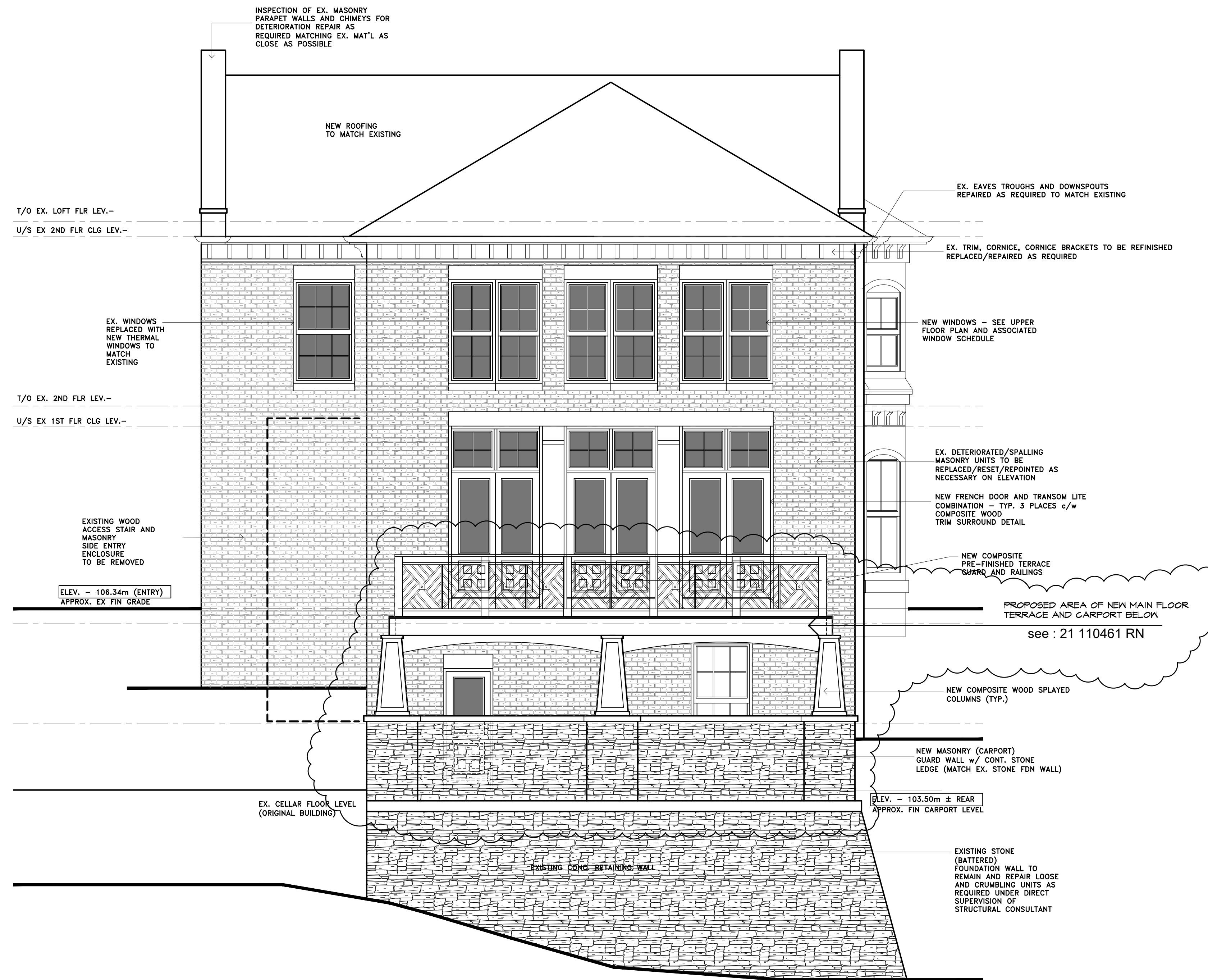
East (Left-Side) Elevation REVISED BAY

scale 1/4" = 1'-0"

drawn drawing no.

reviewed **A3.02A**

plot



South (Rear) Elevation

scale 1/4" = 1'-0"

The undersigned has reviewed and takes responsibility for this design, and has the qualifications and meets the requirements set out in the Ontario Building Code to be a designer.

QUALIFICATION INFORMATION	
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ANDREW HELLWIG	18776
NAME	SIGNATURE
	BCIN
REGISTRATION INFORMATION	
Required unless design is exempt under Div. C, Article 3.2.4.1 of the Building Code	
Andrew Allen Hellwig Design Consultants Inc.	114357
FIRM NAME	BCIN

drawing

South Building Elevation

disclaimer

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AAH
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drawn drawing no.

reviewed **A3.03**

plot



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NAME	SIGNATURE
REGISTRATION INFORMATION	
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Andrew Allen Hellwig Design Consultants Inc.	114357
FIRM NAME	B/CIN

drawing
West Building Elevation

disclaimer
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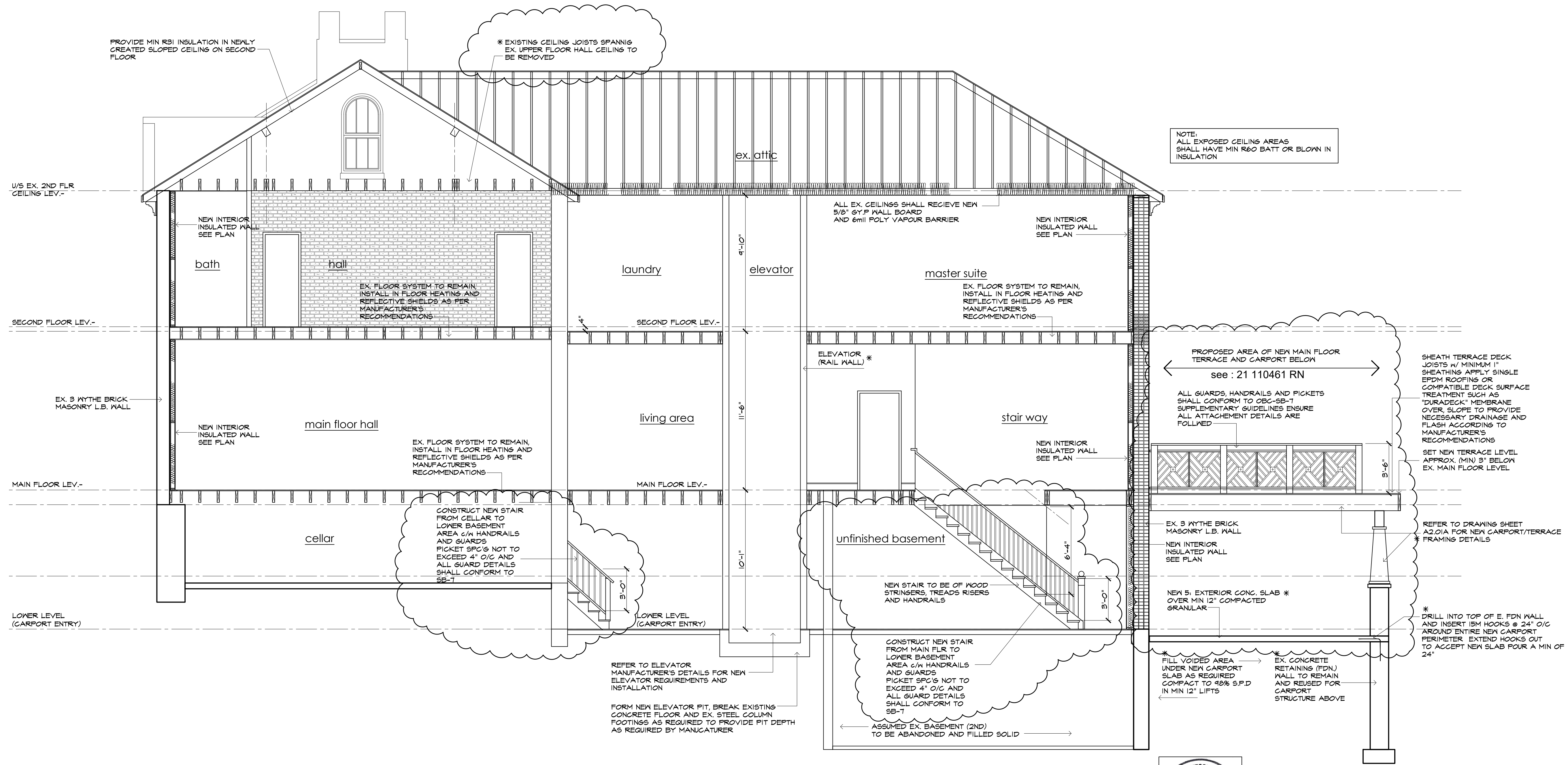
date of issues and revisions
A. ISSUED FOR BUILDING PERMIT 2021-05-17
AAH
B. PERMIT SEPARATION (INTERIOR) AND ITEMS ADDRESSED OF CITY'S LETEER DATED JUNE 21 2021 - AAH

West (Right Side) Elevation
scale 1/4" = 1'-0"

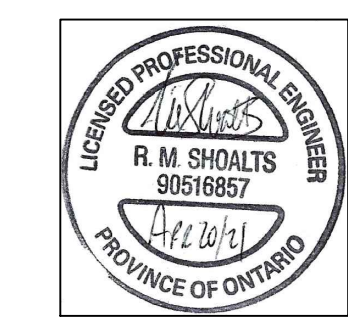


notes

Interior alterations phase
 permit ref : 21 114654 RN



1 Building Cross Section
 A2.01A scale 1/4" = 1'-0"



FOR ALL STRUCTURAL ITEMS INDICATED BY ASTERIK (*) ONLY

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Andrew Allen Hellwig Design Consultants Inc.	114357
FIRM NAME	BCIN

drawing

Building Section

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- B. PERMIT SEPARATION (INTERIOR) AND ITEMS ADDRESSED OF CITY'S LETTER DATED JUNE 21 2021 - AAH

drawn

drawing no.

reviewed

A4.01

plot