



Kollaard Associates
Engineers

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September 7, 2023

Kollaard File # 230022 – LOT352

Phoenix Homes
18A Bentley Avenue
Ottawa, Ontario
K2E 6T8

Attn: Catherine Buck
Tel: 613-723-9227 x 191
Email: CBuck@phoenixhomes.ca



Re: Proposed Single Family Dwelling, Lot # 352 Ninaatik Place, Pathways, City of Ottawa, Kollaard Associates File # 230022

With regard to structural issues only, Kollaard Associates has reviewed the following drawings:

- Phoenix Homes, Lot # 352 Pathways, Pages # 1, 2M to 8M, Dated September 7, 2023 ✓
- Grandor, Roof Truss Layout, Belfast, Elev-M w/ 3' Extension, Dated 02/25/2022 ✓
- Grandor, 2nd Floor Joist Layout, Belfast, Elevation C/M EXT, 4 & 5 Bedrooms, Dated 2023/09/06 ✓
- Grandor, 1st Floor Joist Layout, Belfast, Elevation C/M EXT, 4 & 5 Bedrooms, Dated 2023/09/06 ✓

Kollaard Associates offers the following comments:

Second Floor Plan – Pages # 4M:

1. It is the opinion of Kollaard Associates that the proposed lintels and supporting posts shown on Phoenix Homes Pages # 4M are adequate.
2. The proposed tall wall noted on Phoenix Homes Pages # 1 is adequate.
3. Posts supporting girders may consist of built up 2x6 posts as indicated on Phoenix Homes Pages # 4M and are laterally supported by plywood or OSB sheathing (i.e. posts form part of sheathed exterior walls unless noted).
4. Truss design is by others.

Ground Floor Plan – Pages # 3M:

5. It is the opinion of Kollaard Associates that the proposed lintels, beams and supporting posts shown on Phoenix Homes Pages # 3M are adequate
6. Ramset a 2x6 to the top flange of all steel beams to attach the above framing, floor joists and flush LVL beams.



Professional Engineers
Ontario

Authorized by the Association of Professional Engineers
of Ontario to offer professional engineering services.

7. Truss design is by others.
8. Posts supporting girders may consist of built up 2x6 posts as indicated on Phoenix Homes Pages # 3M and are laterally supported by plywood or OSB sheathing (i.e. posts form part of sheathed exterior walls unless noted).
9. Floor joist design and flush LVL beams within the floor structure are by the manufacturer.

Basement Plan – Pages # 2M:

10. It is the opinion of Kollaard Associates that the proposed steel beams steel posts shown on Phoenix Homes Sheet # 2M are adequate.
11. The front porch slab reinforcement described on Phoenix Homes Sheet # 1 is adequate.
12. As noted on Phoenix Homes Sheet # 2M, the framed walls supporting the intermediate landing may be supported by the basement slab.
13. The foundation walls at the bottom of the window openings that exceed 47 1/4" in width (or the sum of the widths of the window openings exceed 25% of the length of the wall) are considered to be laterally unsupported as per 2012 OBC 9.15.4.3. The reinforcement around the window openings noted on Phoenix Homes Sheets # 2M is adequate to withstand the lateral earth pressures.
14. The remaining proposed foundation walls conform to 2012 OBC Table 9.15.4.2.A. ensuring that the grade difference between the basement slab and the exterior grade (including the garage slab) does not exceed 7'-6 1/2" for the full height 7'-10" foundation walls.
15. The proposed strip footings, interior pad footings and exterior pad footings shown on Phoenix Homes Page # 2M and noted on Phoenix Homes Sheet # 1 are adequate.
16. Floor joist design, flush LVL beams within the floor structure and LVL lintels are by the manufacturer. The posts supporting the flush LVL lintels shown on Phoenix Homes Sheet # 2M are adequate.
17. The proposed deck and steel bracket support are designed and approved by others (City Structural Design, Dwg. # SK-1, Dated December 2019).



General Notes:

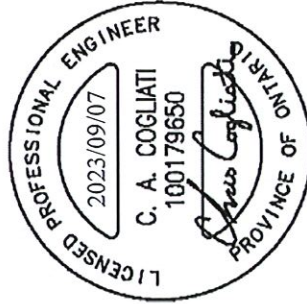
18. All gravity loads to be carried to foundation through solid blocking.
19. Truss design is by others.
20. Floor joist design, flush LVL beams within the floor structure and LVL lintels are by the manufacturer.
21. The self supporting stairs are to be designed by the stair manufacturer.
22. All dimension lumber, except non-load bearing 8 ft 2x6 studs to be No.2 grade SPF or better.
23. Non-load bearing 8 ft 2x6 studs to be No.3 or Stud grade SPF or better.
24. All guards to be as per OBC SB-7, unless otherwise mentioned and designed by others.
25. All brick lintels to be as per OBC Table 9.20.5.2.B.



26. Unless otherwise noted, LVL to be 1.8E 3000Fb LVL (Canadian Limit States bending strength of at least 39.5 MPa) with 1 $\frac{3}{4}$ " nominal width or better.
27. Pemco Steel adjustable posts are designed and approved by the manufacturer. The adjustable steel posts are designed for a maximum allowable load of 106.8 kN at a maximum height of 9'-3".
28. All 3" x 3" x 3/16" HSS posts c/w 6" x 6" x 3/8" top and bottom bearing plates.
29. The assumed soil bearing resistance of 100 kPa is to be verified prior to construction.
30. Note that the truss manufacturer/floor joist supplier has sized the flush LVL beams and girder trusses shown on the building drawings. The comments provided by Kollaard Associates in this report are based in part on the design indicated in the truss and floor layouts. If a different truss and/or floor layout is used in construction, comments made in this report may no longer be valid. Provide Kollaard Associates with the full truss package prior to construction.
31. Comments provided in this report are made in consideration of Part 9 and Part 4 (where applicable) of the 2012 OBC as amended.
32. This report constitutes a review of the structural information indicated on the building plans cited in this report for the client indicated above.

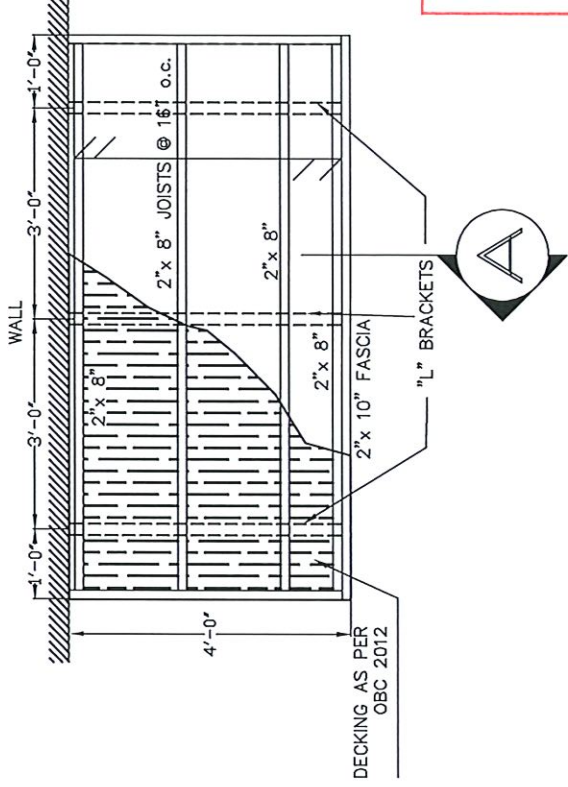
We trust this letter provides sufficient information for your present purposes. If you have any questions concerning this letter please do not hesitate to contact our office.

Sincerely,
Kollaard Associates Inc.



Christopher Cogliati, P.Eng.



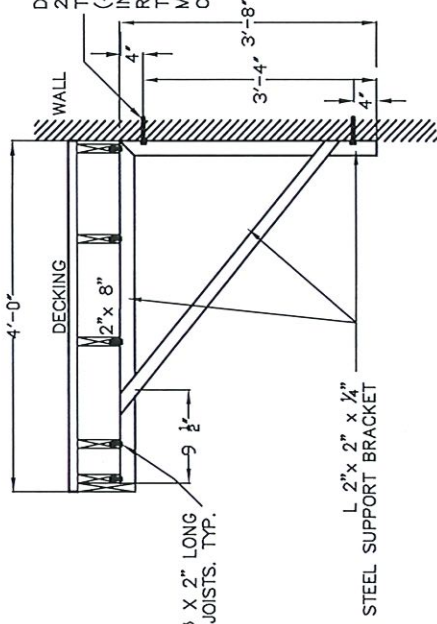


City of Ottawa
Building Services Branch

SEP 28 2023

Building Code Reviewed

[Signature]
Signature



PROVIDE 1/4" ϕ X 2" LONG LAG BOLT AT EACH JOISTS, TYP.

DRILL INTO EXISTING FOUNDATION WALL
2 - 1/2" ϕ RED HEAD STAINLESS STEEL
TRUBOLT WEDGE ANCHOR
(4" MIN. EMBEDMENT)
INSTALL AS PER MANUFACTURERS
RECOMMENDATIONS.
TWO BOLTS PER BRACKET LEG.
MIN. EDGE DISTANCE FROM TOP OF
CONCRETE WALL=4"



NOTES:

- STEEL
- ALL STRUCTURAL STEEL WORK INCLUDING DESIGN OF ALL COMPONENTS SHALL BE CARRIED OUT IN ACCORDANCE WITH CAN/CSA-S16-09.
 - HOLLOW STRUCTURAL SECTIONS TO CAN/CSA G40.20 GRADE 350, CLASS C OF H.
 - STRUCTURAL STEEL SHALL CONFORM TO CAN/CSA G40.21 GRADE 300W
 - ALL WORK SHALL CONFORM OBC 2012
 - CONTRACTOR TO VERIFY ALL DIMENSIONS ON SITE.
 - FOR ADDITIONAL INFORMATION, SEE ENGINEERING DWGS.

ALL HARDWARE TO BE HOT-DIP GALVANIZED
CONCRETE MIN. STRENGTH: 25 MPA



Estructura Inc.

TEL: (819) 916-4382
EMAIL: info@estruc.com

Client



CUT RITE CONSTRUCTION

Project Name

Drawn Title
DECK CONNECTION 4'-0"x8'-0"

Drawn By
DS

Project No.
N.T.S.

Date
DECEMBER 2019

File Name
Drawing No.

SK-1

Notes:
Contractor must verify all dimensions on the job and report any discrepancy to the architect before proceeding with the work.
All drawings and specifications are instruments of service and the property of the architect which must be returned at the completion of the work. Drawings are NOT to be scaled.

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/sideights/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	Unit number
804 Ninaatik Place	352
Municipality	Reg. Plan number / other description
Gloucester	4M-1618

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

C. Project Design Conditions	
Climatic Zone (SB-1):	Heating Equipment Efficiency
☒ Zone 1 (< 5000 degree days)	☒ ≥ 92% AFUE
☐ Zone 2 (≥ 5000 degree days)	☐ ≥ 84% < 92% AFUE
Ratio of Windows, Skylights & Glass (W, S & G) to Wall Area	
Area of walls = _____ m ² or 3450 _____ ft ²	W, S & G % = 12.5 _____
Area of W, S & G = _____ m ² or 431.6 _____ ft ²	Utilize window averaging: ☐ Yes ☒ No
Space Heating Fuel Source	
☒ Gas ☐ Propane ☐ Solid Fuel	
☐ Oil ☐ Electric ☐ Earth Energy	
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)	

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)	Permitted Substitution:
Airtightness test required (Refer to Design Guide Attached)	Permitted Substitution:
	Permitted Substitution:

Building Component		Minimum RSI / R values or Maximum U-Value ⁽¹⁾	Building Component	Efficiency Ratings
Thermal Insulation		Nominal	Effective	Windows & Doors
Ceiling with Attic Space		R60		Windows/Sliding Glass Doors
Ceiling without Attic Space		R31		Skylights/Glazed Roofs
Exposed Floor		R31		Mechanicals
Walls Above Grade		R22		Heating Equip.(AFUE)
Basement Walls			R21.12	HRV Efficiency (SRE% at 0°C)
Slab (all >600mm below grade)		--		DHW Heater (EF)
Slab (edge only ≤600mm below grade)		R10		DWHR (CSA B55.1 (min. 42% efficiency))
Slab (all ≤600mm below grade, or heated)		R10		Combined Heating System

(1) U value to be provided in either W/(m²•K) or Btu/(h•ft²•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	Signature
Catherine Buck	