BRIDGEN RESIDENCE

Kingsville, Ontario — for Brady Homes

B. COMPLIANCE OPTION	
☒ SB-12 PRESCRIPTIVE [SB-12 – 2.1.1.]	NOTE: SECTIONS CURRENTLY DEPICT SB-12 COMPLIANCE PACKAGE "A1" TABLE 3.1.1.2.A
☐ SB-12 PERFORMANCE* [SB-12 – 2.1.2.]	* ATTACH ENERGY PERFORMANCE CALCULATIONS USING AN APPROVED SOFTWARE
☐ ENERGY STAR* [SB-12 – 2.1.3.]	* ATTACH BOP FORM
☐ ENERGUIDE 80*	* HOUSE MUST BE EVALUATED NY NRCAN ADVISOR AND MEET A RATING OF 60

C. PROJECT DESIGN CONDITIONS			
CLIMATE ZONE (SB-1):	HEATING EQUIPMENT EFFICIENCY	SPACE HEATING FUEL SOURCE	
☒ ZONE 1 (< 5000 DEGREE DAYS)	☒ ≥ 92% AFUE	☒ GAS ☐ PROPANE ☐ SOLID FUEL	
☐ ZONE 2 (≥ 5000 DEGREE DAYS)	☐ ≥ 84% < 92% AFUE	☐ OIL ☐ ELECTRIC ☐ EARTH ENERGY	
WINDOWS+SKYLIGHTS+GLASS DOORS		OTHER BUILDING CONDITIONS	
AREA OF WALLS = 215 SQ.M.	W, S & G % = 11.9%	☐ ICF BASEMENT ☐ WALKOUT BASEMENT ☐ LOG/POST&BEAM	
AREA OF W, S & G = 25.7 SQ.M.		☐ ICF ABOVE GRADE ☐ SLAB ON GROUND ☒ AIR CONDITIONING	

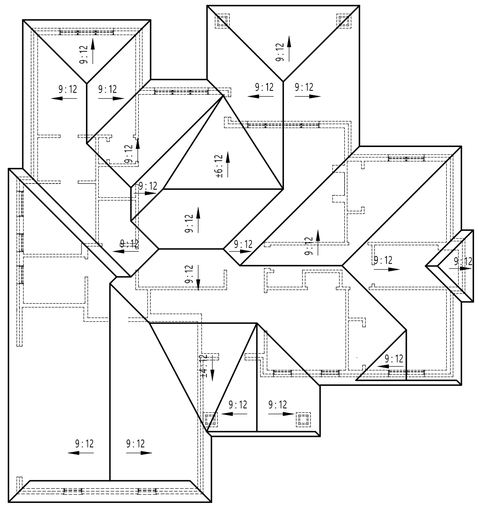
D. BUILDING SPECIFICATIONS (PROVIDES VALUES AND RATINGS OF THE ENERGY EFFICIENCY COMPONENTS PROPOSED, OR ATTACH ENERGY STAR BOP FORM)

BUILDING COMPONENT	RSI/ R VALUES	BUILDING COMPONENT	EFFICIENCY RATINGS
THERMAL INSULATION		WINDOWS & DOORS [1]	
CEILING WITH ATTIC SPACE	R60	WINDOWS/SLIDING GLASS DOORS	U-VALUE 0.28
CEILING WITHOUT ATTIC SPACE	R31	SKYLIGHTS	U-VALUE 0.49
EXPOSED FLOOR	R31	MECHANICALS	
WALLS ABOVE GRADE	R22	SPACE HEATING EQUIP. [2]	96% MIN.
BASEMENT WALLS	R20ci	HRV EFFICIENCY (%)	75%
SLAB (ALL > 600mm BELOW GRADE)	R20	DHW HEATER (EF)	0.8 E.F.
SLAB (EDGE ONLY ≤ 600mm BELOW GRADE)	R10	DWHR (CSA B55.1)-MIN. 42&% EFF.)) REQ'D # of SHOWERS 2	
SLAB (ALL ≤ 600mm BELOW GRADE, OR HEATED)	R12	NOTES: 1. PROVDE U-VALUE IN W/m²K, OR ER RATING	

NOTE: AS PER SB-12 R-VALUES ARE BASED ON MECH. DESIGNER ENVELOP. REQUIRED R-VALUES TO MEET MECH. DESIGNERS SB-12 COMPLIANCE SHALL SUPERCEDE ANY POSTED R-VALUES IN THE EVENT A POSTED R-VALUE IS INSUFFICIENT.

ROOFING NOTES:

1. ROOF VENTILATION PER O.B.C. 9.19.1.2
2. OFFSET ALL THRU-ROOF VENTS TO REAR PORTION OF ROOF.
3. FINAL ROOF TRUSS DESIGN BY CERTIFIED TRUSS MANUFACTURER. BUILDING CONTRACTOR TO BE NOTIFIED OF ANY CHANGES MADE FROM PROPOSED LAYOUT.
4. TRUSS SHOP DRAWINGS TO BE SUBMITTED TO DESIGNER FOR 'CONFORMANCE REVIEW'.
5. REFER TO ELEVATIONS FOR OVERHANG DIMENSIONS
6. PROVIDE 'ICE AND WATER SHIELD' AT ALL VALLEYS AND UP ROOF A MIN. OF 24" INTO HEATED SPACE.
7. PROVIDE GUTTERS AND DOWNSPOUTS FOR CONTROLLED DRAINAGE OF ROOF WATER.
8. WATER RUN-OFF IS TO BE CONTROLLED ON SITE AND NOT TO SHED ONTO ADJACENT PROPERTIES.



ROOF PLAN

SCALE: 1" = 10'

SITE PLAN

SCALE: 1" = 20'

SITE DESCRIPTION:
Mun. No. 204 Cameron Side Rd, Town of Kingsville Ontario

SITE NOTES:

1. EXISTING TREES TO REMAIN & TO BE PROTECTED WITH BARRIER. DO NOT STOCKPILE SOIL AGAINST OR AROUND TREES. AVOID COMPACTING SOIL AROUND ROOT AREA OF TREES.
2. THE BUILDING SHALL BE LOCATED OR THE BUILDING SITE GRADED SO THAT WATER WILL NOT ACCUMULATE AT OR NEAR THE BUILDING AND WILL NOT ADVERSELY AFFECT ADJACENT PROPERTIES. PER O.B.C. 9.14.6.1 SURFACE DRAINAGE
3. WATER SERVICE TO BE 1" DIA. AS PER O.B.C. 7.6.3.4

SITE INFORMATION:	UPDATED : JULY 30, 2018
ZONED	A-1
TOTAL AREA OF LOT:	109,457 SQFT
TOTAL FOOTPRINT OF MAIN STRUCTURE: (INCLUDING GARAGE AND COVER PORCHES)	3,172 SQFT
TOTAL LOT COVERAGE (MAX. 45%):	2.9%

GENERAL NOTES:

General:

Site plan generated is based upon municipal zoning information as obtained from the local building department where the project is to be constructed. Montemurri & Associates will not be responsible for determining other restrictions that are applied to the property (ie. easements, restrictive covanents etc.).

Montemurri & Associates is not responsible for obtaining any permits, approvals, or authorizations by any governing bodies for the construction of this project.

Upon receipt of the building permit, Montemurri & Associates is to be notified immediately, by the permit holder, of any issues or concerns the building department has noted on the permit set. If not notified, Montemurri & Associates is not responsible for any associated costs or damages.

Engineered shop drawings, for any "manufactured component" forming part of the building (ie. engineered roof trusses, engineered floor joist, timbers etc.), must be submitted to Montemurri & Associates for review and written approval. If engineered shop drawings are not submitted and approved, Montemurri & Associates is not responsible for any associated costs or damages.

Materials or construction procedures with are prohibited by law or shall cause a harmful effect to the natural environment or to the health of any person on the site during construction and/or during occupancy shall not be used in this project.

All trades shall conform with all the applicable federal, provincial & local codes, rules and regulations. In case of conflict, the most stringent requirement shall apply.

All construction methods and materials shall comply with the current building codes, ordinances and requirements as adopted by the local governing body where the building is to be located.

These notes are for general reference only; where conflicts exist between these notes and current codes the more stringent requirements shall prevail.

Do not scale drawings; use printed dimensions only. If any discrepancy occurs, notify the designer and/or owner for direction.

Soils:

A soils investigation by a qualified and licensed soils engineer must be provided at each building location prior to construction. In addition to other pertinent information, each report shall include the following:

a) Allowable soil bearing capacity and recommendations for improvement if required.

b) Water drainage and hydrostatic pressure analysis including recommendations for relief of any adverse conditions.

If there is a conflict between the soils investigation and information on the construction documents, the most stringent and conservative condition shall govern.

Sump Pit and Pump:

Provide sump pit with pump in basement if recommended by soil engineer.

Sump pit to be designed to resist removal by children, and pit covers shall be sealed to maintain continuity of air barrier system. Refer to O.B.C. 9.14.5.2 & 9.25.3.3.(16).

Foundation Notes:

Foundations and footings have been designed based on a minimum soil bearing capacity of 3,000 p.s.f.

Compressive strength of concrete after 28 days shall be at least 32 MPa for a garage and carport floors and all exterior flatwork. All concrete used for garage and carport floors and exterior steps shall have air entrainment of 5% to 8%. Concrete work and placement shall conform to the latest specification of C.R.S.I. and A.C.I.

Compressive strength of concrete after 28 days shall be at least 20 MPa for foundation walls.

Minimum footing depth shall be 3'-6" below finished grade.

Remove all fill and organic materials from areas to receive floor slabs. Prepare areas per soils engineer's recommendation.

All reinforcing bars, dowels, and ties shall conform to A.S.T.M A615 Grade 60. Reinforcing steel shall be continuous and shall have minimum 36 bar diameter lap, unless shown or noted. All reinforcing bars shall be deformed.

Provide temporary bracing as required to insure the stability of the structure until the permanent framing is in place.

All block shall be type N-1; mortar is to be type "N"; horizontal wire reinforcing shall be at 16" o.c. in all masonry walls.

Provide sill plate anchor bolts at 4'-0" o.c. (max.) and 12" from end of sill plates. Anchor bolts shall be ½" diameter (min.) and shall extend 15" (min.) into grouted concrete block or 8" (min.) into poured in place concrete footing or 8" into grouted concrete block plus 7" into poured in place concrete footing.

Provide 24" rigid insulation at all perimeter slab on grade conditions. See drawings for thickness.

Waterproof all brick, block and poured concrete walls at any below grade conditions unless directed otherwise by the soils engineer.

Provide 6 mil vapor barrier under all concrete slab on grade conditions and at all attached garage area concrete slabs.

All poured concrete walls to be backfilled with sandy type soil and be well braced until concrete is thoroughly cured and additional weight of the building is in place. Do not use frozen material for backfill.

Crack control joints shall be provided in foundation walls more than 70 feet long at intervals of not more than 35 feet and should be designed to resist moisture penetration as per section 9.15.4.6.

Loading Conditions:

	Live load	Dead load	Total
Floor habitable	40	15	55 p.s.f.
Floor with marble, stone or other hard finish material on grout bed.	40	35	75 p.s.f.
Wind load		25	25 p.s.f.
Roof pitched or flat	30	15	45 p.s.f.
Flat with ballust	30	25	55 p.s.f.

(Note): All floors were designed to a total load of 50 p.s.f. If a hard finish material in a grout bed is to be installed or other special loading conditions are anticipated consult designer for a structural analysis of the condition.

Trusses:

Floor truss manufacturer shall design and provide trusses to have a maximum deflection of 3/8" for spans greater than 16'-0" and 1/480 for spans under 16'-0".

Truss manufacturer shall be responsible for all truss designs including girders, hangers, bearing seats and anchors for trusses.

Truss framing shown on plans is for general reference and to indicate bearing locations. Manufacturer shall notify designer if additional bearing points and/or walls are needed prior to fabrication and erection.

All roof trussing shall be braced per manufacturer's recommendations or as required on drawings.

Framing & Materials:

Studs (bearing walls): Spruce-pine-fir, kiln dried, No. 2 or better.

Studs (non-bearing walls): Spruce-pine-fir, kiln dried, stud grade or better.

Joists, rafters, and headers: Fiber bending stress 1250 PSI elasticity Modulus 1,400,000 PSI or better.

Wall plates, non-structural blocking: Spruce-pine-fir, kiln dried, utility grade or bettered gra

Perimeter sill plates: Spruce-pine-fir, kiln dried, No. 2 or better. Set perimeter sill plates on sill sealer.

Furring: Spruce-pine-fir, kiln dried, No.3 or better.

Use metal joist hangers only where joists hang from beams, walls or other supports. No joist angles allowed.o

Floor Truss framing and TJI floor joist on drawings is designed for carpet, wood or ceramic tile floor finishes. If the floor material changes, notify the designer immediately for a structural redesign of the floor system to accommodate the dead load of the new floor material.

All micro lam beams are by Trus Joist MacMillan and are to be joined together per manufacturer printed specifications.

Provide 2 x 6 blocking at 16" o.c. between rim joist and header joist under all partitions parallel to floor framing direction. Provide solid bearing under all point load conditions to top of foundation wall on steel beam.to

Studs in all walls to be spaced 16" o.c. unless noted otherwise. All studs to be continuous from floor to upper floor or roof.

Bearing Walls:

Provide 2 x 4 solid blocking at 16" o.c. on 2 x 4 ledger boards between header joists (see drawings for size of member) under all in-line bearing partitions from floor above.

Provide solid blocking at all point load conditions continuous to solid bearing at headers or foundation.

Provide solid blocking at all bearing walls perpendicular to framing direction.

Wall framing:

Exterior wood framed walls over 9'-0" in height shall be of minimum 2 x 6 construction. All studs shall be continuous from floor to underside of floor or roof framing above.

All structural mullions to have minimum double stud construction continuous from floor to underside of floor or roof framing above. Window transom headers shall span between continuous studs with flush hanger brackets as required.

Provide continuous studs to underside of roof framing at all sloped ceiling conditions. (Balloon construction.)

Lower level (basement) exterior frame walls shall be minimum 2 x 6 framing at 16" o.c. with pressure treated base plate. Interior lower level bearing walls shall be 2 x 6 framing at 16" o.c.

Provide in the 'main bathroom' stud wall reinforcement for the future use of 'grab bars'

Wall Sheathing:

Structural grade for lateral loading. When non-structural sheathing is used provide let-in diagonal wind bracing or other type of bracing at all exterior corners of structure.

Roofing:

Asphalt shingles shall not be installed on roof slopes below two units vertical in 12 units horizontal (2:12). Double-layer underlayment shall be required on roof slopes below four units vertical in 12 units horizontal (4:12). Single-layer underlayment is required on all other roof slopes. Asphalt shingles shall be secured to the roof with not less than four fasteners per strip shingle, or not less than two fasteners per individual shingle. Shingle headlap shall not be less than 2 inches (51mm). Installation at valleys, use "cut valley" method.

Provide ventilation per O.B.C. 9.19.1.2. Unobstructed vent area not less than 1/300 of insulated ceiling. Where roof slope is slope less than 1 in 6 unobstructed vent area must not be less than 1/150 of insulated ceiling. Min. 25% required openings located at the top of bottom of space. Venting to be uniformly distrubuted on all sides of building.

Roof Penetrations:

All plumbing, mechanical vent stacks and furnace flues shall be offset to rear roof lines. Flashing at all penetrations as required.

Attic Access:

A readily-accessible opening not less than 22" x 28" shall be provided to any attic area having a clear height of over 30".

Hatch to be weather stripped and insulated.

Stairs:

All stairs shall conform to code for allowable riser height and tread depth. (Minimum 9 1/4" treads and maximum 7 7/8" risers in single family dwellings.)

Handrails shall be provided on at least one side of stairways of two (2) risers or more having a width of less than 44". Provide additional handrails as required by code on wider stairways.

Handrail to have a diameter size of 1 ¼" min, 2" max.

All handrails shall be located at a height of 34" min. and 38" max. above nose of tread. The size and shape of handrails shall conform to current code requirements.

Guard rail:

Balusters shall be spaced so that a sphere with a diameter of 4 inches cannot pass through the opening.

Top of railings shall be a minimum of 42" high above finished floor or nose of stair tread. The space below a guard rail shall be constructed such that a sphere with a diameter of 6 inches shall not be able to pass through any opening.

Doors:

All doors shall be 6' - 8" high unless noted otherwise.

Doors between house and garage to be solid core fire rated steel door with automatic closer and weatherstripping.

All exterior swing type doors to have a dead-bolt locking mechanism.

Windows and Glazing:

A minimum of one (1) window in each sleeping area shall meet emergency egress requirements. Window contractor shall provide egress hardware necessary to allow windows to meet applicable egress requirements.

Provide flashing at all window head, jamb, and sill conditions.

Fixed glass sizes shown are for reference only. Glazing contractor shall field measure all rough openings for fixed glass prior to fabrication.

Operating sash are shown for basic sizing only. Final size for rough opening and glazing shall be per selected window manufacturer's standards.

Provide the appropriate safety glass (in accordance with all applicable building codes) for all hazardous locations listed below:

a) Glazing in ingress and egress doors except wired glass in required fire doors and jalousies.
b) Glazing in fixed sliding panels of sliding type doors (patio and mall type).
c) Glazing in storm doors.
d) Glazing in all unframed swinging doors.
e) Glazing in shower and bathtub doors and enclosures.
f) Glazing, operable or inoperable, adjacent to a door in all buildings and within the same plane as the door whose nearest vertical edge is within twelve (12) inches of the door in a closed position and whose bottom edge is less than sixty (60) inches above the floor or walking surface.
g) Glazing in fixed panels having a glazed area in excess of nine (9) square feet with lowest edge less than eighteen (18) inches above the finished floor or walking surface within thirty-six (36) inches of such glazing. In lieu of safety glazing such glazed panels may be protected with a horizontal member not less than one and one half (1 ½) inches in width when located between twenty-four (24) and thirty-six (36) inches above the walking surfaces.

Insulation:

Insulation requirements are to meet or exceed those for a Zone 1 Compliance Package for Space Heating with AFUE = 92%.

Thermal batt and blanket insulation shall have a kraft faced vapor barrier.

Insulation shall be installed in such a manner as to allow free air flow from the soffit to the roof space.

Ventilation of concealed roof spaces shall be maintained.

Gypsum Board:

Garage shall be completely separated from the residence and its attic area by means of ½" gypsum board applied to the garage side.

Smoke / Carbon Monoxide Detectors:

Each sleeping area shall be provided with a minimum of one (1) smoke detector (local fire department approved and Underwriter's Laboratories listed and labeled) installed adjacent to the sleeping area. The smoke detector shall be installed in accordance with all applicable codes. Where more than one (1) detector is required to be installed within an individual dwelling unit, the detectors shall be wired in such a manner that the actuation of one (1) alarm will actuate all the alarms in the individual unit. At least one alarm shall be provided at each floor.

Plumbing:

All hose bibbs to have back-flow prevention.

INSULATION SCHEDULE (Per O.B.C. SB-12 2017)	
Zone	1
Compliance Package	A1
Walls above grade	R-22
Walls below grade	R-20ci
Ceilings with attic	R-60
Ceilings with no attic	R-31
Exposed floor	R-31

MONTEMURRI RESIDENTIAL DESIGN
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Project

Bridgen Residence
Kingsville, Ontario

Project No.

157-17

Note:
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Drawn By

LM (BCIN: 31501)

Issued:

Montemurri & Associates
Company BCIN : #33339
July 30, 2018

LICENSED DESIGNER
LINO MONTEMURRI #31501
ONTARIO

only valid with authorized signature
from Montemurri & Associates

Date

PERMIT : JULY 30, 2018

Sheet No.

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