

# Mackitecture Construction Notes Part 2 (MCN2) General

All drawings are the property of the Designer. The Designer retains copyright in these documents which may not be used for any other project without the written permission of the Designer.
All work shall conform to the Ontario Building Code, Ontario regulation 332/12 and all amending regulations, the Ontario Health and Safety Act Regulations for construction projects and all authorities having jurisdiction over the site.

over the site.

Any and all changes and/or deviations from these drawings are to be noted on a set of "As Built" drawings maintained by the General Contractor or Project Manager.

All dimensional information and grades shown on drawings must be verified on site and any discrepancies reported to the Designer prior to commencing work, Drawings must not be scaled.

No responsibility is hereby assumed for details and information not contained in these drawings.

All Specifications and materials proposed by engineers shall be used in place of specifications and materials identified in Mackitecture Construction Notes.

Construction Notes.

All manufactured items to be installed in accordance with manufacturers

printed instructions. Submit all installation instructions to owner upon

Thermal Insulation (9.25.2.)

All walls, ceilings and floors separating heated space from unheated space, the exterior air or the exterior soil shall be provided with thermal insulation in conformance with Section 12.2. to prevent moisture condensation on their room side during the winter and to ensure comfortable conditions for the occupants. (9.25.2.1.)

Insulation in contact with the ground shall be inert to the action of soil and water and be such that its insulative properties are not significantly reduced by moisture.

water and be such that its insulative properties are not significantly reduced by moisture.

MCN2 does not specify the required minimum thermal performance value of the building envelope component. The thermal performance values are specified in MCN1 item F. Energy Efficiency Design Summary (EEDS) table or on an attached EEDS report.

All foamed plastics shall be protected with 1/2" gypsum board interior finish per sentence 9.10.17.10.(1) of the OBC

Air Barrier Systems (9.25.3.)

Wall, ceiling and floor assemblies that separate conditioned spaces from unconditioned spaces or from the ground shall be constructed so as to include an air barrier system that will provide a continuous barrier to air leakage from the interior of the building into wall, floor, attic or roof spaces sufficient to prevent excessive moisture condensation in such spaces during the heating season, and from the exterior inward sufficient to prevent moisture condensation on the room side during the heating season.

Vapour Barriers (9.25.4.)
Thermally insulated wall, ceiling and floor assemblies shall be constructed with a vapour barrier sufficient to prevent condensation in the wall spaces, floor spaces or attic or roof spaces.

elling units shall comply with 9.7.5.3. Resistance to Forced

Windows in dwelling units shall comply with 9.7.5.3. Resistance to Forced Entry for Windows
A guard or a window with a maximum restricted opening width of 4" (100) is required where the top of the window sill is located less than 1'-7" (480) above fin. floor and the distance from the finished floor to the adjacent grade is greater than 5'-11" (1800). (9.8.8.1.)
Windows in exit stairways that extend to less than 2'-11" (900) shall be protected by guards in accordance with MCN1 33, or the window shall be non-operable and designed to withstand the specified loads for balcony guards as provided in 9.8.8.2

17. Notching and Drilling (9.23.5.)
17.1. Holes in floor, roof and ceiling members to be not larger than 1/4 the actual depth of member and not less than 50mm from edges. (9.23.5.1.)
17.2. Notches in Floor, roof and ceiling framing members are to be located on the top of the member within half the joist depth from the edge of bearing and is not deeper than one-third the joist depth. (9.23.5.1.)
17.3. Wall studs may be notched or dilled provided that no less than 2/3 the depth of the stud remains, if load bearing, and 40mm if non-load bearing, unless the weakened studs are suitably reinforced. (9.23.5.3.)
17.4. Roof truss members shall not be notched, drilled or weakened unless accommodated in the design. (9.23.5.4.)

guards as provided in 9.8.8.2 Egress Requirements for Basements with Bedrooms
At least 1 outside window in the basement shall provide the minimum egress requirements described in O.B.C. section (9.9.10. Egress from Bedrooms.). The egress window shall be openable from the inside without the use of fools, provide an individual, unobstructed open portion having a minimum area of 3.85 sq ft (0.35 sq m) with no dimensions less than15" (380mm) and maintains the required opening without the need for additional support. The 3'-3" (1.0m) minimum required sill height for egress windows do not apply to basement areas. When sliding windows are used, the minimum required dimension shall apply to the openable portion of the window. Where a window opens into a window well a 18. Sill Plates
 18.1. Minimum 2x4 (38x89) sill plate with 1/2" (12.7) Ø x anchor bolts embedded minimum 4" (100) into concrete space at maximum 7'-10" (2400) o/c. Provide continuous caulking or gasket between the plate and foundation. Use non-shrink grout to level the sill plate when required. used, the minimin required alimension strain apply to the operable portion of the window. Where a window opens into a window well, a clearance of not less than 21 5/8" (550) shall be provided in front of the window. Where the sash of an egress window swings towards the window well, the operation of the sash shall not reduce the clearance in a manner that would restrict escape in an emergency. Where a protective enclosure is installed over the window well, such enclosure shall be openable from the inside without the use of keys, tools or special knowledge of the opening mechanism. knowledge of the opening mechanism.

Minimum Thermal Resistance (SB-12, 3.1.1.10.): Except for doors in enclosed unheated vestibules and cold cellars, and except for glazed portions of doors, all doors that separate heated space from unheated space shall have a thermal resistance of not less than RSI 0.7 where a

storm door is not provided. All doors that separate heated space from unheated enclosed spaces

shall have an insulated core and be installed with weatherstripping. Entrance doors to dwelling units shall comply with 9.7.5.2. Resistance to

Smoke Alarms (9.10.19)

Smoke alarms conforming to ULC-S531 shall be installed shall be installed in conformance with CAN/ULC-S553.

One smoke alarm shall be installed on each storey, including basements. Any storey of a dwelling unit containing sleeping rooms a smoke alarm shall be installed in each sleeping room and in a location between the sleeping rooms and the remainder of the storey. If the sleeping rooms are served by a hallway, the smoke alarm shall be located in the hallway.

Smoke alarms shall be installed on or near the ceiling and shall have a visual signalling component conforming to 9.10.19.3.(3) and (4).

Smoke alarms shall be installed with permanent connections to an electrical circuit and have no disconnect switch between the overcurrent device and the smoke alarm. In case the regular power supply to the smoke alarm is interrupted is shall be provided with a battery as an alternative power source that can continue to provide power to the smoke alarm for a period of not less than 7 days in the normal condition, followed by 4 min of alarm. Smoke alarms shall be wired so that the activation of one alarm will cause all alarms within the dwelling unit to sound.

Carbon Monoxide Alarms (9.33.4.)
A carbon monoxide alarm shall be installed adjacent to each sleeping area in a dwelling unit. Carbon monoxide alarms shall be permanently connected to an electrical circuit and shall have no disconnect switch between the overcurrent device and the carbon monoxide alarm. The alarm shall be be wired so that its activation will activate all carbon monoxide alarms within the dwelling and be equipped with an alarm that is audible within bedrooms when the intervening doors are closed.

# **Bearing Capacity**

Concrete or unit masonry foundation walls and concrete footings not subject to surcharge shall bear on stable soils (firm clay) with an allowable bearing pressure of 75 kPa or greater for buildings of wood frame or masonry construction. (9.15.1.1.(1)(a)).

10. Excavation (9.12)
10.1. Every excavation shall be undertaken in such a manner to prevent damage to adjacent property, existing structures, utilities, roads and sidewalks at all stages of construction (9.12.1.4.(1)).
10.2. The topsoil and vegetable matter in all unexcavated areas under an exception of the construction (9.12.1.4.(1)).

10.2. The topsoil and vegetable matter in all unexcavated areas under a building shall be removed (9.12.1.1.(1)).
10.3. The boftom of every excavation shall be free of all organic material (9.12.1.1.(3)).
10.4. Excavations shall be kept free of standing water (9.12.1.2.(1)).
10.5. Material shall not be placed nor shall equipment be operated or placed in or adjacent to an excavation in a manner that may endanger the integrity of the excavation or its supports (9.12.14.(2)).
10.6. Excavations for foundations shall extend to undisturbed soil (9.12.2.1.)
10.7. The minimum depth of foundations below finished ground level shall be 4.0° (1.2m). (9.12.2.2.)

4'-0" (1.2m). (9.12.2.2.)

11. Drainage

11.1 100 (4") Ø drain tile or pipe shall be laid on undisturbed or well-compacted soil so that the top of the tile or pipe is below the bottom of the floor slab or the ground cover of the crawl space. Protect perforated drain pipes from sand and sediment clogging with a drain-sleeve. Cover the pipe with 150 (6") crushed stone cover (9.14.3.).

11.2. 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. (9.14.6.1.)

11.3. Every window well shall be drained to the footing level or other suitable location with a 4" (100) weeping tile c/w a filter cloth wrap and filled with crushed stone.

11.4. Where downspouts are provided and are not connected.

crushed stone. Where downspouts are provided and are not connected to a sewer, extensions shall be provided to carry rainwater away from the building in a manner that will prevent soil erosion. (9.26.18.2.)

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12. Poured Concrete Footings (9.15.3.)
12.1. Poured concrete footings shall rest on undisturbed soil, rock or compacted granular fill and have a minimum compressive strength of 15MPa.

15MPa.

Strip footings shall have a continuous shear key to provide lateral support of the wall above or 18" long 15M dowels at 3'-0" o/c max. to tie the strip footing to the foundation wall.

Where step footings are used the vertical rise between horizontal portions shall not exceed 24" and the horizontal distance between risers shall be not less than 24" mm. (9.15.3.9.)

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# 13. Poured Concrete Foundation Walls

13.1. 15MPa (2200 psi) poured conc. foundation wall on continuous concrete footing. The outside of the foundation shall be damproofed from the top of the footing to finished grade and brush coated from the top to 2" below grade. Provide an approved drainage layer on the outside of the foundation wall. Seal the drainage layer at the top. The top of the conc. footing shall be damproofed.
13.2. Recess the foundation wall at garage doors, person-doors and hydro services.

Concrete Floor Slab on Grade (9.16.): Minimum 4" (100) 32 MPa (4640psi) concrete slab w/ 5-8% air entrainment on 4" (100) coarse granular fill on

All lumber shall be spruce-pine-fir No. 1 & 2, and shall be identified by a grade stamp. (9.3.2.)

Wood framing members that are supported on concrete, in contact with the ground or fill shall be separated from the concrete by not less than 0.05 mm polyethylene film or Type S roll roofing. (9.23.2.3.)

All steel beams shall conform to OBC 9.23.4.3. unless noted atherwise. Steel beams shall have a minimum bearing length of 3 1/2" (90) (9.23.8.1.). Steel beams shall meet or exceed the requirements for 350 W steel in CSA G40.21-04.

19.3. Steel beams shall meet or exceed the requirements for 350 W steel in CSA G40.21-04.
19.4. All welding shall be performed by a Canadian Welding Bureau certified welder and conform to all applicable standards.
19.5. Provide sufficient lateral support for steel beams to prevent lateral torsional buckling. Sufficient lateral support examples:
19.5.1. Dropped steel beam: 19 mm x 38 mm wood strips in contact with top flange are nailed on both sides of the the beam to the bottom of the joist supported (9.23.4.3.(3))
19.5.2. Dropped steel beam: A 2x6 top plate w/ 3/8" thru-bolts c/w nuts and washers or Hilli X-U fasteners @ 24" o.c. staggered into the top flange & 2-3 1/4" nails from each joist into the top plate.
19.5.3. Flush steel beam: Solid blocking (2x lumber and plywood) bolted to the beam web with 1/2" dia. thru-bolts @ 16" o.c. staggered top and bottom and approved face-mount hangers for the joist to blocking connection

20.1. All steel columns shall conform to OBC 9.17.3. unless noted otherwise.
20.2. Steel pipe columns shall have an outside diameter of not less than 73 mm and a wall thickness of not less than 4.76 mm.
20.3. Steel pipe columns shall be fitted with not less than 100 mm by 100 mm by 6.35 mm thick steel plates at each end, and where the column supports a wooden beam, the top plate shall extend across the full width of the beam

Wood Columns

Columns shall be centrally located on a footing conforming to OBC 9.15.

Columns shall be securely fastened to the supported member to reduce the likelihood of lateral differential movement between the column and the supported member. columns shall be laterally supported directly or by connection to the supported members.

The width or diameter of a wood column shall be not less than the width of the supported member.

Columns shall be not less than 184 mm for round columns and 140 mm by 140 mm for rectangular columns

Wood columns shall be separated from concrete in contact with the ground by 0.05 mm polyethylene film or Type S roll roofing.

16. Fasteners (9.23.3.)
16.1. Nailing of framing shall conform to Table 9.23.3.4.
16.2. Fastening of sheathing and subflooring shall conform to Table 9.23.3.5.

compacted sub-grade or undisturbed soil. 15. General Wood Frame Construction fumes and shall be fitted with a self-closing device. Where membrane materials are used to provide the required air tightness in the air barrier system, all joints shall be sealed and structurally supported.

28.1. Stud Wall Reinforcement (9.5.2.3.). See "detail E" on construction sheet. 28.2. Refer to project wall sections and details.

# 28. Assemblies and Details

# 13.3. Foundation Reduction in Thickness for Floor Joists Where the top of a foundation wall is reduced in thickness to permit the installation of floor joists, the reduced section shall be not more than 350 mm high and not less than 90 mm thick. (9.15.4.7.(1)) 13.4. Foundation Reduction in Thickness for Masonry Where the top of a foundation wall is reduced in thickness to permit the installation of a masonry exterior facing, the reduced section shall be not less than 90 mm thick, and tied to the facing material with metal ties conforming to Sentence 9.20.9.4.(3) spaced not more than 200 mm o.c. vertically, and 900 mm o.c. horizontally. The space between wall and facing shall be filled with mortar. (9.15.4.7.(2)(3))

29. Floor Assemblies 29.1. Exposed Floor to Exterior: Provide 6 mil poly vapour barrier between floor sheathing and floor framing, insulation with approved minimum R value with an approved vented soffit. The vapour barrier can be omitted if the insulating material provides the minimum required vapour barrier.

30. Pre-engineered Systems
30.1. All pre-engineered systems (roof trusses, floor joists, etc.) shall be designed and sealed by a licensed Professional Engineer of Ontario. Provide layouts and sealed design sheets to Mackitecture and local building building division.

# Concrete Floor Slabs Basement Floor Slabs (9.16.): 80 (3") minimum 25 MPa (3600psi) concrete slab on 100 (4") coarse granular fill, or 20MPa (2900psi) conc. with dampproofing below slab. Provide 1/2" (12.7) impervious board for bond break at edge of slab. Where a basement slab is within 24" (610) of the exterior grade provide rigid insulation around the perimeter extending minimum 610 (24") below grade. For slab on grade conditions rigid insulation shall be applied to the underside of the entire slab. Garage Floor Slab (9.16.): 4" (100) 32MPa (4640psi) concrete slab with 5-8% air entrainment on optional 4" (100) coarse granular fill with compacted sub-base or compacted native fill. Slope to front @ minimum 1.5%. Concrete Floor Slab over Cold Room (9.39): For max. 8"-2" (2500) porch depth, 5" (127) 32 MPa (4640psi) conc. slab w/5-8% air entrainment. Reinf. with 10M bars @ 7 7/8" (200) o.c. each direction, w/ 1 1/4" (30) clear cover from bottom of slab to first layer of bars & second layer of bars laid directly on top of lower layer in opposite direction. The slab shall bear not less than 75 mm on the supporting foundation walls and be anchored to the walls with 600 mm x 600 mm 10M bent dowels spaced at not more than 600 mm o.c. Exposed slabs shall be sloped to effectively shed water away from the exterior wall. Concrete Floor Slab on Grade (9.16.): Minimum 4" (100) 32 MPa (4640psi) concrete slab w/5-8" air contrained in the concrete floor Slab on Grade (9.16.): Minimum 4" (100) 32 MPa (4640psi) concrete slab w/5-8" air contrained in the concrete floor Slab on Grade (9.16.): Minimum 4" (100) 32 MPa (4640psi) concrete slab w/5-8" air contrained in the concrete floor Slab on Grade (9.16.): Minimum 4" (100) 32 MPa (4640psi) concrete floor Slab on Grade (9.16.): Minimum 4" (100) 32 MPa (4640psi) concrete floor Slab on Grade (9.16.): Minimum 4" (100) 32 MPa (4640psi) concrete floor Slab on Grade (9.16.): Minimum 4" (100) 32 MPa (4640psi) concrete floor S

31. Roof Assemblies
31.1. Typical Roof and Overhang Construction: Minimum 210 lb (10.25 kg/m2) asphalt or fiberglass shingles on 3/8" plywood sheathing with "h" clips on approved wood trusses @ 24" (600) o.c. or conventional roof framing. Approved eaves protection to extend 36" (900) from edge of roof and min. 12" (305) beyond inner face of exterior wall, 2"x4" (38x89) fruss bracing @ 6"0" (1830) o.c. at bottom chord. Prefin. alum. eavestrough, fascia, RWL & vented soffit. Eavestrough to be 4" min. with RWL connected to storm sewers or to discharge onlo concrete splash pads as per municipal requirements. Townhouses to have 5" (127) min. eavestrough with elec. traced heater cable along eavestrough and down RWL.

31.2. Conventional Roof Framing: 2"x6" (38x140) rafters @ 16" (406) o.c., 2"x8" (38x184) ridge board. 2"x4" (38x89) collar fies at mid-span. Ceiling joists to be 2"x4" (38x89) @ 16" (406) o.c. for max. 9"3" (2819) span & 2"x6" (38x140) @ 16" (406) o.c., for max. span 14"-7" (4450). Rafters for built up roof over pre-engineered roof trusses and or conventional framing to be 2"x4" (38x89) @ 24" (610) o.c. unless otherwise specified.

31.3. Ice and Water Shield: Provide ice and water shield in the areas indicated. The ice and water shield shall be a self adhering and self sealing membrane. Side laps must be a minimum 3 1/2" (90) and end laps a minimum 6" (150) and extend up walls a minimum 12" (300).

31.4. Exposed Ceiling: Provide thermal insulation with 6 mil poly vapour barrier and 1/2" gypsum board finish.

31.5. Attic Access: 21 1/2" x 28 1/2" attic access hatch with weather stripping. Attic access hatch shall have a min. area of 0.32 m2 and no dim. less than 21 1/2" (545). Hatchways to the attic or roof space will be fitted with doors or covers and will be insulated with min. R20 (RSI 3.52) (SB-12 3.1.1.8.(1))

32. Stairs
32.1 Stair Width: Required exit stairs serving a house or an individual dwelling unit shall have a width of not less than 2'-10".
32.2. Height over stairs: The clear height over stairs shall be measured vertically, over the clear width of the stair, from a straight line tangent to the tread and landing nosings to the lowest point above, and not less than 6'-5" for stairs serving a single dwelling unit. (9.8.2.2.)
32.3 Maximum Height of Flights: The vertical height shall not exceed 12'-1 ½"

32.3. Maximum Height of Flights: The vertical height shall not exceed 12'-1 ½"
32.4. Rise for Rectangular Treads, Tapered Treads and Winders and Run for Rectangular Treads shall conform to Table 9.8.4.1.

# Table 9.8.4.1. Rise for All Steps Min. Run for Rectangular Treads Max. Min. 13 ½" (355) 10 ½" (255) no limit 11" (280) 7 ½" (200) 4 ½" (125) 7 ½" (180) 4 ½" (125)

32.5. The depth of a rectangular tread shall be not less than its run and not more than its run plus 1" (25).
32.6. Tapered treads shall have a run that is not less than 6" at the narrow end of the tread, and complies with the dimensions for rectangular treads specified in Table 9.8.4.1, when measured at a point 11 %" from the centre line of the inside handrail. Tapered treads in required exit stairs shall conform to the requirements in Article 3.4.6.9. The depth of a tapered tread shall be not less than its run at any point and not more than its run at any point and not more than its run or tread shall be not less than its run at any point and not more than its run a

tread shall be not less than its run at any point and not more than its run at any point plus 1".

32.6 Uniformity and Tolerances for Risers and Treads shall comply with articles 8.8.4.4. and 9.8.4.4A.

32.7. Winders shall comply with article 9.8.4.5.

32.8 Exterior and Garage Steps: For the required number of steps refer to siting and grading drawings. Exterior concrete stairs with more than 2 risers and 2 treads shall be provided with foundation as required by article 9.8.9.2. or shall be cantilevered as per subsection 9.8.10. Exterior wood steps shall not be in direct contact with the ground unless suitably treated with a wood preservative.

# 33. Handrails

For stairs or ramps serving a single dwelling unit, at least one required handrail shall be continuous throughout the length of the stair or ramp, except where interrupted by, doorways, landings or newel posts at changes in direction.

Handrails shall be terminated in a manner that will not obstruct pedestrian travel or create a hazard.

The height of handrails on stairs and ramps shall be measured vertically from the top of the handrail to, a straight line drawn tangent to the tread nosings of the stair served by the handrail, or the surface of the ramp, floor or landing served by the handrail.

or landing served by the handrail.

The height of handrails on stairs and ramps shall be not less than 34 1/8"

The height of handrails on stairs and ramps shall be not less than 34 1/8" (865) and not more than 42  $\frac{1}{8}$ " (1070). A clearance of not less than 50 mm shall be provided between a handrail and any surface behind it. All handrails shall be constructed so as to be continually graspable along their entire length with no obstruction on or above them to break a handhold, except where the handrail is interrupted by newels at changes in direction. Handrails and projections below handrails, including handrail supports and stair stringers, shall not project more than 4" (100) into the required width of a stair or ramp.

# beam. 20.4. Exterior steel columns susceptible to corrosion shall be treated on the outside surface with at least one coat of rust-inhibitive paint. 20.5. All steel columns shall be laterally supported top and bottom (e.g. by concrete slab on grade, 2-3/8" dia. bolts, or 2" of 1/4" fillet weld min.) Continue all columns down to foundation or full bearing on beams. Block 34. Guards

Guards
Guards are required where there is a difference in elevation of more than 23 5/8" (600) between the walking surface and the adjacent surface.
When an interior stair has more than two risers the sides of the stair and the landing or floor level around the stairwell shall be protected by a guard on each side that is not protected by a wall.
Doors in buildings of residential occupancy, where the finished floor on one side of the door is more than 23 5/8" (600) above the floor or other surface or ground level on the other side of the door, shall be protected by a guard in accordance with this Subsection, or a mechanism capable of controlling the free swinging or sliding of the door so as to limit any clear unobstructed opening to not more than 4" (100).
Guards are not required for windows when the top surface of the window sill is located more than 18 7/8" (480) above the finished floor on one side of the window, or the window is located in a room or space with the finished floor is located less than 5-10 7/8" (1800) above the floor or ground on the other side of the window.

In dwelling units, glazing installed over stairs, ramps and landings that extends to less than 35" (900) above the surface of the treads, ramp or landing shall be protected by guards or non-openable and designed to withstand the specified lateral loads for guards as provided in Afficle 4.1.5.14.

Guards shall be designed to resist the specified loads prescribed in Table 9.8.8.2. or constructed in accordance with the requirements in MAMALI

22.1. Minimum end bearing for joists shall be 1 1/2"
22.2. Where indicated provide 1"x3" at 6'-11" o.c. wood strapping unless a panel type ceiling finish is applied.
22.3. Where indicated provide 2"x2" cross bridging or solid blocking @ 6'-11" o.c.

4.1.5.14.
34.6. Guards shall be designed to resist the specified loads prescribed in Table 9.8.8.2. or constructed in accordance with the requirements in MMAH Supplementary Standard SB-7, "Guards for Housing and Small Buildings".
34.7. All guards within dwelling units shall be not less than 35 %," (900) high.
34.8. Exterior guards serving not more than one dwelling unit shall be not less than 35 %," (900) high where the walking surface served by the guard is not more than 5-10 %" (1800) above the finished ground level.
34.9. The height of guards shall be not less than 36 1/4" (920) for required exit stairs, and 42 1/8" (1070) around landings. (9.8.8.3.(5))
34.10. Openings through any required guard shall be of a size that will prevent the passage of a spherical object having a diameter of 4" (100 mm). (9.8.8.5.)
34.11 Guards shall be designed so that no member, attachment or opening

(9.8.8.5.)
34.11. Guards shall be designed so that no member, attachment or opening located between 6" and 35" (140 mm and 900 mm) above the floor or walking surface protected by the guard will facilitate climbing. (9.8.8.6.)
34.12. Glass in guards shall be safety glass of the laminated or tempered type conforming to CAN/CGSB-12.1-M, "Tempered or Laminated Safety Glass or wired glass conforming to CAN/CGSB-12.11-M, "Wired Safety Glass".

35. Ventilation
35.1. Laundry Drying Exhaust: A clothes dryer exhaust duct system shall conform

to Part 6. (9.32.1.1.(5), 6.2.3.8.(/)) **35.2. Mechanical Exhaust Fan for Natural Ventilation:** Where a room or space i not provided with natural ventilation, mechanical ventilation shall be provided to exhaust inside air from or to introduce outside air to that room or space at the rate of one half air change per hour if the room or space is mechanically cooled in summer, and one air change per hour if it is not [9.32.1.3.]. Exhaust systems shall discharge directly to the outdoors.

(6.2.3.8.)'
35.3. Furnace Venting: Direct vent furnace terminal min. 3'-0" (915) from a gas regulator. Minimum 12" (305) above finished grade, and all openings, exhaust vents and intake vents. HRV intake to be a min. of 6'-0" (1830) from all exhaust vents. Refer to Gas Utilization Code.
35.4. Cooking Appliance Exhaust Fan: Ductwork for cooking appliance exhaust fans shall, be of noncombustible, corrosion-resistant material and lead directly to the outdoors without connection to other exhaust fans or ducts Ductwork for cooking appliance exhaust fans shall be equipped with a grease filter at the intake. (9.32.3.10.(a))
35.5. Gas Fireplace Venting: Direct vent gas fireplace vent to be a min. 12" (305) from any opening and above fin. grade. Refer to Gas Utilization Code.

Code.

35.6. Roof Vents (Static Roof Vents): Provide static roof vent. The unobstructed vent area shall be not less than 1/300 of the insulated ceiling area. Roof vents shall be uniformly on exposite sides of the building, with not less that corresponding to care at the top of the space, and with not less than 25% of the required openings located at the bottom of the space. The control of the space of the required openings located at the bottom of the space.

Nov 14 2023 Morte DETAILS 14 - POURED CONCRETE STAIR

max.

22.4. Minimum subfloor thickness shall be 5/8" tongue-and-groove plywood or OSB 0-2 grade.

22.5. Double floor joists below non-load bearing walls or provide solid wood blocking @ 48" o.c.

solid in joist spaces, Typical.

19. Steel Beams

20. Steel Columns

21. Wood Columns

22. Floor Joists

23. Wall Studs (9.23.10.)

23.2. Non-bearing partitions shall be minimum 2x4 (38x89) @ 24" (610) o.c. 23.3. Wall plates shall be minimum 1 1/2" thick and not less then the width of the

23.4. A bottom wall plate shall be provided in all cases. The bottom plate in exterior walls shall not project more than one-third the plate width over the support. No fewer than two top plates shall be provided in loadbearing walls.

shall be fastened to the studs at mid-height to prevent sideways buckling.

# 24. Stud Posts

24.1. The width of the stud post shall be not less than the width of the girder or beam that it supports.
24.2. The number of studs in a wall directly below a girder truss or roof beam shall conform to Tables A-34 to A-37, provided, the studs are nailed together to form a post with not less than 76 mm nails spaced not more than 300 mm o.c.

25. Wood Lintels (9.23.12.)
25.1. All lintels shall have 1 jack stud and 1 king stud at ends UNO.
25.2. Spans and sizes of wood lintels shall conform to the spans shown in Tables A-12 and A-15 of the OBC. (9.23.12.3). Refer to MCN1 item D.

# 26. Steel Lintels

Masonry over openings shall be supported on corrosion resistant or prime painted steel lintels with a minimum of 150mm end bearing and shall bear on masonry, concrete or steel. (9.20.5.2.)
Steel angle lintels supporting masonry veneer above openings shall conform to Table 9.20.5.2.B. (9.20.5.2.(3)). Refer to MCN1 item D. for Steel Lintel Legend, Size and Span table.

# 27. Storage Garages

Where a storage garage is attached to or built into a building of residential occupancy, an air barrier system shall be installed between the garage and the remainder of the building to provide an effective barrier to gas and exhaust fumes, and every door between the garage and the remainder of the building shall be tight-fitting and weatherstripped to provide an effective barrier against the passage of gases and exhaust

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CONSTRUCTION NOTES (UNLESS OTHERWISE NOTED)
ALL CONSTRUCTION TO ADHERE TO THESE PLANS AND SPEC'S AND TO
CONFORM TO THE ONTARIO BUILDING CODE AND ALL OTHER APPLICABE CODES AND AUTHORITIES HAVING JURISDICTION. THESE REQUIREMENTS ARE TO BE TAKEN AS MINIMUM SPECIFICATIONS. ONT. REG. 332/12 - 2012 OBC.

# (\*SEE DBC 9.19.) ROOF CONSTRUCTION

NO. 210 (10.25kg/m2) ASHPHALT SHINGLES. 10mm (3/8") PLYWOOD SHEATHING WITH "IT" CLIPS. APPROVED WOOD TRUSSES @600mm 24"
o.c. MAX. APPROVED EAVE PROTECTION TO EXTEND 900mm (3"-0")
FROM EDGE OF ROOF AND MIN. 300mm (12") BEYOND INNER FACE OF EXTERIOR WALL, 38x89 (2"x4") TRUSS BRACING @ 1830mm (6"-0") o.c. AT BOTTOM CHORD. PREFIN. ALUM. EAVESTROUGH, FASCIA, RWL & VENTED SOFFIT. PROVIDE ICE & WATER SHIELD TO ALL ROOF / WALL SURFACES SUSCEPTIBLE TO DAMMING. ROOF SHEATHING TO BE FASTENED 150 (6") c.c. ALONG EDGES & INTERMEDIATE SUPPORTS WHEN TRUSSES SPACED GREATER THAN 406 (16"). ATTIC VENTILATION 1:300 OF INSULATED CEILING AREA WITH 50% AT EAVES.

# FRAME WALL CONSTRUCTION (2"x6")

2 SIDING, HARDIE BOARD, STUCCATO BOARD OR EQUAL AS PER ELEVATION. 19864 (1'83") VERTICAL WOOD FURRING, APPROVED SHEATHING PAPER, 7/16" O.S.B. EXTERIOR SHEATHING OR OBC COMPLIANT EQUIVALENT. 38X140 (2"X6") STUDS @ 400MM (16") O.C. W/APPROVED DIAGONAL WALL BRACING, RSI 3.87 (R22) INSULATION AND APPROVED VAPOUR BARRIER AND APPROVED CONT. AIR BARRIER, 13mm (1/2") INT. DRYWALL FINISH.

# ackslashBrick Veneer Construction (2"x6")

3 90mm (4") FACE BRICK 25mm (1") AIR SPACE, 22x180x0.76mm (7/8"x7"x0.03") GALV. METAL TIES @ 400mm (16") o.c. HORIZONTAL 600mm (24") o.c. VERTICAL. APPROVED SHEATHING PAPER, 7/16" O.S.B. EXTERIOR SHEATHING OR OBC COMPLIANT EQUIVALENT. 38x140 (2"x6") STUDS @ 400mm (16") o.c. W/APPROVED DIAGONAL WALL BRACING, RSI 3.87 (R22) INSUL. APPROVED VAPOUR BARRIER AND APPROVED CONT. AIR BARRIER, 13mm (1/2") INT. DRYWALL FINISH. PROVIDE WEEP HOLES @ 800mm (32") o.c. BOTTOM COURSE AND OVER OPENINGS.

FLASHING UP MIN. 150mm (6") BEHIND BUILDING PAPER.

# STUCCO WALL CONSTRUCTION (2"x6")

STUCCO CLADDING SYSTEM CONFIRMING TO OBC9,27.1.1.[2] & 9.28 THAT EMPLOY A MINIMUM 6mm (1/4") DRAINAGE CAVITY BEHIND THE CLADDING WITH POSITIVE DRAINAGE TO THE EXTERIOR AND APPLIED AS PER MANUFACTURERS SPECIFICATION ON 25mm (1") MINIMUM EXTRUDED OR EXPANDED RIGID INSULATION, APPROVED SHEATHING PAPER, 7/16" O.S.B. EXTERIOR SHEATHING OR OBC COMPLIANT EQUIVALENT. 38x140 (2"x6") STUDS @ 400mm (16") o.c. W/APPROVED DIAGONAL WALL BRACING, RSI 3.87 (R22) INSUL. APPROVED VAPOUR BARRIER AND APPROVED CONT. AIR BARRIER, 13mm (1/2") INT. DRYWALL FINISH. STUCCO TO BE MIN.200mm (8") ABOVE FINISH GRADE.

# INTERIOR STUD PARTITIONS

# (\*SEE OBG 9.23.10.&9.23.11.)

4

BEARING PARTITION 38x89 (2"x4") @ 400mm (16") o.c. FOR 2 STOREYS AND 300mm (12") o.c. FOR 3 STOREYS. NON-BEARING PARTITIONS 38x89 (2"x4") @ 600mm (24") o.c.. PROVIDE 38x89 (2"x4") BOTTOM PLATE AND 2/38x89 (2-2"x4") TOP PLATE. 13mm (1/2") INTERIOR DRYWALL BOTH SIDES OF STUD, PROVIDE 38x140 (2"x6") STUDS/PLATES WHERE NOTED.

# FOUNDATION WALL/FOOTINGS: 5

# (\*SEE OBC 9.15.3 & 9.15.4.)

MIN. 200mm (8") POURED CONC. FDTN. WALL 15MPa (2200psi) WITH BITUMENOUS DAMPROOFING AND DRAINAGE LAYER. MIN. 480x155 (19"x6") CONTIN. KEYED CONC. FTG. BRACE FOUNDATION WALL PRIOR TO BACKFILLING. ALL FOOTINGS SHALL REST ON NATURAL UNDISTURBED SOIL WITH MINIMUM BEARING CAPACITY OF 120kPg (17.4 psi) OR

# STRUDET INC.



(\* SEE OBC 9.14.3.)

WEEPING TILE 6 100mm (4") DIA. WEEPING TILE 150mm (6") CRUSHED STONE OVER AND AROUND WEEPING TILES.

# BASEMENT SLAB

(\*SEE DBC 9.16.-)

80mm (3") MIN. 25MPa (3600psi) CONC. SLAB ON 100mm (4") COARSE GRANULAR FILL, OR 15MPa (2200psi) CONC. WITH DAMPROOFING BELOW SLAB.

# WOOD SUBFLOORS (\*SEE OBC 9.23.14. & 9.30.2.)

19mm (3/4") T&G SUBFLOOR UNDER GROUND FLOOR FINISH FLOOR. 16mm (5/8") T&G SUBFLOOR UNDER SECOND FLOOR FINISH FLOOR. 16mm (5/8") PANEL-TYPE UNDERLAY FOR CERAMIC TILE APPLICATION. 6mm (1/4") PANEL-TYPE UNDERLAY UNDER RESILIENT & PARQUET

# ROOF INSULATION (\*SEE SB12 - 2.1.1.2.A & 2.1.1.7)

RSI 10.57 (R60) ROOF INSULATION AND APPROVED VAPOUR BARRIER, 16mm (5/8") INT. DRYWALL FINISH OR APPROVED EQUAL

# ALL STAIRS/EXTERIOR STAIRS (\*SEE OBC 9.8.-)

/MAX. KISE	=200	(/ //0)		
→ MIN. RUN	=255	(10 1/4")		
MIN. TREAD	=280	(11")		
MAX. NOSING	=25	(1")		
MIN. HEADROOM	=1950	(6'-5")		
RAIL @ LANDING	=900	(2'-11")		
RAIL @ STAIR	=865	(2'-10")	TO 965 (3'-2")	
MIN. STAIR WIDTH	=860	(2'-10")		
		, ,		

# FOR CURVED STAIRS MIN. AVG. RUN = 200 = 150 MIN. RUN

# RAILING (\*SEE DBC 9.8.8.) FINISHED RAILING ON PICKETS SPACED MAXIMUM 100mm (4") BETWEEN PICKETS. (\*SEE OBC 9.8.8.)

INTERIOR GUARDS: (2'-11") MIN. (3'-6") MIN.

# (\*SEE DBC 9.23.6 & 9.23.7.)

12 SILL PLATE (\*SEE DBC 9.23.6 & 9.23.7 38x89 (2"x4") SILL PLATE WITH 13mm (1/2") DIA. ANCHOR BOLTS 200mm (8") LONG, EMBEDDED MIN. 100mm (4") INTO CONC. @ 2400mm (7-10")
o.c. CAULKING OR 25 (1") MIN. MINERAL WOOL BETWEEN PLATE AND
TOP OF FDTN. WALL. USE MORTAR TO LEVEL SILL PLATE WHEN REQUIRED.

# BASEMENT INSULATION

FOUNDATION WALLS ENCLOSING HEATED SPACE SHALL BE INSULATED FROM THE UNDERSIDE OF THE SUBELOOR TO NOT MORE THAN 152mm (6") ABOVE THE FINISHED FLOOR OF THE BASEMENT AND NOT LESS THAN 50mm (2") TO THE SLAB.

FOUNDATION WALL INSULATION SHALL BE MINIMUM RSI, 3,52 (R20) BLANKET INSULATION, APPROVED VAPOUR BARRIER, DAMPROOFING W/BLDG, PAPER BETWEEN THE FDTN, AND INSUL.

# 14 BASEMENT BEARING STUD PARTITION

# (\*SEE OBC 9.23.10.)

38x89 (2"x4") STUDS @400mm (16") o.c. 38x89 (2"x4") SILL PLATE ON DAMPROOFING MATERIAL, 13mm (1/2") DIA. ANCHOR BOLTS 200mm (8") LONG, EMBEDDED MIN. 100mm (4") INTO CONC. @ 2400mm (7'-10") o.c. (4") HIGH CONC. CURB ON 305x155 (12"x6") CONC. FOOTING. ADD HORIZ. BLOCKING AT MID-HEIGHT IF WALL IS UNFINISHED.

## STEEL BASEMENT COLUMN (\* SEE OBC 9.17.3.)

90mm (3-1/2") DIA. x 4.78mm (.188) STL. COL. WITH 150x150x9.5mm (6"x6"x3/8") STL. TOP & BOTTOM PLATE.

(\* SEE OBC 9.17.3.)

STEEL COLUMN (\* SEE OBC 9.17.3. 90mm (3-1/2") DIA. x 4.78mm (.188) STL. COLUMN WITH 100x100x6.4mm (4"x4"x1/4") STEEL TOP & BOTTOM PLATE. FIELD WELD BOTTOM PLATE TO 250x100x12.5mm (10"x4"x1/2") BASE PLATE C/W 2-13mm (1/2") DIA, x 300mm (12") LONG x 50mm (2") HOOK ANCHORS.

# 16 NIB WALLS

(\* SEE OBC 9.23.8.)

(\*SEE OBC 12.3.)

# BEAM POCKET OR 200x200 (8"x8") POURED CONCRETE NIB WALLS. MINIMUM BEARING 90mm (3-1/2")

STEEL BEAM STRAPPING (\* SEE OBC 9.23.4.3.(3)(c)) 19x38 (1"x2") CONTINUOUS WOOD STRAPPING BOTH SIDES OF STEEL

# (\*SEE OBC 9.16.-) GARAGE SLAB

100mm (4") 32MPa (4640psi) CONC. SLAB WITH 5-8% AIR ENTRAINMENT ON OPT. 100 (4") COARSE GRANULAR FILL WITH COMPACTED SUB-BASE

# INTERIOR GARAGE WALLS & CEILING

(\*SEE OBC 9.10.9.16.)

13mm (1/2") GYPSUM BOARD ON WALL AND CEILING BETWEEN HOUSE AND GARAGE, RSI 3.87 (R22) IN WALLS, RSI 5.46 (R31) IN CEILING. TAPE AND SEAL ALL JOINTS GAS TIGHT.

# 20 GARAGE DOOR GASPROOFING

(\*SEE OBC 9.10.13.15.)

DOOR AND FRAME GASPROOFING. DOOR EQUIPPED WITH SELF CLOSING DEVICE AND WEATHER STRIPPING.

# EXTERIOR STEP

(\*SEE OBC 9.8.9.2, 9.8.9.3 & 9.8.10.)

PRECAST CONCRETE STEP OR WD. STEP WHERE NOT EXPOSED TO WEATHER MAX. RISE 200mm (7-7/8"): MINIMUM TREAD 250mm (9-1/2")

(\*SEE OBC 6.2.3.8.(7))

DRYER VENT (\*SEE DBC 6.2.3.8.(7)
CAPPED DRYER EXHAUST VENTED TO EXTERIOR. USE 1000mm (4") DIA. SMOOTH WALL VENT PIPE.

(\*SEE OBC 9.19.2.)

ATTIC ACCESS

ATTIC ACCESS HATCH 545x700 (22"x28") WITH WEATHERSTRIPPING. RSI 5.46 (R31) RIGID INSULATION BACKING.

# FIREPLACE CHIMNEYS

(\*DBC 9.21.-)

TOP OF FIREPLACE CHIMNEY SHALL BE 915mm (3-0") ABOVE THE HIGHEST POINT AT WHICH IT COMES IN CONTACT WITH THE ROOF AND 610mm (2'-0") ABOVE THE ROOF SURFACE WITHIN A HORIZ. DISTANCE OF 3050mm (10'-0") FROM THE CHIMNEY.

25 LINEN CLOSET
4 SHELVES MIN. 350mm (14") DEEP.

## MECHANICAL EXHAUST (26)

(\*SEE OBC 9.32.3.5, 9.32.3.10.) MECHANICAL EXHAUST FAN VENTED TO EXTERIOR

# STEEL BEARING PLATE FOR MASONRY WALLS

/280x280x16 (11"x11"x5/8") STL. PLATE FOR STL BEAMS AND 280x280x12 (11"x11"x1/2") STL. PLATE FOR WOOD BEAMS BEARING ON CONC. BLOCK PARTYWALL, ANCHORED W/ 2-19mm (3/4") x200mm (8") LONG GALV. ANCHORE WITHIN SOLID BLOCK COURSE. LEVEL WITH NON-SHRINK GROUT.

# 28 CLASS B VENT

U.L.C. RATED CLASS "B" VENT 610mm (2'-0") ABOVE THE POINT IN CONTACT WITH THE ROOF FOR SLOPES UP TO 9/12, REFER TO THE ONTARIO GAS UTILIZATION CODE.

# WOOD BASEMENT POST

(\*OBC 9.17.4.)

3-38x140 (3-2"x6") BUILT-UP POST ON METAL BASE SHOE ANCHORED TO CONC. WITH 12.7 (1/2") DIA. BOLT ON 406x406x203 (16"x16"x8") CONC.

(\*OBC 9.15.3.9.)

# SLAB ON GRADE

(\*SEE OBC 9.16.-)

100mm (4") 32MPa (4640psi) CONC. SLAB WITH 5-8% AIR ENTRAINMENT ON OPT. 100 (4") COARSE GRANULAR FILL WITH COMPACTED SUB-BASE OR COMPACTED NATIVE FILL. REINFORCED W/ 6x6-W2.9xW2.9 MESH PLACED NEAR MID-DEPTH OF SLAB.

# DIRECT VENT FURNACE •

32 DIRECT VENT I DINIGOL 

DIRECT VENT FURNACE TERMINAL MIN. 900mm (36") FROM A GAS REGULATOR, MIN 300mm (12") ABOVE FIN. GRADE, FROM ALL OPENINGS, EXHAUST & INTAKE VENTS. HRV INTAKE TO BE A MIN. OF 1830mm (6'-0") FROM ALL EXHAUST TERMINALS. REFER TO GAS UTILIZATION CODE. ALL AIR INTAKES SHALL BE LOCATED SO THAT THEY ARE SEPARATED FROM KITCHEN EXHAUST BY 3.0m IN COMPLIANCE WITH O.B.C. DIV.-B TABLE 6.2.3.12..

# DIRECT VENT GAS FIREPLACE

DIRECT VENT GAS FIREPLACE, VENT TO BE A MINIMUM 300mm (12") FROM ANY OPENING AND ABOVE FIN. GRADE. REFER TO GAS

# JOIST STRAPPING & BRIDGING (\*SEE OBC 23.9.4.) ALL FLOOR JOISTS TO BE BRIDGED WITH 38x38 (2"x2") CROSS BRACING OR SOLID BLOCKING @2100mm (6'-11") o.c. MAX. 19x64 (1"x3") @2100mm (6'-11") o.c. UNLESS A PANEL TYPE CEILING FINISH IS APPLIED.

# EXPOSED BUILDING FACE (\* SEE DBC 9.10.15.) EXTERIOR WALLS TO HAVE A FIRE RESISTANCE RATING OF NOT LESS THAN 45min. WHERE LIMITING DISTANCE IS LESS THAN 1.2M (3'-11") WHERE THE LIMITING DISTANCE IS LESS THAN 600mm (1'-11") THE EXPOSING FACE

SHALL BE CLAD IN NON-COMBUSTABLE MATERIAL.

# (\* SEE OBC 9.40.)

COLD CELLAR PORCH SLAB (\* SEE DBC 9.40.
FOR MAX. 2500mm (8'-2") PORCH DEPTH, 125mm (5") 32Mpa (4640 psi)
CONC. SLAB WITH 5-8% AIR ENTRAINMENT. REINF. WITH 10M BARS @200mm (8") o.c. EACH WAY IN BOTTOM THIRD OF SLAB, ANCHORED IN PERIMETER FDTN. WALLS W/ 610x610 (24"x24") 10M @600mm (24") o.c. DOWELS. SLOPE SLAB MIN. 1.0% FROM DOOR. SLAB TO HAVE A MIN. 75mm (3") BEARING ON FDTN. WALLS. PROVIDE (WL1) LINTELS OVER

# 37 FDTN. WALL REDUCTION IN THICKNESS

(\*SEE OBC 9.15.4.7.)

FDTN. WALL SHALL NOT BE REDUCED TO LESS THAN 90mm (3-1/2") THICK TO A MAX. DEPTH OF 660mm (26") FOR 8" FDTN. WALL. 10" FDTN. WALL WHEN REDUCTION IN THICNESS IS GREATER THAN 26". FDTN. WALL SHALL 18 TIED TO THE FACING MATERIAL WITH METAL TIES SPACED 200mm (8")o.c. VERTICALLY AND 900mm (36")o.c. HORIZONTALLY. FILL SPACE BETWEEN WALL AND FACING SOLID WITH MORTAR.

# 38 CONVENTIONAL ROOF FRAMING

(\*SEE OBC 9.23.4.2.(1))

FOR MAX. 2240mm (7'-4") SPAN, 38x89 (2"x4") RAFTERS @400mm (16") o.c... FOR MAX. 3530mm (11'-7") SPAN, 38x140 (2"x6") RAFTERS @400mm (16") o.c... RIDGE BOARD TO BE 51mm (2") DEEPER. 38x39 (2"x4") COLLAR TIES AT MIDSPANS. CEILING JOISTS TO BE 38x89 (2"x4") @400mm (16") o.c. FOR MAX. 2830mm (9'-3") SPAN & 38x140 (2"x6") @ 400 (16") o.c. FOR MAX. 4450mm (14'-7") SPAN. RAFTERS FOR BUILT-UP ROOF TO BE 38x89 (2"x4") @600mm (24") o.c. WITH A 38x89 (2"x4") CENTER POST TO THE TRUSS BELOW, LATERALLY BRACED @1800mm (6'-0") o.c.

# TWO STOREY VOLUME SPACES

FOR A MAXIMUM 5490mm (18-0") HEIGHT, PROVIDE 2-38x140 (2-2"x6") CONTINUOUS STUDS @300mm (12") o.c. FOR BRICK AND 400mm (16") o.c. FOR SIDING. PROVIDE SOLID WOOD BLOCKING BETWEEN STUDS @1220mm (4'-0") o.c. VERT, 7/16" EXT, PLYWOOD.

# EXPOSED FLOOR TO EXTERIOR (\*SB12 - 2.1.1.2.A) PROVIDE RSI 5.46 (R31) INSULATION, APPROVED VAPOUR BARRIER AND CONTINUOUS AIR BARRIER, FINISHED SOFFIT.

# PARTYWALLS

TYPICAL 1 HOUR RATED PARTYWALL. REFER TO DETAILS FOR TYPE AND SPECIFICATIONS.

EXTERIOR WALLS FOR WALK-OUT CONDITION
THE EXTERIOR BASEMENT STUD WALL TO BE 38x1 40mm (2"x6") STUDS
@400mm (16") o.c. MATCH FLOOR JOIST SPACING WHEN PARALEL WITH

# 43 SMOKE ALARM •

PROVIDE 1 PER FLOOR, NEAR THE STAIRS CONNECTING THE FLOOR LEVEL AND ALSO 1 IN EACH BEDROOM NEAR HALL DOOR, ALARMS TO BE CONNECTED TO AN ELECTRICAL CIRCUIT AND INTERCONNECTED TO ACTIVATE ALL ALARMS IF ONE SOUNDS. BATTERY BACK-UP REQUIRED. SMOKE ALARMS TO INCORPORATE VISUAL SIGNALLING COMPONENT

(\*OBC 9.10.19)

CARBON MONOXIDE ALARM • (\*OBC 9.33.4.)
WHERE A FUEL-BURNING APPLIANCE IS INSTALLED IN A DWELLING UNIT, A BARBON MONOXIDE DETECTOR CONFORMING TO CAN./CGA-6.19, CSA 6.19 OR UL2034 SHALL BE INSTALLED ADJACENT TO EACH SLEEPING AREA. CARBON MONOXIDE DETECTOR(S) SHALL BE PERMANENTLY WIRED SO THAT IT IS ACTIVATION WILL ACTIVATE ALL CARBON MONOXIDE DETECTORS AND BE EQUIPPED WITH AN ALARM THAT IS AUDIBLE WITHIN BEDROOMS WHEN THE INTERVENING DOORS ARE CLOSED

# SOIL GAS CONTROL

(\*OBC 9.13.4.) 45 PROVIDE CONSTRUCTION TO PREVENT LEAKAGE OF SOIL GAS INTO THE BUILDING AS REQUIRED.



# MHP 23034

Compliance Package A1

he undersigned has reviewed and takes responsibility for this design, as well as having the qualifications and requirements mandated by the Ontario Building Code (O.B.C.) to be a Designer.

# **Qualification Information**

Mackitecture

Jamie Mack Name **BCIN** 

Registration Information

103532



not to scale Greenpark 2023-07-18 22-012

**Construction Notes** 

# **<b>\***Greenpark

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# MHP 23034



3ECROOM WINDOW

(\*OBC 9.9.10.1.) \_ SEDROOM WINDOW ON A GIVEN FLOOR IS TO HAVE MIN NOBSTRUCTED GLAZED OPENABLE AREA WITH MIN. mm (1'-3")

GLASS AREA NOT MORE THAN 17% OF GROSS PERIPHERAL WALL AREA. MAXIMUM U-VALUE 0.28  $\,$ 

# (2) WINDOW GUARDS

(\*OBC 9.8.8.1(6))

A GUARD IS REQUIRED WHERE THE TOP OF THE WINDOW SILL IS LOCATED LESS THAN 480mm (1'-6") ABOVE FIN. FLOOR AND THE DISTANCE FROM THE FIN. FLOOR TO THE ADJACENT GRADE IS GREATER THAN 1800mm (5'-11")

# GENERAL:

# (1) MECHANICAL VENTILATION

MECHANICAL VENTILATION IS REQUIRED TO PROVIDE 0.3 AIR CHANGES PER HOUR AVERAGED OVER 24 HOURS. SEE MECHANICAL DRAWINGS.

# (2) OUTDOOR AIR INTAKE •

ALL OUTDOOR AIR INTAKES SHALL BE LOCATED SO THAT THEY ARE SEPARATED FROM SOURCES OF CONTAMINATION (EXHAUST VENTS) IN COMPLIANCE WITH O.B.C. DIV.-B 6.2.3.12. AND TABLE 6.2.3.12.

# (3) RAINFORCEMENT FOR GRAB BARS (\*OBC 9.5.2.3.) ●

RAINFORCEMENT OF STUD WALLS SHALL BE INSTALLED ADJACENT TO WATER CLOSETS AND SHOWER OR BATHTUB IN MAIN BATHROOM. REFER TO O.B.C. 9.5.2.3, 3.8.3.8.(3)(a), 3.8.3.8.(3)(c), 3.8.3.13.(2)(g) & 3.8.3.13.(4)(e). SEE DETAIL ON PAGE 11.

## LUMBER:

- 1.) ALL LUMBER SHALL BE SPRUCE-PINE-FIR No.1&2 GRADE, UNLESS NOTED
- 2.) LUMBER EXPOSED TO THE EXTERIOR TO BE SPRUCE-PINE-FIR No.1&2 GRADE PRESSURE TREATED OR CEDAR, UNLESS NOTED OTHERWISE.
- ALL BEAMS, GIRDER TRUSSES, AND METAL HANGER CONNECTIONS 3.) SUPPORTING ROOF FRAMING TO BE DESIGNED & CERTIFIED BY TRUSS
- LVL BEAMS SHALL BE 2.0E (Fb=2800psi MIN.). NAIL EACH PLY OF LVL
  4.) WITH 89mm (3-1/2") LONG COMMON WIRE NAILS @300mm (12") o.c.
  STAGGERED IN 2 ROWS FOR 184, 240, & 300mm (7-1/4",9-1/2",11-7/8") DEPTHS AND STAGGERED IN 3 ROWS FOR GREATER DEPTHS AND FOR 4 PLY MEMBERS ADD 1/2" (13mm) DIA. GALVANIZED BOLTS BOLTED AT MID-DEPTH OF BEAM @ 915mm (3'-0")o.c.

PROVIDE TOP MOUNT BEAM HANGERS FOR ALL LVL BEAM TO BEAM CONNECTIONS UNLESS NOTED OTHERWISE.

- 5.) PROVIDE METAL JOIST HANGERS FOR ALL JOISTS AND BULIT-UP WOOD MEMBERS INTERSECTING FLUSH BUILT-UP WOOD MEMBERS.
- 6.) WOOD FRAMING NOT TREATED WITH A WOOD PRESERVATIVE, IN CONTACT WITH CONCRETE, SHALL BE SEPARATED FROM THE CONC. BY AT LEAST 2mil. POLYETHYLENE FILM, No.50 (45lbs) ROLL ROOFING OR OTHER DAMPROOFING MATERIAL, EXCEPT WHERE THE WOOD MEMBER 7.) IS AT LEAST 150mm (6") ABOVE THE GROUND.

STRUCTURAL STEEL AND HOLLOW STRUCTURAL SECTIONS SHALL CONFORM TO CAN/CSA-G40-21 GRADE 350W.

REINFORCING STEEL SHALL CONFORM TO CSA-G30-18M GRADE 400R.

# REVISION:

ONT. REG. 332/12-2012 OBC AMENDMENT O. REG. 88/19 JAN. 01, 2020

# STABILITY OF NARROW (20'-25')

# & TALL (±30) Houses

BUILDER TO PROVIDE SUFFICIENT TEMPORARY BRACING TO RESIST WIND LOADING WHEN UNDER CONSTRUCTION, FURTHER

- 1.) REDUCE THE FOUNDATION WALL SILL PLATE ANCHOR BOLT SPACING FROM 2400mm o.c. (7'-10") TO 1220mm o.c. (4'-0") FOR STANDARD
- 2.) USE 9.5mm (3/8") THICK PLYWOOD OR WAFERBOARD FOR THE EXTERIOR WALL SHEATHING.
- 3.) TO STIFFEN THE STRUCTURE IN TRANSVERSE DIRECTION USE 9.5mm (3/8") THICK PLYWOOD NAILED TO THE INTERIOR PARTITIONS ON EACH FLOOR FOR A MINIMUM 2 INTERIOR PARTITION WALLS ON BOTH SIDES AND PERPENDICULAR TO THE LONG WALLS.

# BRICK VENEER LINTELS

WL1 = 3-1/2"x3-1/2"x1/4"L (90x90x6.0L) + 2-2"x8" SPR. No.2 WL2 = 4"x3-1/2"x5/16"L (100x90x8.0L) + 2-2"x8" SPR. No.2 WL2 = 4'x3-1/2'x5/16" (100x90x8.0L) + 2-2'x16" SPR. No.2
WL3 = 5'x3-1/2'x5/16" (150x90x10.0L) + 2-2'x10" SPR. No.2
WL4 = 6'x3-1/2'x3/8" (150x90x10.0L) + 2-2'x12" SPR. No.2
WL5 = 6'x4'x3/8" (150x100x10.0L) + 2-2'x12" SPR. No.2
WL6 = 5'x3-1/2'x5/16" (125x90x8.0L) + 2-2'x12" SPR. No.2
WL7 = 5'x3-1/2'x5/16" (125x90x8.0L) + 3-2'x10" SPR. No.2
WL8 = 5'x3-1/2'x5/16" (125x90x8.0L) + 3-2'x10" SPR. No.2 WL9 = 6"x4"x3/8"L (150x100x10.0L) + 3-2"x12" SPR. No.2

# WOOD LINTELS AND BEAMS

WB1 = 2-2"x8" SPR. No.2 (2-38x184 SPR. No.2) WB2 = 3-2"x8" SPR No 2 (3-38x184 SPR No 2) WB3 = 2-2"x10" SPR. No.2 (2-38x235 SPR. No.2) WB4 = 3-2"x10" SPR. No.2 (3-38x235 SPR. No.2) WB5 = 2-2"x12" SPR. No.2 (2-38x286 SPR. No.2) WB6 = 3-2"x12" SPR. No.2 (3-38x286 SPR. No.2) WB7 = 5-2"x12" SPR. No.2 (5-38x286 SPR. No.2) WB11 = 4-2"x10" SPR. No.2 (4-38x235 SPR. No.2) WB12= 4-2"x12" SPR. No.2 (4-38x286 SPR. No.2)

# LOOSE STEEL LINTELS

L1 = 3-1/2"x3-1/2"x1/4"L (90x90x6.0L) L2 = 4"x3-1/2"x5/16"L (100x90x8.0L) = 5"x3-1/2"x5/16"L (125x90x8.0L) = 6"x3-1/2"x3/8"L (150x90x10.0L)

= 6"x4"x3/8"L (150x100x10.0L)L6 = 7''x4''x3/8''L(175x100x10.0L)

# LAMINATED VENEER LUMBER (LVL) BEAMS

LAMINATED VENEER LUMI

LVL1A = 1-1 3/4" x 7 1/4" (1-45x184)

LVL1 = 2-1 3/4" x 7 1/4" (2-45x184)

LVL2 = 3-1 3/4" x 7 1/4" (4-45x184)

LVL3 = 4-1 3/4" x 7 1/4" (4-45x184)

LVL4A = 1-1 3/4" x 9 1/2" (1-45x240)

LVL5 = 3-1 3/4" x 9 1/2" (2-45x240)

LVL5A = 4-1 3/4" x 9 1/2" (4-45x240)

LVL6A = 1-1 3/4" x 11 7/8" (1-45x300)

LVL6 = 2-1 3/4" x 11 7/8" (2-45x300)

LVL7 = 3-1 3/4" x 11 7/8" (3-45x300)

LVL7 = 4-1 3/4" x 11 7/8" (3-45x300) LVL7 = 3-1 3/4" x 11 7/8" (4-45x300) LVL8 = 2-1 3/4" x 14" (2-45x356) LVL9 = 3-1 3/4" x 14" (3-45x356) LVL10 = 2-1 3/4" x 18" (2-45x456

# DOOR SCHEDULE

INSULATED ENTRANCE DOOR  $1a = 2'-8'' \times 6'-8''$ (815x2033 INSULATED FRONT DOORS = 2'-8" x 6'-8" (81.5x2033 WOOD & GLASS DOOR = 2'-8" x 6'-8 x 1-3/4" = 2'-8" x 6'-8" x 1-3/8" (815x2033x45 (815x2033x35 EXTERIOR SLAB DOOR INTERIOR SLAB DOOR INTERIOR SLAB DOOR = 2'-6" x 6'-8" x 1-3/8" (760x2033x35 = 2'-2" x 6'-8" x 1-3/8" 1660x2033x35 INTERIOR SLAB DOOR INTERIOR SLAB DOOR

LEGEND

 $\square$ 

DJ TJ TRIPLE JOIST GT

POINT LOAD

GIRDER TRUSS

SOLID WOOD BEARING. SOLID BEARING TO BE WIDE AT LEAST AS SUPPORTED MEMBER. MIN. 3

\_\_\_\_\_LOAD-BEARING WALL

TWO-STOREY WALL, SEE NOTE  $\sim$ 

SMOKE ALARM & CARBON

MONOXIDE ALARM. SEE NOTE



FLAT ARCH

FLOOR DRAIN

SMOKE ALARM. SEE NOTE



 $\langle 44 \rangle$ 

Compliance Package A1

he undersigned has reviewed and takes responsibility for this design, as well as having the qualifications and requirements mandated by the Ontario Building Code (O.B.C.) to be a Designer.

# **Qualification Information**

BCIN

Mackitecture



**General Notes** Greenpark not to scale 2023-04-28 21-018 **<b>Greenpark** 

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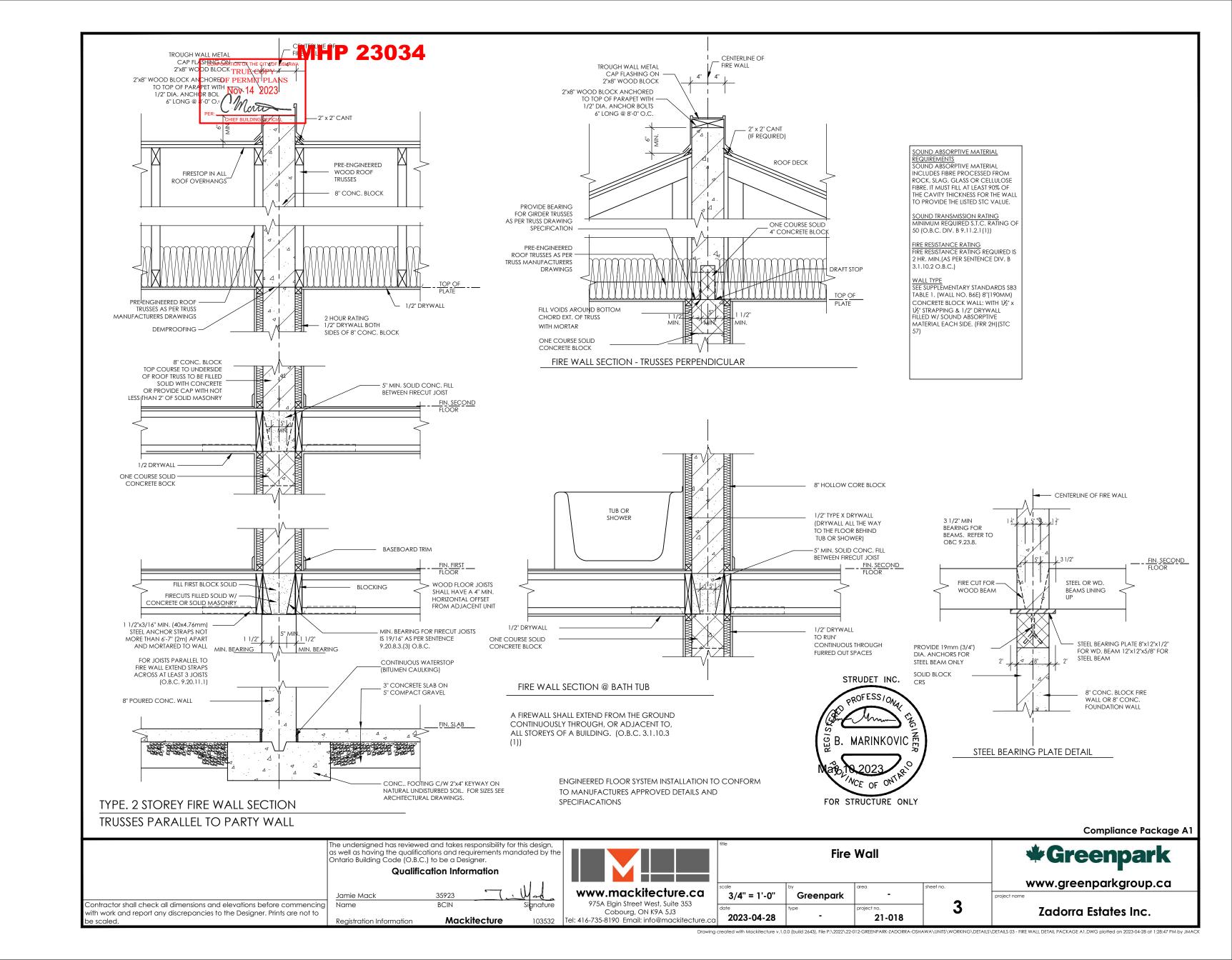
Zadorra Estates Inc.

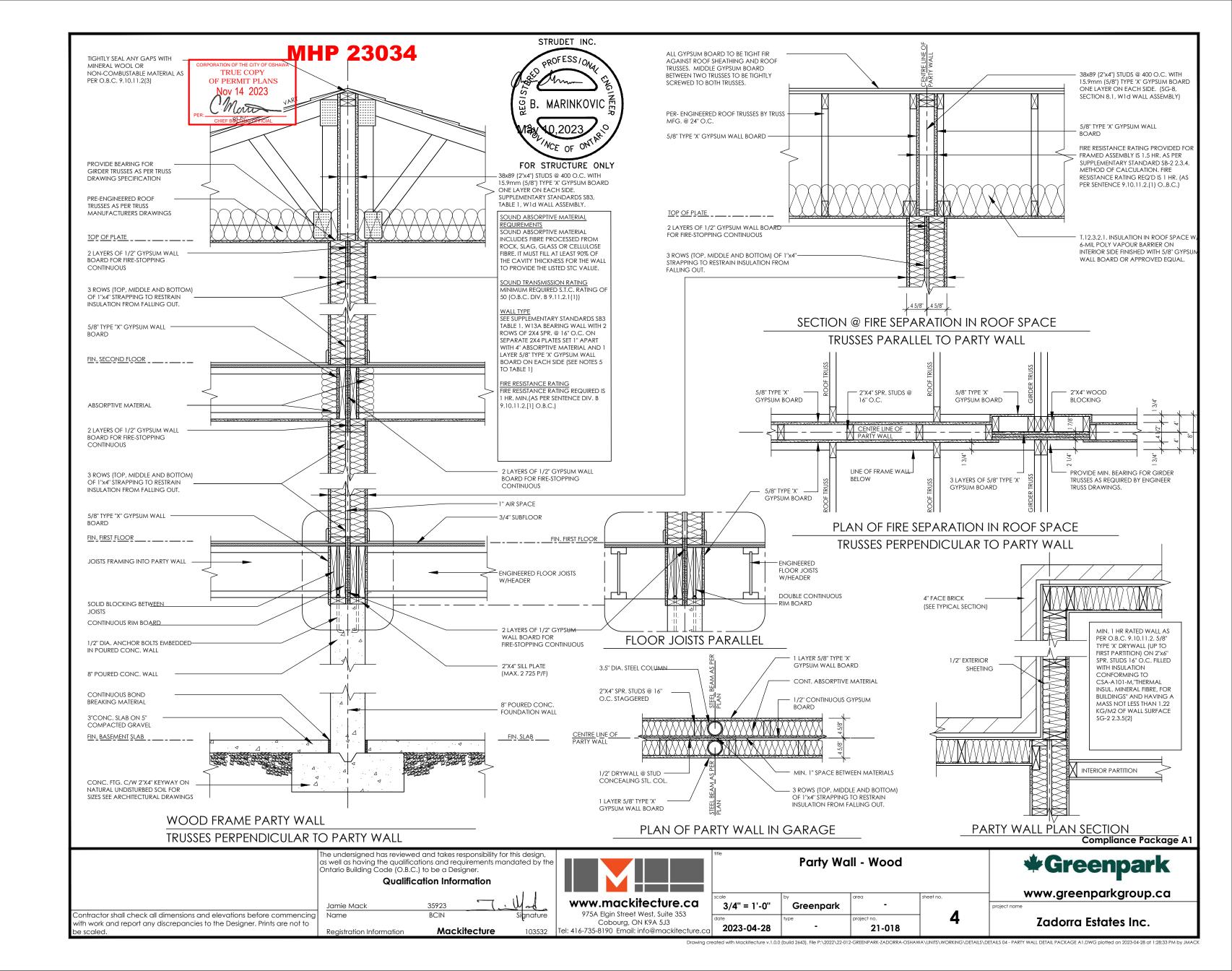
Contractor shall check all dimensions and elevations before commencing with work and report any discrepancies to the Designer. Prints are not to

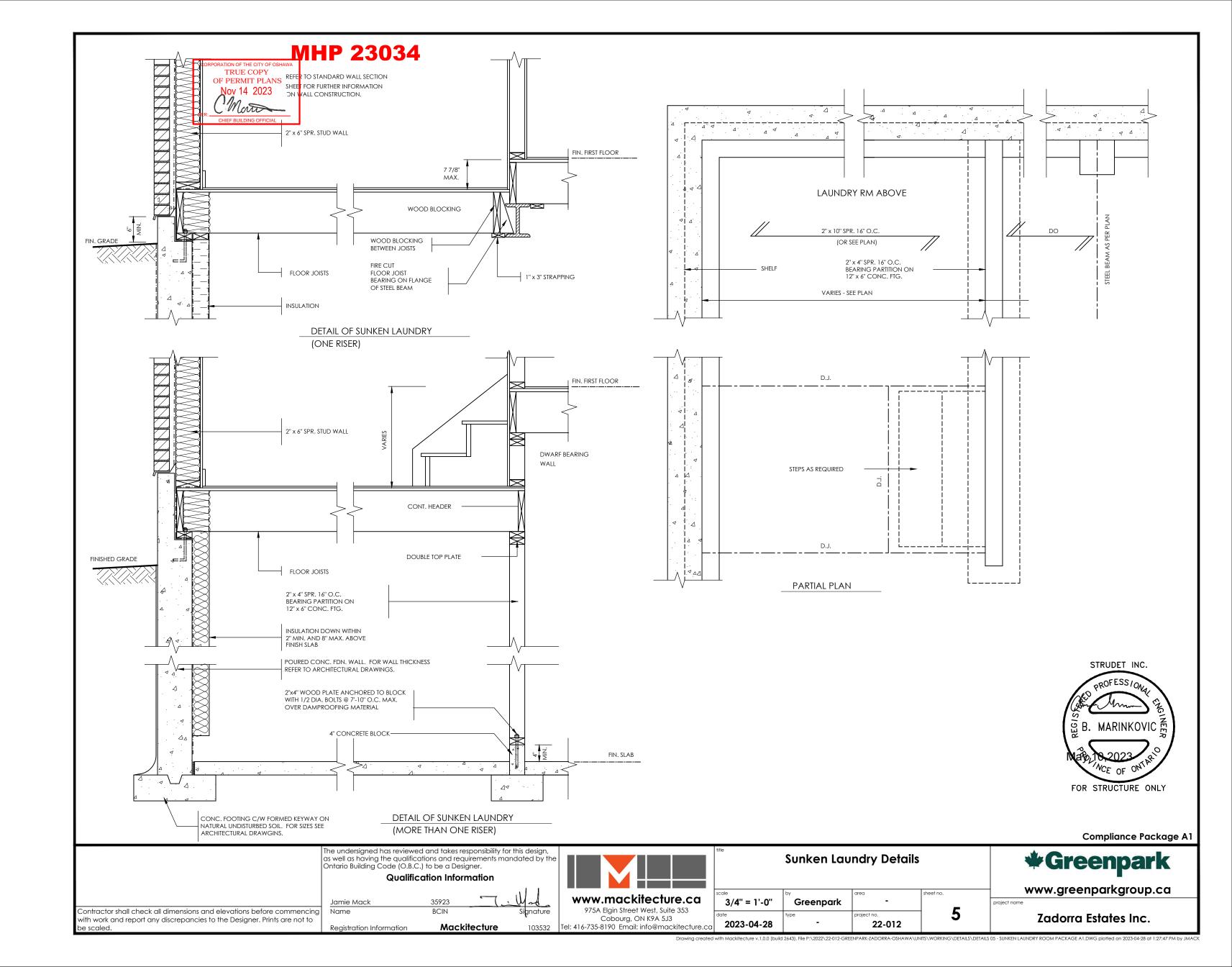
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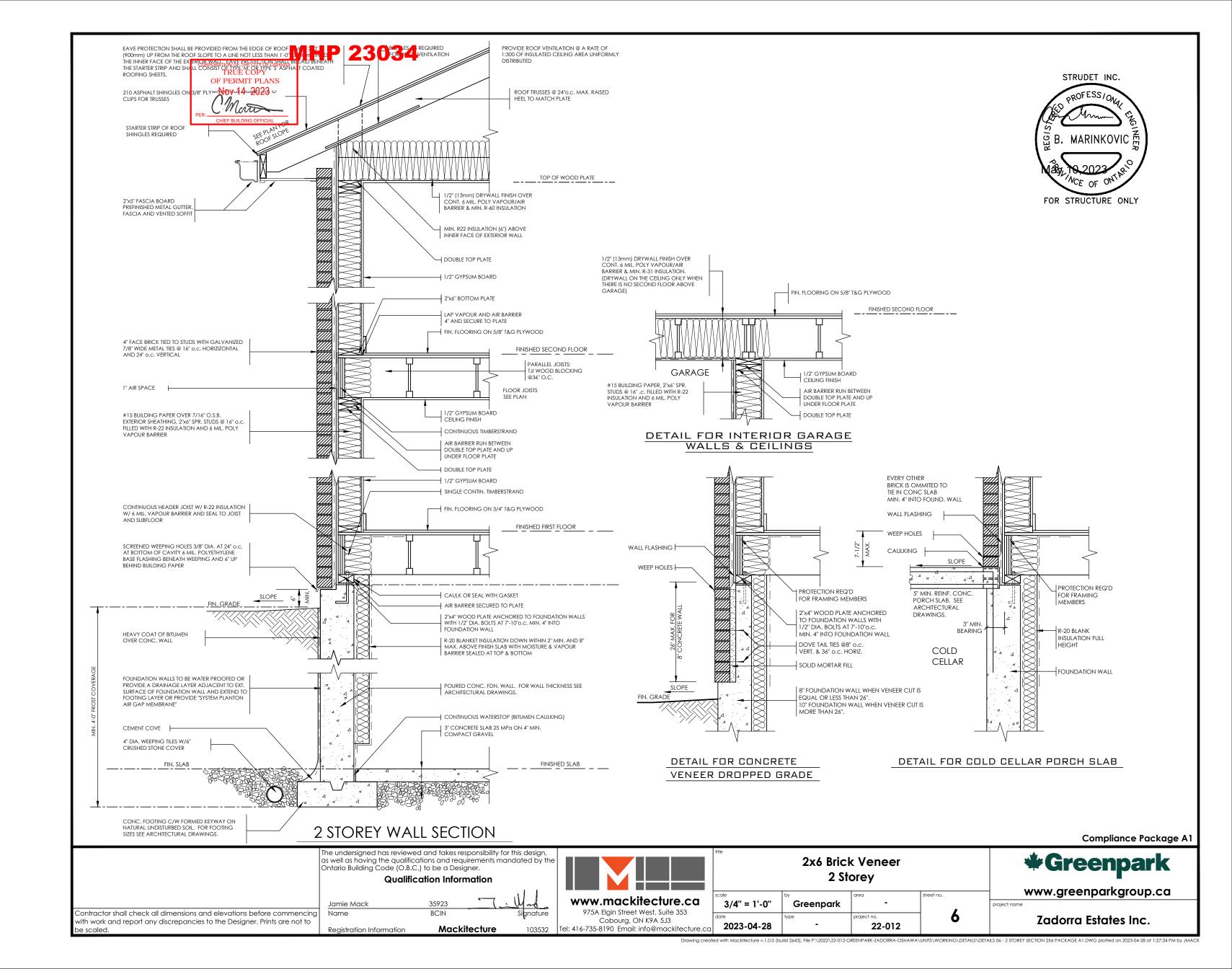
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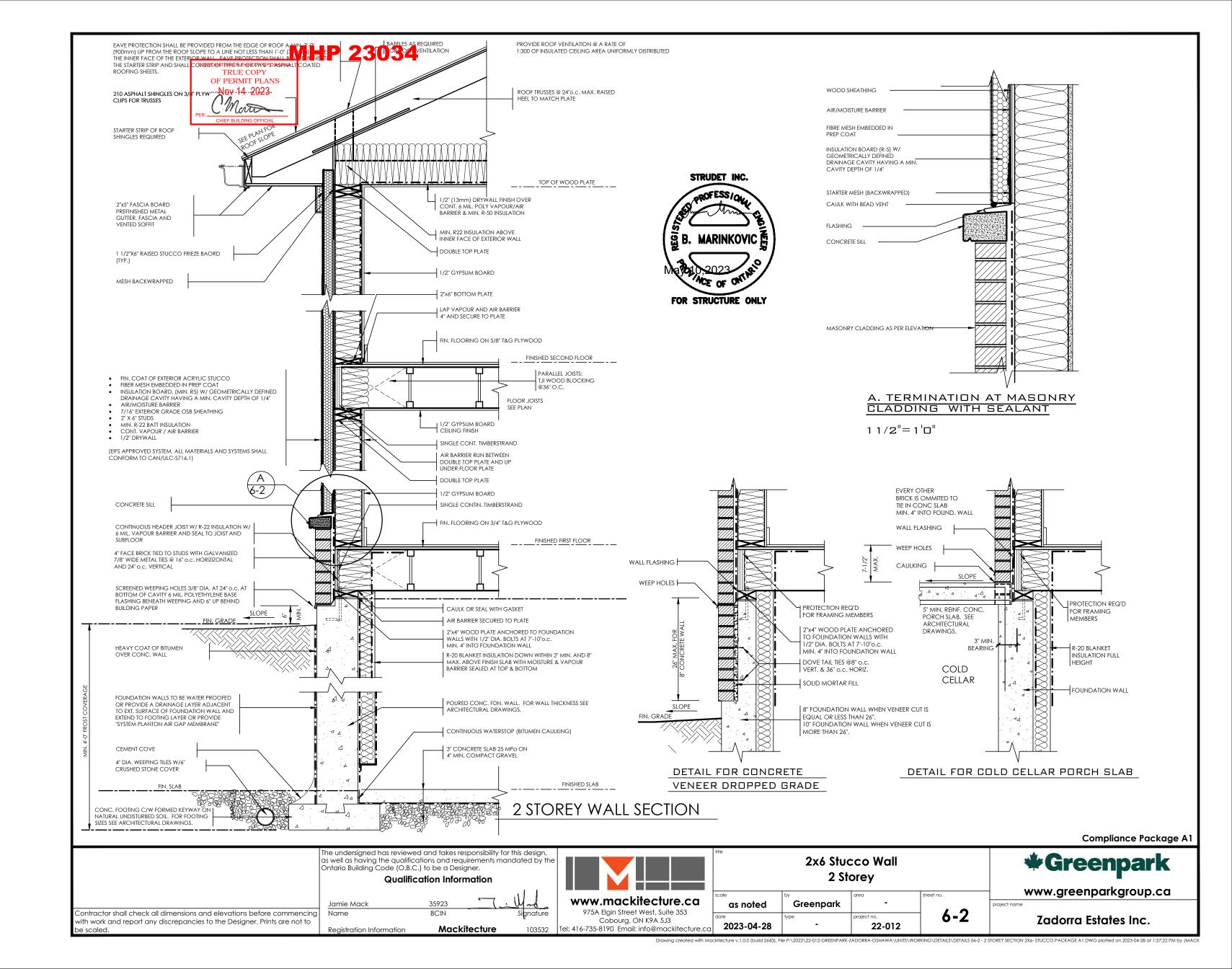
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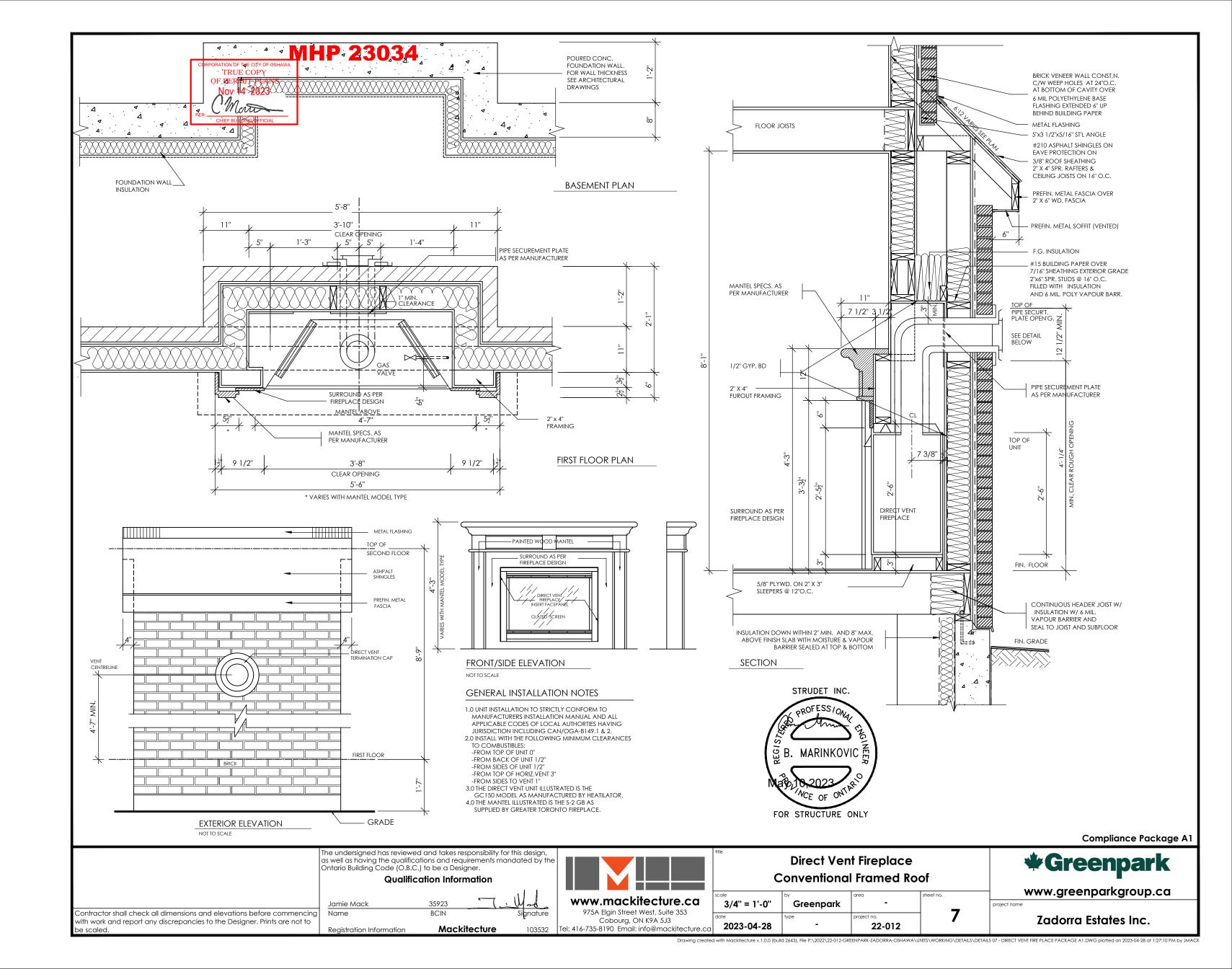


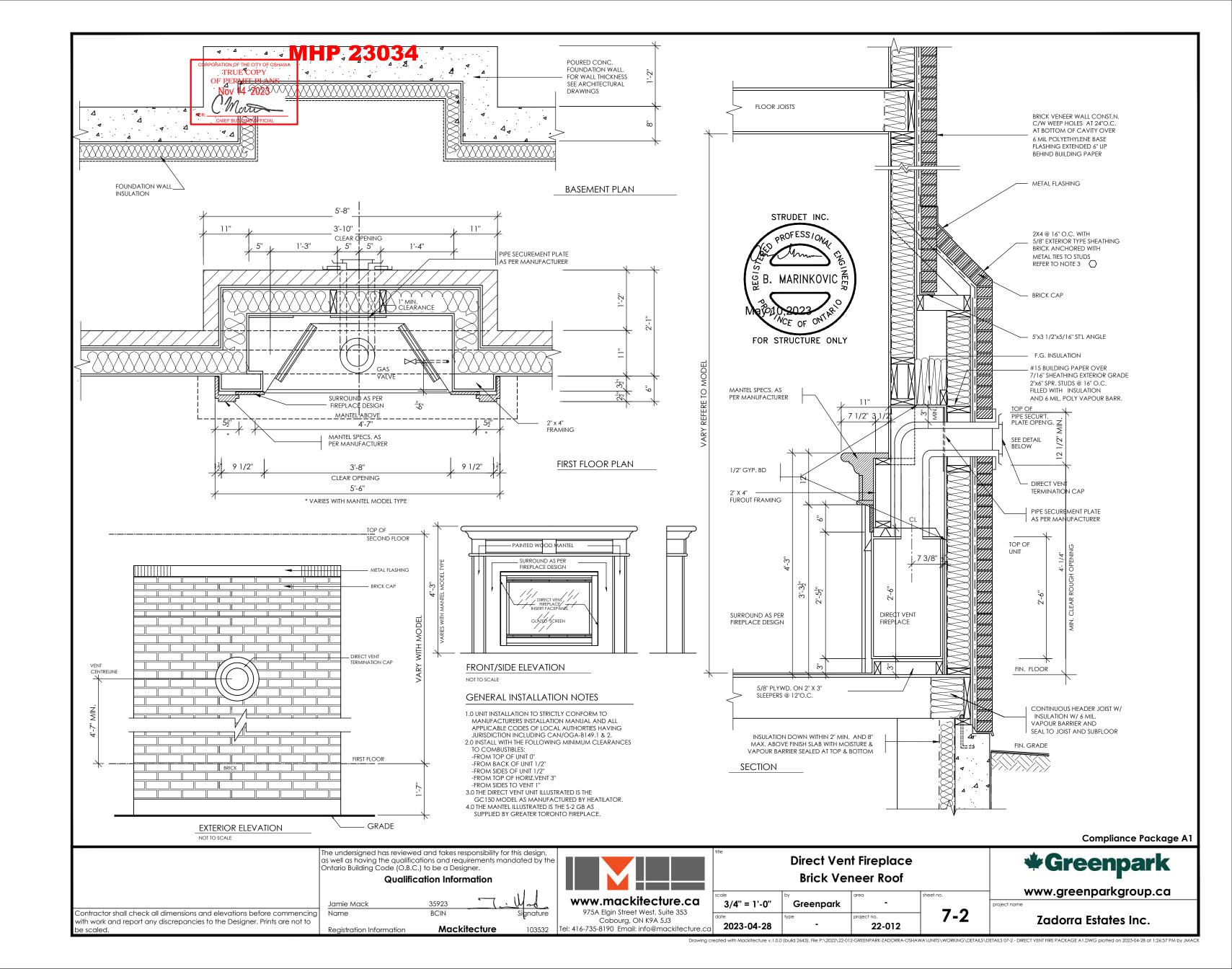


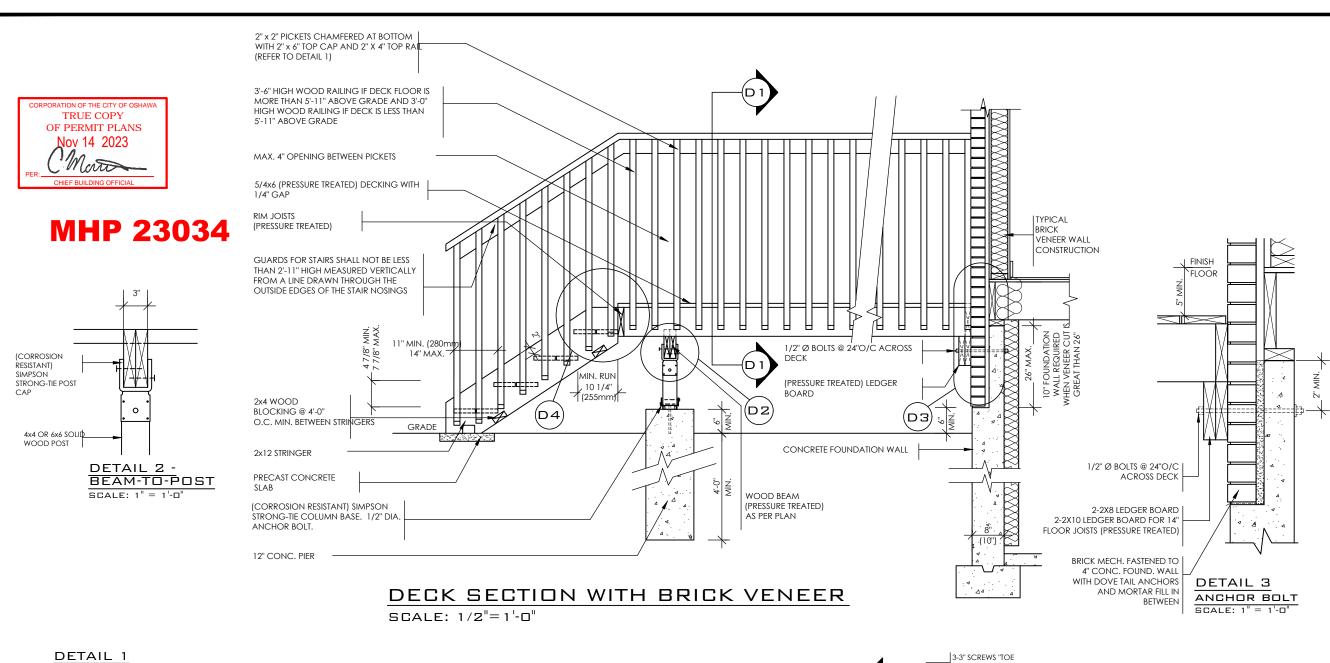




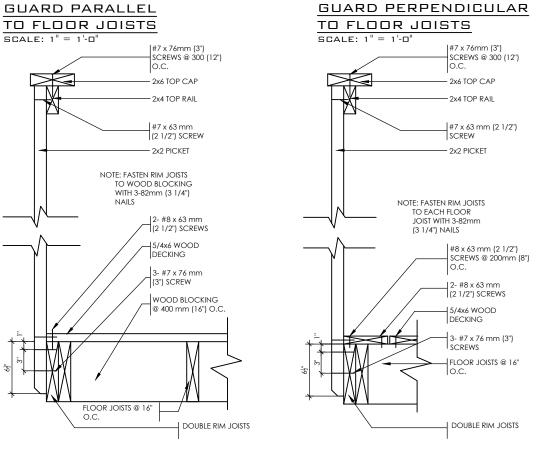


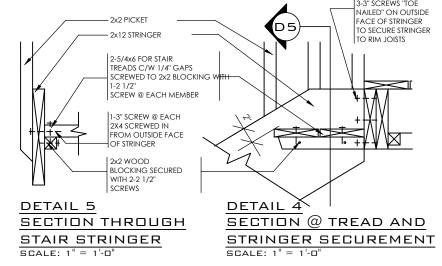












# **GENERAL NOTES**

- BRICK TO BE COMPRESSIVE STRENGTH OF 15mPa (2200 p.s.i.) MIN. UNITS TO BE LAID WITH FULL HEAD AND BED JOINTS.
- 2. MORTAR TO BE TYPE S WITH JOINT THICKNESS OF 10mm (3 /8") MIN. AND 20mm (3 /4") MAX.
- 3. ALL NAILS AND SCREWS TO BE GALVANIZED.
- WOOD FOR CANTILEVERED PICKETS PICKETS SHALL BE DOUGLAS FIR-LARCH, SPRUCE-PINE-FIR, OR HEM-FIR SPECIES.
- 5. THE DECK HAS BEEN DESIGNED TO SAFELY SUPPORT A SUPERIMPOSED LOAD OF 1.9kPa [40psf].
- 6. CONCRETE SHALL HAVE COMPRESSIVE STRENGTH OF 20MPa AT 28 DAYS AND 5-8% AIR ENTRAINED.
- 7. FOOTING TO BE PLACED ON UNDISTURBED SOIL WITH MIN. BEARING PRESSURE OF 150kPa [3130psf]



Compliance Package A1

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# **Qualification Information**

Contractor shall check all dimensions and elevations before commencing with work and report any discrepancies to the Designer. Prints are not to be scaled.

Jamie Mack
Name
BCIN
Signature
Registration Information
Mackitecture
103532



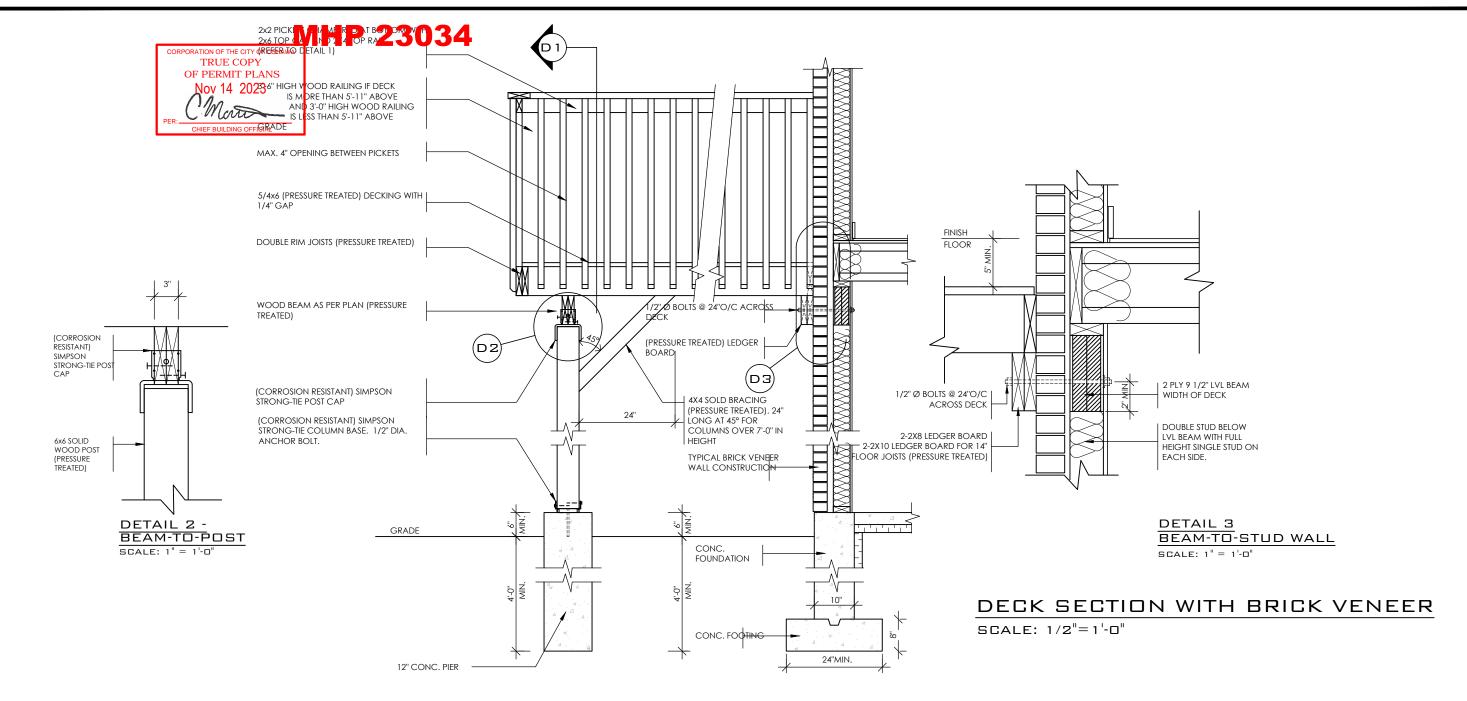
Wood Deck Details

scale
As shown
Greenpark
date
2023-07-18

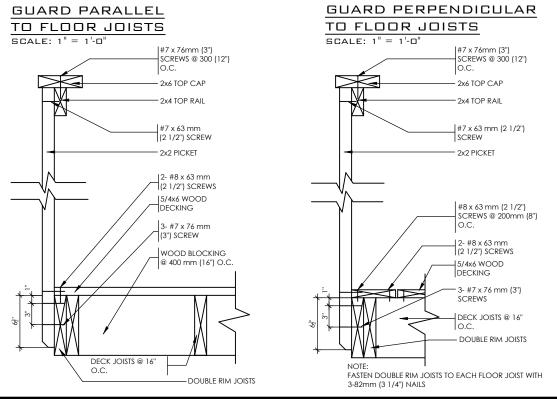
Type
Froject no.
22-012



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# CANTILEVERED PICKET SCREWED TO RIM JOIST AND DECK



Name

Contractor shall check all dimensions and elevations before commencing with work and report any discrepancies to the Designer. Prints are not to

# **GENERAL NOTES**

- THE DECK HAS BEEN DESIGNED TO SAFELY SUPPORT A SUPERIMPOSED LOAD OF 1.9kPa [40psf]
- ALL NAILS AND SCREWS TO BE GALVANIZED
- WOOD FOR CANTILEVERED PICKETS PICKETS SHALL BE DOUGLAS FIR-LARCH, SPRUCE-PINE-FIR, OR HEM-FIR SPECIES
- CONCRETE SHALL HAVE COMPRESSIVE STRENGTH OF 20MPa AT 28 DAYS AND 5-8% AIR ENTRAINED
- FOOTING TO BE PLACED ON UNDISTURBED SOIL WITH MIN, BEARING PRESSURE OF 1.50kPa (3.130psf)



Compliance Package A1

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# **Qualification Information BCIN**

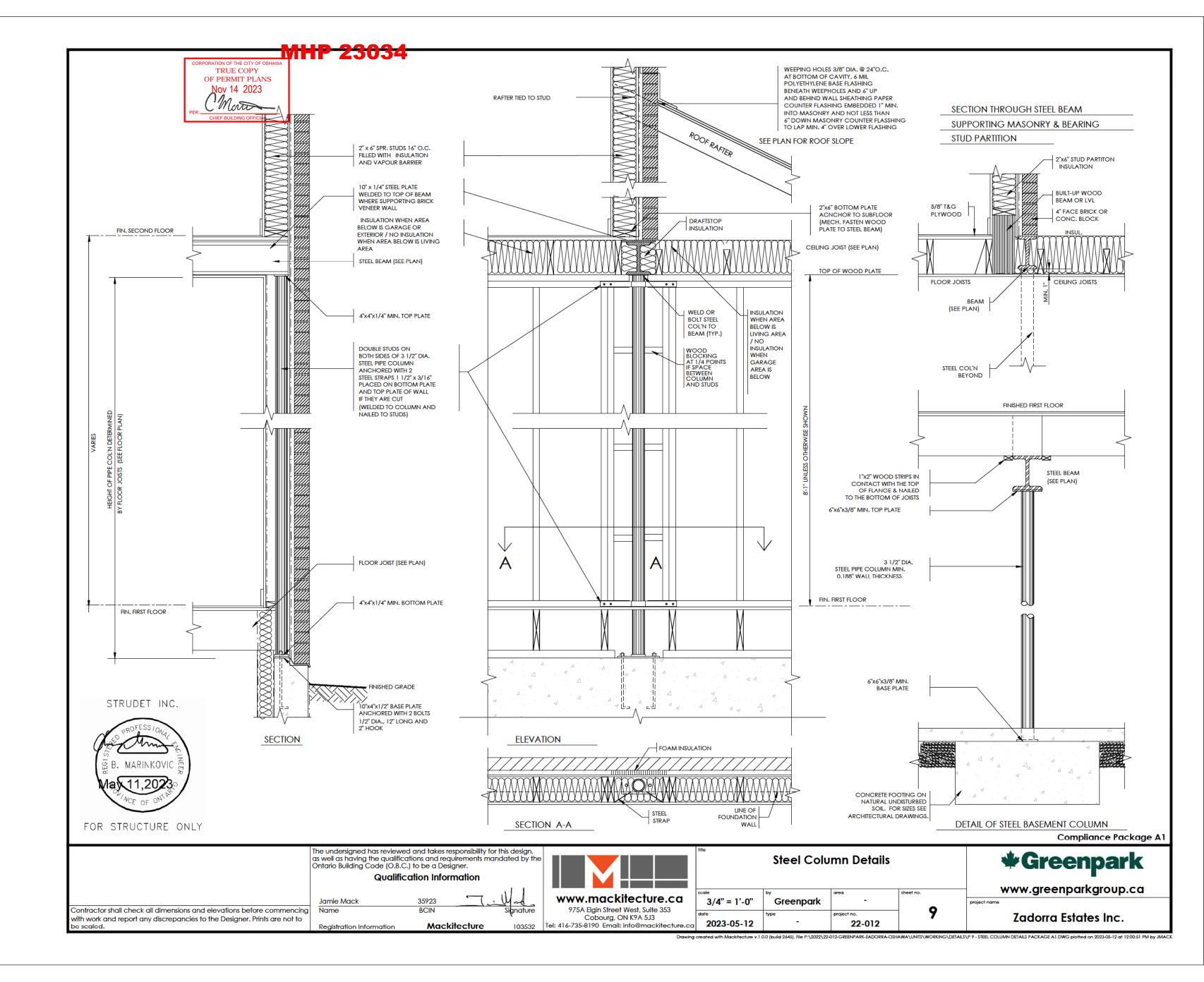
Mackitecture

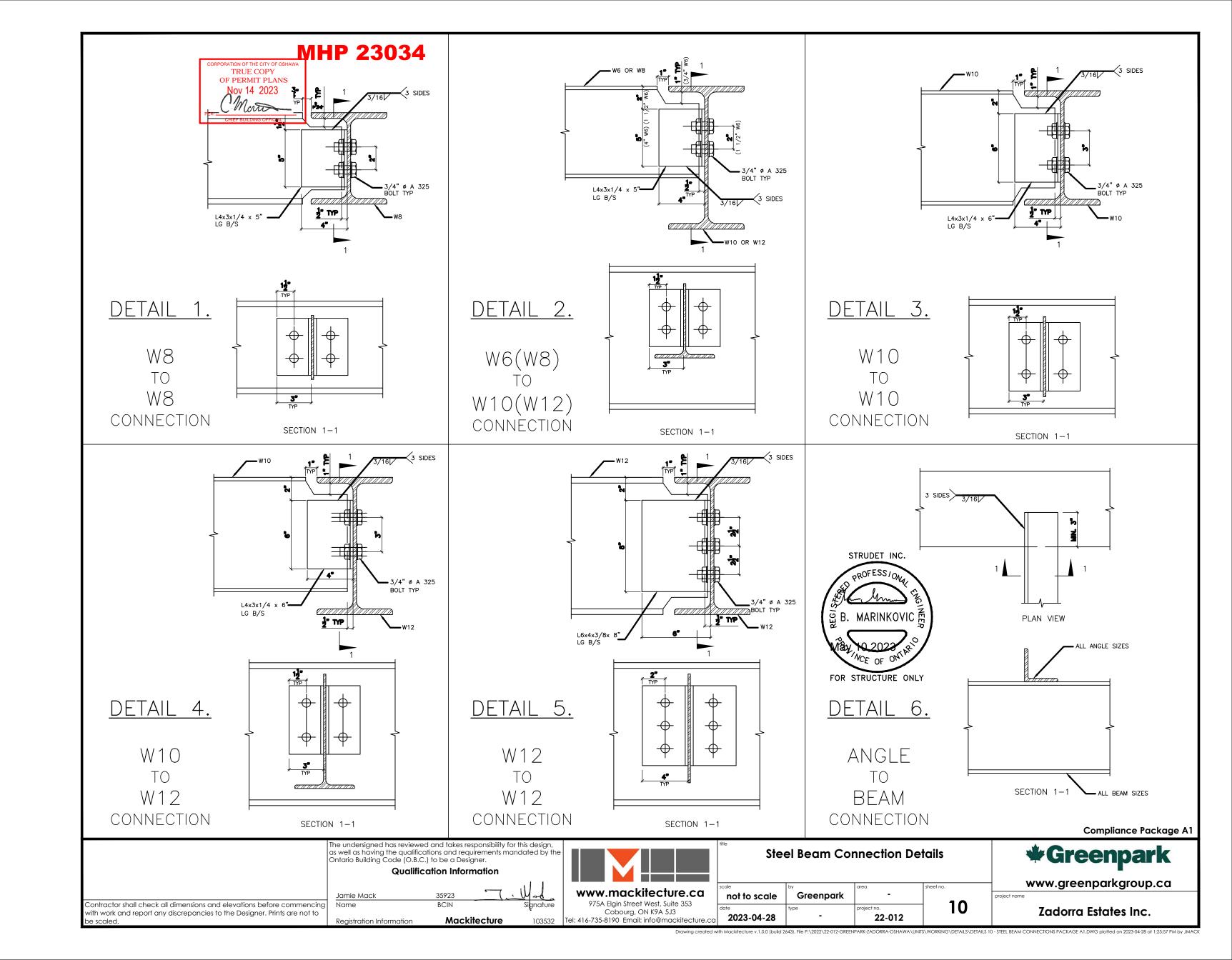


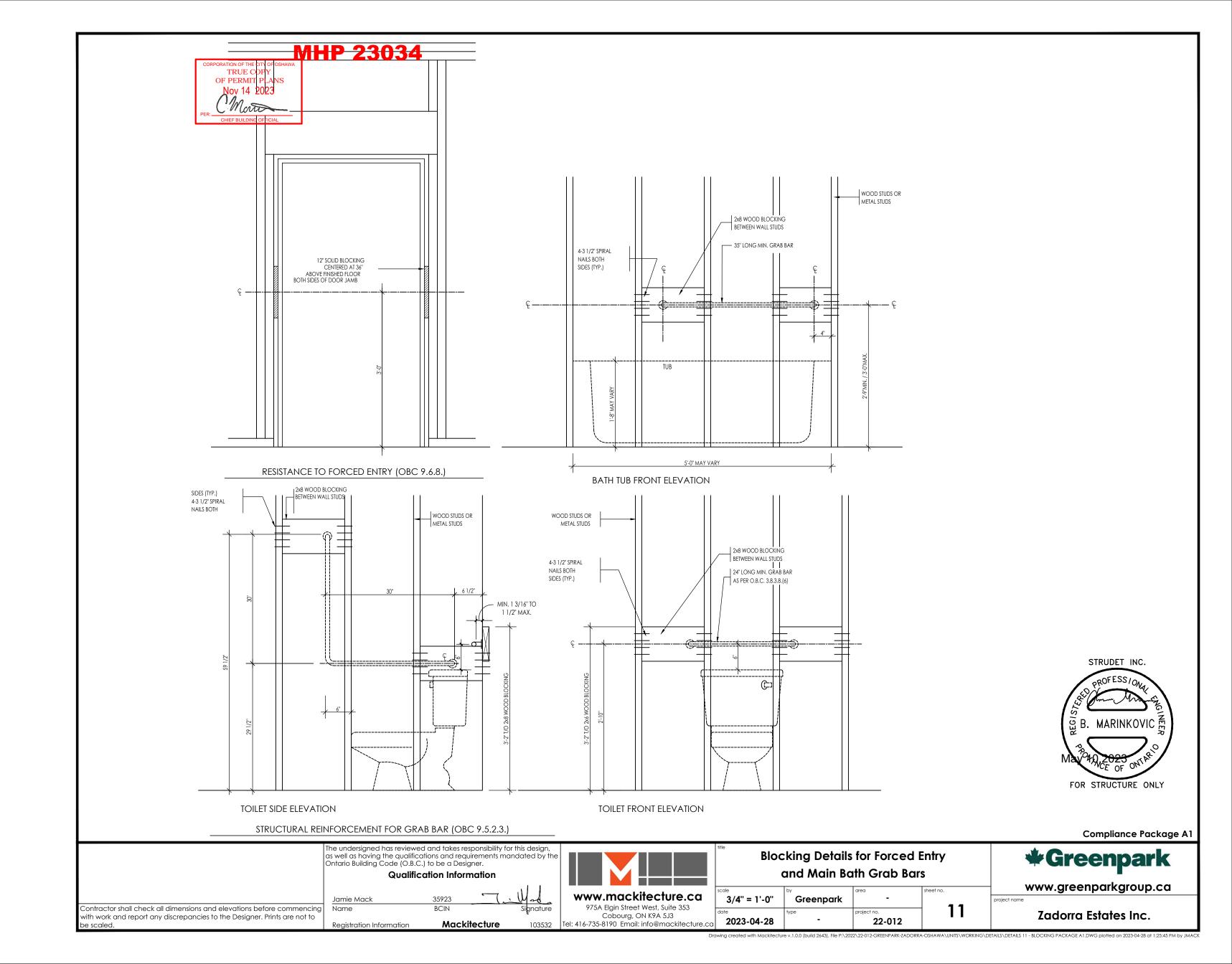
**Walk-out Deck Details** As shown Greenpark 8-2 2023-04-28 22-012

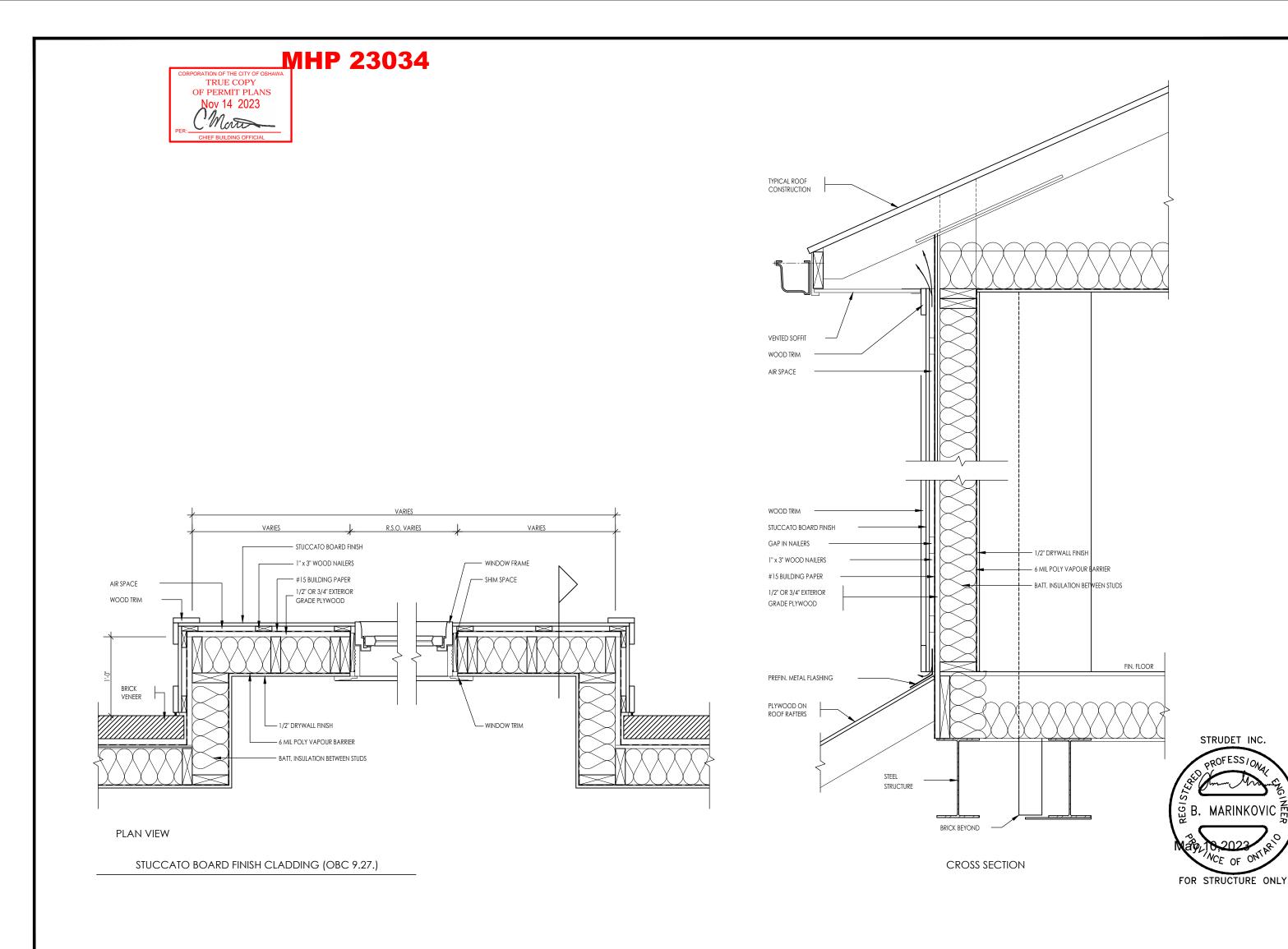
**<b><b>Greenpark** 

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Compliance Package A1

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# **Qualification Information**

Jamie Mack35923NameBCINSignatureRegistration InformationMackitecture103532

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# Stuccato Board Exterior Cladding

**\*Greenpark** 

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