

SCOPE OF THIS APPLICATION:
 ADDITION TO MAIN FLOOR OVER BASEMENT WALKOUT

THERE IS NO CHANGE IN THE OCCUPANCY AND IT WILL REMAIN SINGLE FAMILY DWELLING

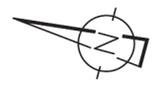
THERE IS NO CHANGE PROPOSED IN ANY LANDSCAPE .

THE OWNER OR THEIR AUTHORIZED AGENT IS RESPONSIBLE FOR OBTAINING WRITTEN UTILITY LOCATE INFORMATION PRIOR TO RENOVATION

THERE IS NO EXCAVATING WITH IN OR ENCRANCHING IN TO MUNICIPAL ROAD ALLOWANCE

Lot Area	18406.77 sqft 8250 sqm
Existing	2658.64 sqft
Proposed	2861.29 sqft
Main Floor Area	2172.43 sqft
Gross Floor Area	4831.07 sqft
5033.72 sqft	
Finished Basement	2460.87 sqft

EXISTING/PROPOSED SITE PLAN



- 1 Excavation and Backfill
 - Excavation shall be undertaken in such a manner so as to prevent damage to existing structures, adjacent property and utilities
 - Topsoil and vegetable matter in unexcavated areas under a building shall be removed. The bottom of excavations for foundations shall be free of all organic matter
 - All fill other than coarse clean material placed beneath concrete slabs shall be compacted to provide uniform support
- 2 Concrete Floor Slabs
 - Grade, curbs and exterior slabs and exterior steps shall be cast in concrete with 5-8% of entrainment
 - Other slabs: 3000psi concrete
 - Minimum 4" thick, placed on a minimum 4" of coarse, clean, granular material
 - All fill other than coarse clean material placed beneath concrete slabs shall be compacted to provide uniform support
- 3 Masonry Walls
 - Where constructed with 1/2" brick, wall shall be bonded with header course every 8" course
 - Provide 2" solid masonry or continuous 7/8" plate under roof and floor framing members
 - Provide 7/8" solid masonry under beams and columns
 - Masonry wall to be tied to each tier of joists with 1/8" dia. x 3/16" corrosion resistant steel straps, spaced minimum 4' into masonry. When joists are parallel to wall, ties are to extend across at least 3 joists @ 9" o.c.
 - Inside back of wall to be parged and covered with 1/4" mortar cover over the footing prior to dampproofing
 - For reduced foundation walls to allow a brick facing while maintaining lateral support, tie minimum 1/2" dia. x 3/16" corrosion resistant steel straps vertically and 2'-11" horizontally, with joints completely filled with mortar
 - Masonry over openings shall be supported on corrosion resistant or prime painted steel lintels with a minimum of 5 7/8" end bearing
- 4 Masonry Veneer
 - Minimum 3/4" thick if joints are not raked and 1/2" thick if joints are raked
 - Minimum 1" air space to sheathing
 - Provide weep holes @ 31" o.c. at the bottom of the cavity and over doors and windows
 - Direct drainage through weep holes with 1/8" poly flashing extending minimum 7/8" up behind the sheathing paper
 - Veneer has minimum 0.030" thick 27/8" wide corrosion resistant straps spaced @ 23 5/8" vertically and 3/4" horizontally
 - Fasten ties with corrosion resistant 1/2" diameter screws or spiral nails which penetrate at least 1-3/8" into studs
- 5 Wood Frame Construction
 - All lumber shall be spruce-pine-fir No. 1 & 2, and shall be identified by a grade stamp
 - Maximum moisture content 19% at time of installation
 - Wood framing members which are supported on concrete in direct contact with soil shall be separated from the concrete with 6 mil polyethylene
 - Soil plate set on foam gasket, poly, or mortar bed and anchored 6"-0" o.c. with anchor bolts set into concrete to min depth of 4".
- 6 Joists
 - Exterior walls shall consist of:
 - cladding
 - sheathing paper lapped at joints
 - 5/8" fibreboard or gypsum board 5/4" plywood sheathing
 - 2x6 studs @ 16" o.c.
 - 2x6 bottom plate and double 2x4 top plate
 - 2x4 studs @ 16" o.c. between R value of the batt insulation and exterior rigid insulation achieves R-22.
 - Interior walls shall consist of:
 - 2x4 studs @ 16" o.c.
 - 2x4 bottom plate and double 2x4 top plate
 - 2x4 studs @ 16" o.c.
 - 1/2" gypsum board sheathing
- 7 Floors
 - Joists to have minimum 1 1/2" of end bearing
 - Joists shall bear on a sill plate fixed to foundation with 1/2" anchor bolts @ 7' 10" o.c.
 - Header joists shall be doubled when supported header is between 7' and 6' 7" trimmer joists shall be sized by calculations when supported header exceeds 6' 7"
 - Trimmer joists shall be sized by calculations when supported header is between 6' 7" and 6' 11" from each support and from other rows of joists
 - Joists shall be supported on joist hangers at all flush beams, trimmers, and headers.
 - Joists located under parallel non-bearing partitions shall be doubled
- 8 Roof & Ceilings
 - Hip and valley rafters shall be deeper than common rafters
 - 2x4 collar ties @ rafter spacing with 1x4 continuous brace at mid span if collar tie exceeds 7' 10" in length
 - No. 210 (30.3kg/m2) asphalt shingles
 - Notching & Drilling of Trusses, Joists, Rafters
 - Holes in floor, roof and ceiling members to be maximum 1/4" actual depth of member and not less than 2" from edges
 - Notches in floor, roof and ceiling members to be located on top of the member and not greater than 1/3 joist depth
 - Wall studs may be notched or drilled provided that no less than 2/3 the depth of the stud remains, if load bearing, and 1/8" non-load bearing
 - Roof truss members shall not be notched, drilled or weakened unless accommodated in the design
 - Roofing
 - Fasteners for roofing shall be corrosion resistant
 - Roofing nails shall penetrate through or at least 1/2" into roof sheathing
 - Every asphalt shingle shall be fastened with at least 4 nails
 - Eave protection shall extend 1" up the roof slope from the edge, and at least 1/4" from the inside face of the exterior wall, and shall consist of Type M or Type S floor flanking lead with minimum 1" head and laps cemented together with glass fibre or Polyester Fibre coated base sheath or self sealing composite membranes consisting of modified bituminous coated material. Eave protection is not required for unheated buildings, for roofing exceeding a slope of 1:15 or where a low slope asphalt shingle application is provided
 - Open valleys shall be finished with layers of roof roofing, of layer of steel metal min. 5/8" wide
 - Flashing shall be provided at the intersection of shingle roofs with exterior walls and chimneys
 - Steel metal flashing shall consist of not less than 1/8" thick, 0.015" galvanized steel, 0.018" copper, 0.018" zinc, or 0.018" aluminum
 - Roof ventilation 1 sq ft per 300 sq ft of ceiling area (50% at eaves) as per 9.29 O.B.C.
 - Columns, Beams & Lintels
 - Steel beams and columns shall be shop primed.
 - Minimum 3/4" end bearing for wood and steel beams, with 7/8" solid masonry beneath the beam.
 - Steel columns to have minimum outside diameter of 2 7/8" minimum wall thickness of 3/16"
 - Wood columns for porches and garages shall be minimum 1 1/2" x 3 1/2", all other cases either 1 1/2" x 5/8" or 1 1/4" x 5/8", unless calculations based on actual loads show lesser sizes are adequate. All columns shall be galvanized to the width of the supported member
 - Steel columns shall be a minimum of x 11 3/8" x 9 1/2" x 16"
 - Provide solid blocking the full width of the supported member under all concentrated loads
 - Insulation & Weatherproofing
 - Insulation shall be protected with gypsum board or an equivalent interior finish, except for unfinished basements where 6 mm poly is sufficient for fiberglass type insulations
 - Ducts passing through unheated space shall be made airtight with tape or sealant
 - Provide solid blocking of air from the exterior and windows between the frame and the exterior cladding
 - Weatherstripping shall be provided on all doors and access hatches to the exterior, except doors from a garage to the exterior
 - Exterior walls, ceilings and floors shall be constructed so as to provide a continuous barrier to the passage of water vapour from the interior and the leakage of air from the exterior
 - 1 x 2" (610) rigid insulation medium to extend 2" below ext. grade
- 9 Handrails and Guards
 - A handrail is required for exterior stairs containing more than 2 risers and exterior stairs containing more than 3 risers
 - Guards are required around every accessible surface which is more than 23 5/8" above the adjacent level
 - Interior and exterior guards min. 2" high. Exterior guards shall be 2' 6" high where height above adjacent surface exceeds 5' 11"
 - Guards shall have no openings greater than 4" and no member between 4" x 2" 11" that will facilitate climbing
- 10 Plumbing
 - Every dwelling requires a kitchen sink, lavatory, water closet, bathtub or shower stall and the installation of laundry facilities
 - A floor drain shall be installed in the basement, and connected to the sanitary sewer where gravity drainage is possible. In other cases, it shall be connected to a storm drainage system, ditch or dry well
- 11 Electrical
 - An exterior light controlled by an interior switch is required at every entrance
 - A light controlled by a switch is required in every kitchen, bedroom, living room, utility room, laundry room, dining room, bathroom, vestibule, hallway, garage and porch.
 - Stairs shall be lighted, and except where serving an unfinished basement shall be controlled by a switch at the head and foot of the stairs
 - Basements require a light for each 323 sqft controlled by a switch at the head of the stairs
- 12 Mechanical Ventilation
 - A mechanical ventilation system is required with a total capacity of least equal to the sum of:
 - 20 cfm each for basement and master bedroom
 - 10 cfm for each other room
 - A principal dwelling exhaust fan shall be installed and controlled by a centrally located switch identified as such
 - Supplemental exhaust shall be installed so that the total capacity of all kitchen, bathroom and other exhausts, less the principal exhaust, is not less than the total required capacity
 - A Heat Recovery Ventilator may be employed in lieu of exhaust to provide ventilation. An HRV is required if any solid fuel burning appliances are installed
 - Supply air intakes shall be located so as to avoid contamination from exhaust outlets
 - Dryers to be vented directly to outside through wall or roof
- 13 Finishes
 - Direct vent gas fireplace installed as per manufacturers specifications
- 14 Window Wells
 - Window wells shall be drained to the wiping lip
- 15 Gasproof Doors
 - Gasproof door and frame assembly with 0/1H closer and weatherstripping
- 16 Gasproofed Walls & Ceiling
 - Garage walls and ceiling shall be gasproofed with 1/2" G.B. and taped joints
- 17 Dampproofed Stairs
 - Basement stair stringers shall be dampproofed u/s of 4" building paper
- 18 Rain Water Leaders
 - R.W.L. Drained to conc. splash pads
- 19 Dura Shucco Wall system or approved equivalent
 - When ceramic tile applied to a mortar bed with adhesive, the bed shall be a minimum of 1/2" thick & reinforced with galvanized diamond mesh lath, applied over polyethylene on building paper
 - Exterior siding or stucco as per elevation. Felt impregnated paper or house wrap (type) on exterior type plywood sheathing on 2x4 @ 16" O.C. stud studs with wall thickness insulated with a min. R-22 factor and 1/8" N.B.D. poly V.B.
 - Stucco shall be applied with min. 1/2" thick first coat embedded in gpm mesh. The second coat with a min. 1/2" thickness to be rough finished. The finished coat shall be not less than 1"
- 20 Alarms and Detectors
 - At least one smoke alarm shall be installed on or near the ceiling on each floor and basement level 2" or more above an adjacent level
 - Smoke alarms conforming to CAN/ULC-531, "Smoke Alarms", shall be installed in each dwelling unit and in each sleeping room not within a dwelling unit, in compliance with the subsection 9.10.19, of the OBC.
 - All smoke alarms are required to be provided with self-testing components (9.10.19, 9.10.19)
 - Where a fuel-burning appliance is installed in a suite of residential occupancy, a carbon monoxide alarm shall be installed adjacent to each sleeping area in the suite, in compliance with the subsection 9.33.4 of the OBC.
 - When a garage is attached to the dwelling unit, a carbon monoxide alarm shall be installed adjacent to each sleeping room, not within a dwelling unit, in compliance with the subsection 9.33.4 of the OBC.
- 21 Stairs
 - Minimum Rise 7 7/8"
 - Minimum Run 10 1/4"
 - Minimum Head Room 6' 5"
 - Minimum Width 2' 10"
 - Curved stairs shall have a min. run of 5 7/8" at any point and a minimum average run of 7 7/8"
 - Winders which converge to a point in stairs must turn through an angle of no more than 90°, with no less than 30" of more than 45° per tread. Sets of winders must be separated by 3' 11" along the run of the stair
 - A landing minimum 2' 11" in length is required at the top of any stair leading to the principal entrance to a dwelling, and other entrances where more than 3 risers
 - Exterior concrete stairs with more than 2 risers require foundations

- 22 Fire Resistance Rating (FRR)
 - Horizontal Assembly: FRR (Hours)
 - Floors: 0 Hours
 - Roof: 0 Hours
 - Masonry: 0 Hours
 - FRR of Supporting Members: 0 Hours
 - Roof: 0 Hours
 - Masonry: 0 Hours
- 23 Spatial Separation - Corridor/Exterior Walls

Wall	Area of EBF (m²)	L.D. (m)	L.H. (m)	Permitted Max. % of Openings	Proposed % of Openings	FRR (Hours)	Listed Design or Description	Comb. Const.	Comb. Contr. None/Cladding	Non-comb. Contr.
North	105.21	9	6.45	N/R	N/A	YES				
South	98.41	100	9.45	N/R	N/A	YES				
East	155.81	100	26.2	N/R	N/A	YES				
West	145.04	100	23.91	N/R	N/A	YES				
- 24 Flashing Fixture Requirements

Male/Female Count @ % / % , except as noted otherwise	BC Reference			
	Part 3	Part 9	Part 3	Part 9
Basement Occupancy				
Occupancy				
1st Floor Occupancy				
Occupancy				
2nd Floor Occupancy				
Occupancy				
3rd Floor Occupancy				
Occupancy				
(Adjust as Required for Additional Floors or Occupancies)				
- 25 Occupant Load - Continued

Floor	Occupancy	Load	Persons
Basement	Occupancy	Load	6 persons
1st Floor	Occupancy	Load	2 persons
2nd Floor	Occupancy	Load	8 persons
3rd Floor	Occupancy	Load	8 persons
(Additional floor areas continued on last page)			
Barrier-free Design	Yes	No (Explain) SINGLE FAMILY DWELLING	3.8
Hazardous Substances	Yes	No	3.31.2 & 3.31.19 9.101.3(4)

Name of Practice: HIRMAN ARCHITECTS INC.
 UNIT 113/471 YONGE STREET, RICHMOND HILL, ON, L4C 0Z5 P: (647) 401-3922 E: hirman.studio@gmail.com

Name of Project: ADDITION TO MAIN FLOOR OVER BASEMENT WALKOUT

Location: 21 Limcombe Drive, Markham



Item	Ontario's 2012 Building Code Data Matrix Part 3 or 9				BC Reference	
	Part 1	Part 3	Part 9	Part 9	Part 9	Part 9
1 Project Description:	<input type="checkbox"/> New	<input type="checkbox"/> Part 3	<input type="checkbox"/> Part 9	1.4.1.2 [A]	1.4.1.2 [A]	1.4.1.2 [A]
	<input type="checkbox"/> Addition	11.1 to 11.4	1.1.2 [A]	1.1.2 [A] & 9.101.3		
	<input type="checkbox"/> Charge of Use					
2 Major Occupancy(s) GROUP C RESIDENTIAL OCCUPANCY				3.1.21.1(1)	9.10.2	
3 Building Area (m²)	Existing	319.38	New	18.82	Total	338.2
4 Gross Area	Existing	448.82	New	18.82	Total	467.64
5 Number of Storeys Above grade	1	Below grade	1	1.4.1.2 [A]	1.4.1.2 [A]	1.4.1.2 [A] & 9.10.4
6 Number of Streets Fire Fighter Access	1			3.2.210 & 3.2.5	9.10.20	
7 Building Classification GROUP C- RESIDENTIAL OCCUPANCY				3.2.220-83	9.10.2	
8 Sprinkler System Proposed	<input type="checkbox"/> entire building	3.2.220-83	9.10.8.2			
	<input type="checkbox"/> selected compartments	3.2.1.5				
	<input type="checkbox"/> selected floor areas	3.2.21.7				
	<input type="checkbox"/> basement <input type="checkbox"/> in lieu of roof rating	INDEX				
	<input type="checkbox"/> not required					
9 Standpipe required	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.9	N/A			
10 Fire Alarm required	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.4	9.10.18			
11 Water Service Supply is Adequate	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.5.7	N/A			
12 High Building	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.2.6	N/A			
13 Commutation Restrictions	<input checked="" type="checkbox"/> Combustible permitted	<input type="checkbox"/> Non-combustible required	<input type="checkbox"/> Both	3.2.220-83	9.10.6	
Actual Construction	<input checked="" type="checkbox"/> Combustible	<input type="checkbox"/> Non-combustible	<input type="checkbox"/> Both			
14 Mezzanine(s) Area m²				3.2.11 (3)-(8)	9.10.4.1	
15 Occupant load based on	<input type="checkbox"/> m²/person	<input checked="" type="checkbox"/> design of building	3.1.17	991.3		
Basement	Occupancy	Load	6 persons			
1st Floor	Occupancy	Load	2 persons			
2nd Floor	Occupancy	Load	8 persons			
3rd Floor	Occupancy	Load	8 persons			
(Additional floor areas continued on last page)						
16 Barrier-free Design	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain) SINGLE FAMILY DWELLING	3.8	9.5.2			
17 Hazardous Substances	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	3.3.1.2 & 3.3.1.19	9.101.3(4)			



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SHEET TITLE: SITE PLAN CONSTRUCTION NOTE DATA MATRIX
 SCALE: 1/16"=1'-0"
 PAPER SIZE: 18"x24"

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PROJECT:
 21 LIMCOMBE DRIVE, MARKHAM

SHEET NUMBER: A0



EXISTING/PROPOSED
MAIN (WEST) ELEVATION

EXISTING/PROPOSED
SIDE (SOUTH) ELEVATION



EXISTING
REAR (EAST) ELEVATION

EXISTING
SIDE (NORTH) ELEVATION



PROPOSED
REAR (EAST) ELEVATION

PROPOSED
SIDE (NORTH) ELEVATION

ENERGY EFFICIENCY CALCS. (AS PER OBC SB-12 3.1.1.2.A)						
	FRONT [W]	SIDE [S]	REAR [E]	SIDE [N]	SKYLITES	TOTALS
AREA OF WALLS	1561.21 sq.ft	1059.61 sq.ft	1677.15 sq.ft	1132.49 sq.ft	-	5430.46 sq.ft
TOTAL OPENINGS (INCL. SKYLITES)	373.43 sq.ft.	100.14 sq.ft.	439.52 sq.ft.	169.32 sq.ft.	16 sq.ft.	1098.41 sq.ft. (20.22 %)

ENERGY EFFICIENCY COMPLIANCE OPTION
SB-12 PRESCRIPTIVE (ZONE 1, COMPLIANCE PACKAGE A1, AFUE 96%, MAX. U-VALUE = 1.4 FOR WINDOWS & SLIDING GLASS DOORS AS PER OBC SB-12 3.1.1.2.A

TOTAL EXPOSED BUILDING FACE: 1132.49 sqft
TOTAL AREA OF GLAZING (ALLOWED): 799=101.92 sqft
TOTAL AREA OF GLAZING (PROPOSED): 786.45=73.09 sqft
LIMITING DISTANCE: 2.83 M



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SHEET TITLE: ELEVATIONS

SCALE: 3/16"=1'-0"
PAPER SIZE: 18"x24"

ARCHITECTURAL DESIGN

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SHEET NUMBER: **A3**