

Our File No.: F19-192
June 11, 2019

Strata Plan NWS 3119 – Queen’s Gate
c/o FirstService Residential
700 – 200 Granville Street
Vancouver, B.C. V6C 1S4
(Email: May.Le@fsresidential.com)

Attention: Ms. May Le

Dear Madam:

Re: Strata Plan NWS 3119 – Queen’s Gate
Suite No. 318 - 8500 General Currie Road, Richmond, B.C.
– Review of Damage to Wood Framing Due to Water Ingress

Spratt Emanuel Engineering Ltd. (SEE) attended the above noted address on June 5, 2019 to review water damage due to water ingress. The scope of the review is limited to the wood framing within the suite left exposed following removal of damaged finishes. In attendance were the suite owner, building manager, member of the Strata Council, and the observer.

1.0 BACKGROUND

1.1 The following table briefly summarizes the building:

Building Owner	Strata Plan NWS 3119
Building Name	Queen’s Gate
Building Address	8500 General Currie Road, Richmond, B.C.
Building Type	Residential Strata-Titled Low-Rise Apartments
Principal Occupancy	Residential
Date of Construction	1991
Applicable Building Code	National Building Code of Canada, 1985
Type of Construction	Combustible Wood Frame
Number of Storeys	3
Number of Units	222
Parking	At-Grade Parkade

1.2 It was understood on site that the points of water ingress responsible for the damage within Suite No. 318 have been found and repaired at this time. The water ingress was due to three identified leak locations at roof level, reported to be addressed. Framing has been exposed for some time to allow thorough drying.

2.0 OBSERVATIONS

- 2.1 Wood framing has been revealed where interior finishes were damaged due to water ingress (**Photos No. 1 and 2**). Gypsum wall board, polyethylene sheet vapour barrier, and batt insulation have been removed as needed. Framing revealed includes: the interior wall separating living room from kitchen and floor structure between this suite and the suite above. The framing was visually reviewed, tested by touch for 'punkiness'¹ or wood rot and tested with a moisture meter to determine moisture content (M.C.).
- 2.2 All components tested with moisture meter read below 13% M.C (**Photos No. 3 to 5**). This M.C. is within acceptable levels to continue with interior repairs following replacement of select framing members.
- 2.3 Some moisture staining of the wood is noted here and there. Some wood rot, now dried, is also noted at some spots (**Photos No. 6 to 10**). All visible structural elements were reviewed: 2x4 studs and plates; 2x10 floor joists; plywood subfloor; and rim joists where visible. Wood framing is noted to be solid except where called out below.
- 2.4 A punky condition was noted at the 2x4 intermediate plate between the interior wall top plate and end joist above, at the corner (**Photos No. 11 and 12**). This plate requires replacement.
- 2.5 Resting on this plate is a 2x10 floor joist with a punky bottom surface (**Photos No. 13 and 14**). The 2x10 floor joist should be cut to remove the rotted section and new dimensional lumber spliced in. Repairs are elaborated upon in the following section.
- 2.6 Some fungus was noted at a few spots in the revealed framing (**Photos No. 15 to 17**). The spots were found to be solid. The remaining fungus should be scraped off and a fungal inhibitor applied to wood.
- 2.7 A suspect connection was noted while reviewing the framing: a vertical butt connection between two 2x4s (**Photo No. 18**). The butt connection is toe-nailed together, with joint closely in plane with other framing joints. Additional material should be spliced on to correct this. This connection can be seen from within the kitchen, to the left side of the opened area.

¹ 'Punky' or 'punkiness' is a common building term that describes the condition of wood that has rotted and dried; it has lost structural integrity. It is typically crumbly and easily pulled apart by hand.

3.0 CONCLUSIONS AND RECOMMENDATIONS

- 3.1 All wood rot must be replaced with new dimensional lumber of matching size. The identified members in this report require full replacement. Any additional wood framing found in the course of work or further exploration with a punky condition is to be replaced as well.
- a. Per Item 2.4, the full rotted length of plate must be replaced.
 - b. Per Item 2.5, cut the joist vertically 3' back from the exposed end and splice in a new piece. Sister a new 2x10 beside the repaired 2x10. Fasten together using 3" wood screws at 6" o.c. staggered at 1.5" from the top and bottom edges.
- 3.2 All water damaged existing framing left in place should be coated with a liquid-applied decay inhibitor, such as Sansin Boracol 20-2 to prevent any further colonization by fungus and mould.
- 3.3 The 2x4 butt connection noted in Item 2.7 should be corrected by sistering a length of 2x4 over the connection to provide rigidity. The length of the sistered 2x4 should be the maximum achievable length, held in place with screws at 6" o.c.

If you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

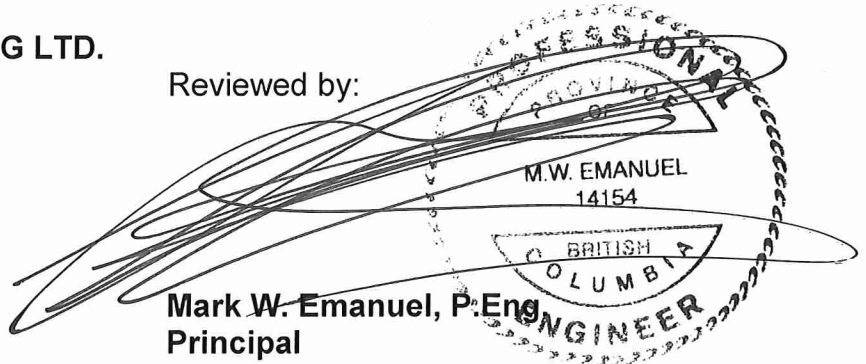
SPRATT EMANUEL ENGINEERING LTD.

Per:



Leanna Sturley, B.Sc., E.I.T.
Project Consultant

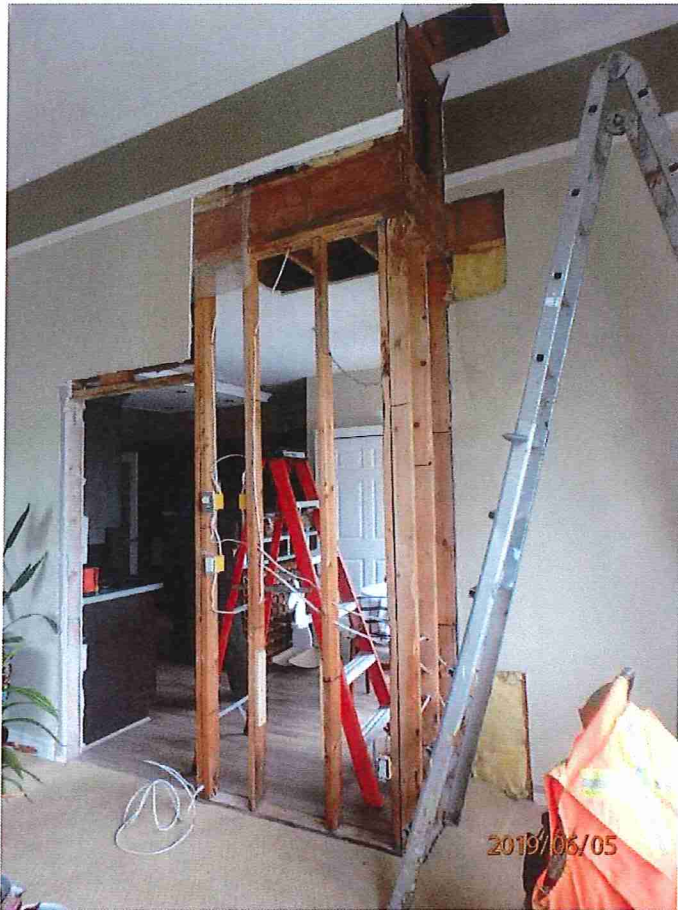
Reviewed by:



Mark W. Emanuel, P.Eng
Principal

LS/ch/encl.

STRATA PLAN NWS 3119 – QUEEN'S GATE
SUITE No. 318 - 8500 GENERAL CURRIE ROAD, RICHMOND, B.C.
PHOTOGRAPHS TAKEN BY LEANNA STURLEY, B.Sc., E.I.T.
ON JUNE 5, 2019

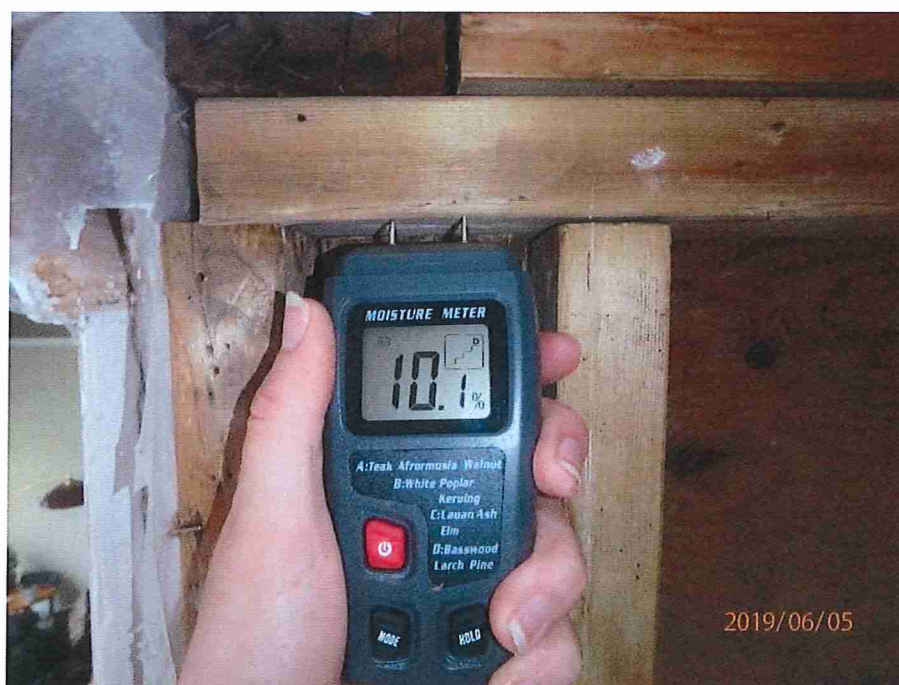


Photos No. 1 and 2

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Photos No. 3 and 4

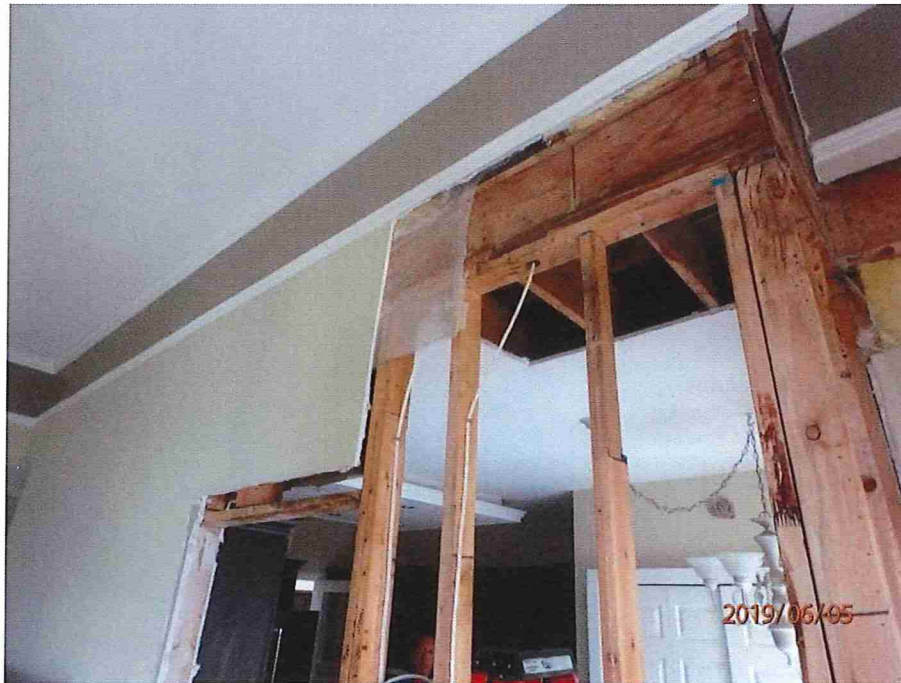


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Photos No. 5 and 6

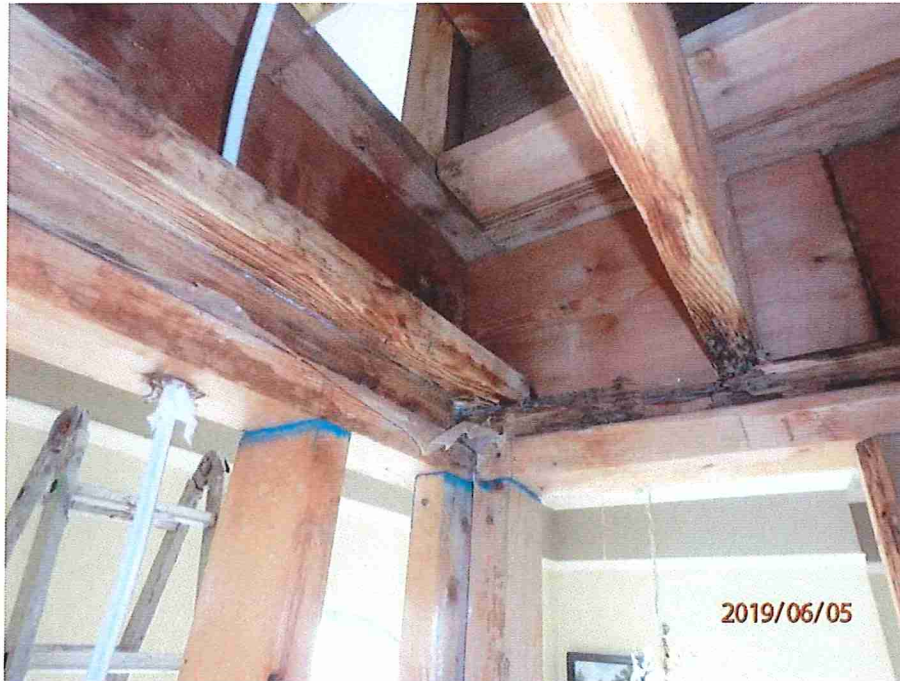
June 5, 2019



Photos No. 7 and 8



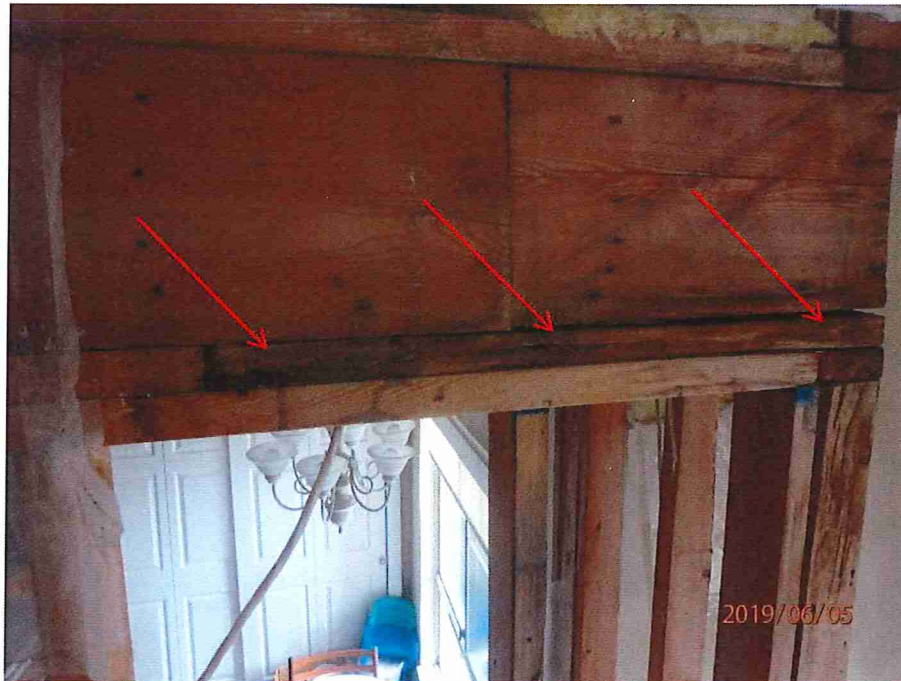
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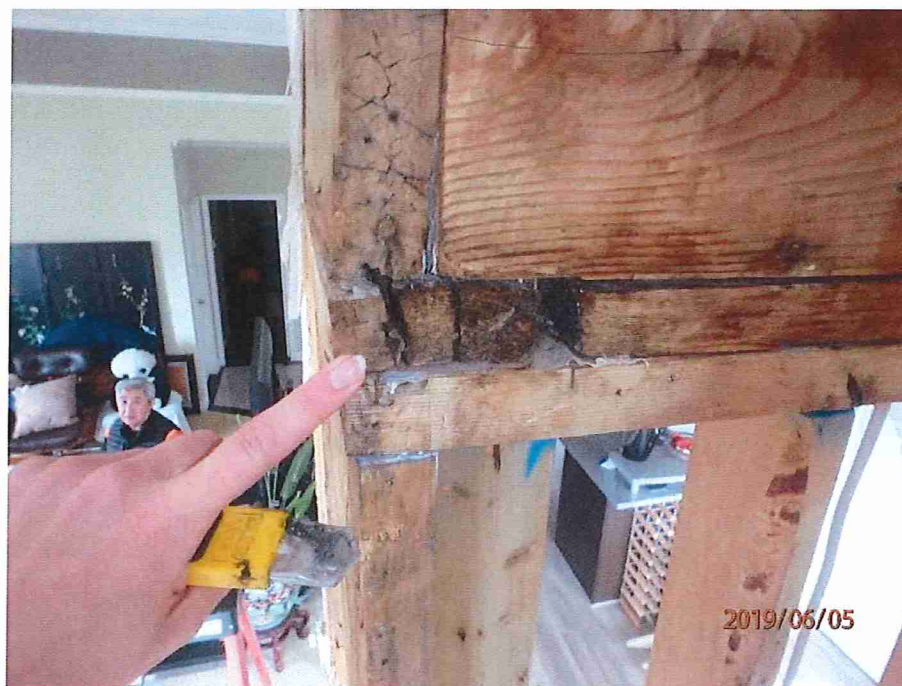
Photos No. 9 and 10



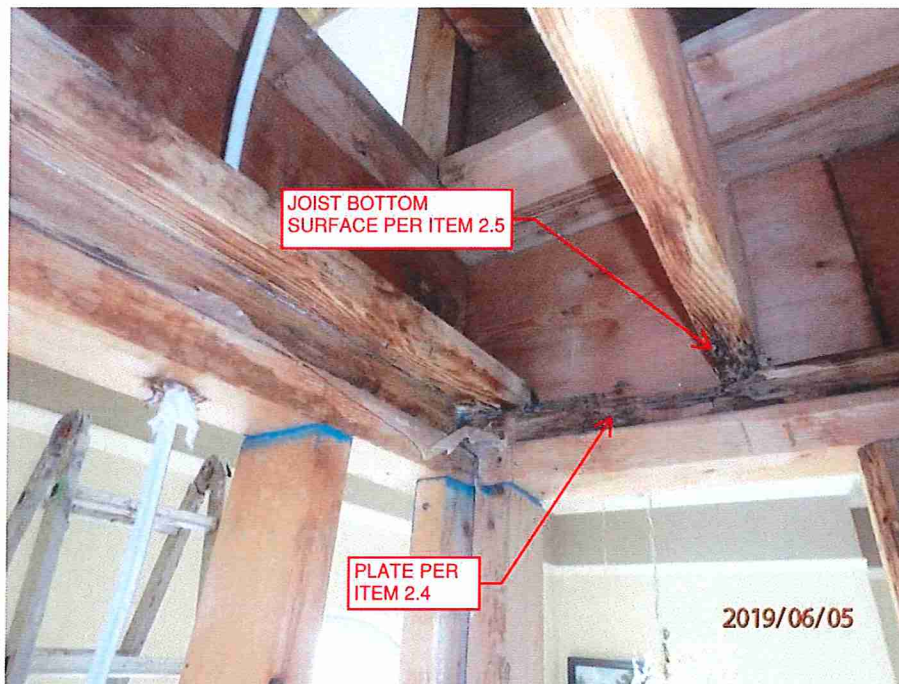
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Photos No. 11 and 12



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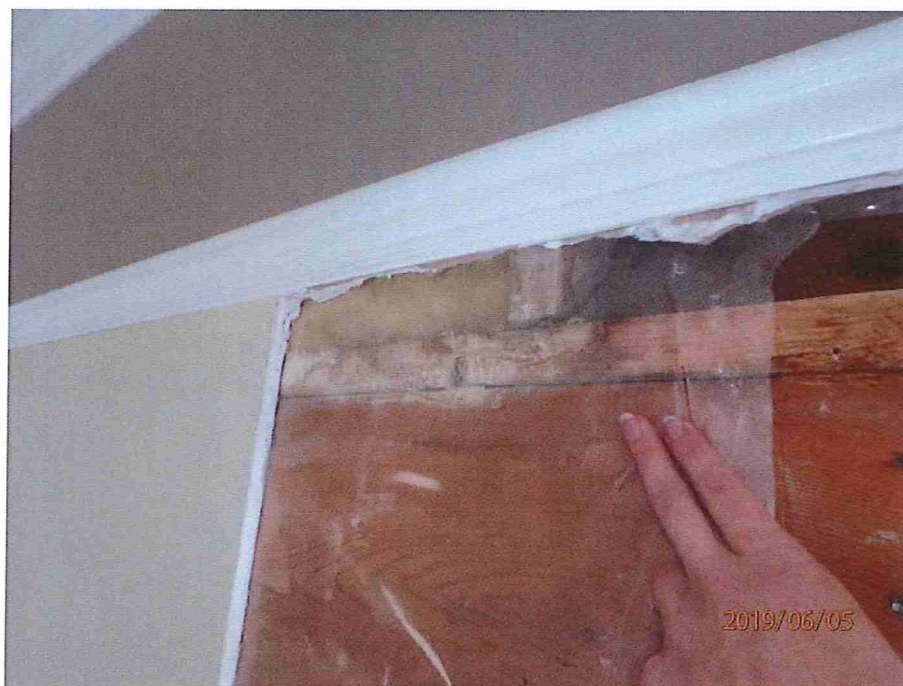
Photos No. 13 and 14



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Photos No. 15 and 16



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Photos No. 17 and 18

