

**IN THE MATTER OF
THE ENGINEERS AND GEOSCIENTISTS ACT,
R.S.B.C. 1996, chapter 116, as amended (the “Act”)**

and

IN THE MATTER OF EDWARD K. Y. LIM, P. Eng.

DETERMINATION OF THE DISCIPLINE COMMITTEE

Hearing Date: October 22 and 23 and December 4, 2018

Discipline Committee Panel: Dr. Ronald Yaworsky., Ph.D., P.Eng., Chair,
Neil Cumming, P. Eng.,
Christopher Arthur, P. Eng.

Counsel for the Association: David Volk and Taymaz Rastin

Counsel for the Member: Mr. Lim, P.Eng. attended in person, without
counsel

1. This panel of the Discipline Committee (the “Panel”) of the Association of Professional Engineers and Geoscientists of BC (the “Association”), doing business as Engineers and Geoscientists BC, conducted an inquiry pursuant to s. 33 of the Act.
2. The allegations against Mr. Lim are set out in the Notice of Inquiry issued March 1, 2018:

AND TAKE NOTICE that in connection with a project located at [redacted] in the Resort Municipality of Whistler, contrary to the Act, you have demonstrated unprofessional conduct by affixing your seal on drawings dated February 19, 2016 submitted to the Resort Municipality of Whistler for a building permit where those drawings (the “Drawings”):

- (a) were materially incomplete;
 - (b) contained deficiencies; and
 - (c) contrary to Section 2.2.4.3 of the BC Building Code 2012, did not contain sufficient detail about the structural members to enable the design to be checked.
3. Simply put, the issue in this hearing is whether structural drawings prepared, sealed and submitted by Mr. Lim in support of a building permit application for a single

family residence in Whistler (the “Project”) were deficient in a manner that constitutes unprofessional conduct. The Association’s position was that structural drawings submitted by Mr. Lim in support of a building permit application were inadequate. Mr. Lim maintained that the drawings were sufficient for the purposes for which they were submitted, that is, to obtain a building permit, and that they would be revised and completed later, including through the process of shop drawing issuance and review, prior to construction. Mr. Lim’s position was that the issuance of the building permit was evidence that the drawings have been “checked”, as required by the BC Building Code (“Building Code”).

4. For the reasons set out more fully below, the Panel finds that the allegations are proven to the required standard.

Onus and Burden of Proof

5. The burden of proof is on the Association.

6. The standard to be met by the Association is proof on the “balance of probabilities”, meaning this Panel must find that it is “more likely true than not” that the alleged facts occurred (*Kaminski v. Assn. of Professional Engineers and Geoscientists of British Columbia*, 2010 BCSC 468, para. 52).

7. The Panel must then decide whether the facts as proven constitute unprofessional conduct.

The Evidence

8. The basic chronology of events is:

- a) Mr. Lim, or more precisely, his company United Building Systems, was engaged to prepare structural drawings for the Project in about November 2015.
- b) On February 19, 2016, Mr. Lim signed and sealed each page in a five page set of drawings which was then submitted to the Resort Municipality of Whistler (the “Municipality”) as part of an application for a building permit. On the same date, a Schedule B “Assurance of Professional Design and Commitment for Field Review” (the “Schedule B Assurance”) was signed and sealed by Mr. Lim and submitted to the Municipality.
- c) On May 16, 2016, a building permit was issued by the Municipality for the Project.

- d) Around June 27, 2016 the Municipality was notified by the owner that Mr. Lim's services were terminated. Mr. Lim subsequently withdrew and retrieved his sealed drawings and the Schedule B Assurance from the Municipality.
- e) On July 3, 2016, the owner of the property submitted a complaint to the Association, complaining that the drawings prepared and submitted by Mr. Lim to the Municipality had been submitted by the owner to a contractor for pricing, but the contractor stated that they contained insufficient detail for that purpose. He attached a copy of those drawings. These drawings were marked Exhibit 2.
- f) The complaint was promptly provided to Mr. Lim for response. Mr. Lim provided several responses in the course of the complaint and investigation. The Association ultimately directed the issuance of the Notice of Inquiry.

9. The complainant did not testify at the hearing. The Association called the Municipality's Plan Reviewer ("AB"), and, in addition, two engineers to provide expert evidence: Andrew Gray, P. Eng. and Bryan Lytton, P. Eng. Mr. Lim called three witnesses: the building designer on the Project ("CD"); plus Richard Diamond and Jason Kinch, P. Eng., both building officials who provided expert evidence. Mr. Lim also testified. The relevant evidence of each witness is summarized and discussed below.

10. AB, a Plan Reviewer with the Municipality, testified that he received and was the examiner of the drawings and the Schedule B Assurance sealed by Mr. Lim. He stated that for the purposes of reviewing plans and issuing a building permit, he ensures that the drawings and Schedule B Assurance submitted are signed and sealed by a professional engineer. He reviews the Municipality Permit Application Checklist to confirm that the package is complete. The Municipality does not conduct structural engineering analysis; indeed AB testified that he is not qualified to do so. However, the drawings would be checked to ensure that snow loading, elevations, and other basic information is provided.

11. AB testified that the Municipality relies upon the professional engineer's assurance, set out expressly in the Schedule B Assurance that "the design of the ...structural... components of the plans and supporting documents prepared by this registered professional of record in support of the application for the building permit as outlined below substantially comply with the B.C. Building Code ('BCBC') and other applicable enactments respecting safety except for construction safety aspects." AB testified that the Municipality does not perform the "check" of the design referred to in section 2.2.4.3 of the Building Code.

12. Mr. Lim provided an additional set of drawings dated February 19, 2016. This set of drawings, in original form, was marked Exhibit 3. Mr. Lim explained that Exhibit 3 was the set of drawings returned to him by the Municipality in July 2016, when he withdrew from the Project.

13. Exhibit 3 contains highlighting, is marked with the Municipality's "received" stamp, and contains slight differences to Exhibit 2 as noted below.

14. It was suggested by Mr. Lim that the plans reviewed for the purposes of issuance of the building permit were those in Exhibit 3, and not Exhibit 2.

15. We are satisfied that plans reviewed by the Municipality for the purposes of issuing the building permit were in the form marked as Exhibit 3, because:

- a) AB testified that, as per usual practice, no copy of the plans was retained when the plans were returned to Mr. Lim;
- b) although AB testified that the plans that he was provided for review at the hearing were those marked Exhibit 2, they did not have a date on Mr. Lim's seal, nor did they have a "Received" stamp from the Municipality;
- c) Exhibit 3 bears an original Municipality received stamp and a date on Mr. Lim's seal, which is consistent with being the returned set of plans;
- d) AB testified that there was no highlighting on the plans he reviewed, whereas Exhibit 3 has highlighting; and
- e) AB testified in cross-examination that Exhibit 3 appeared to be the set that was submitted to the Municipality and that he reviewed.

16. Mr. Lim testified that the highlighting on Exhibit 3 was done by him after the drawings were returned to him, and that no other modifications were made.

17. Other than the highlighting, the difference between Exhibit 2 and Exhibit 3 is a handwritten change to a detail number on page A-03 of Exhibit 3. Mr. Lim testified that this change was made at the time he affixed the seal and prior to submission to the Municipality. The Panel accepts this evidence. The change in the detail number on Exhibit 3 is not material to the Panel's assessment of this case.

18. In cross-examination, AB testified that the plans that Mr. Lim submitted were "typical" of the structural drawings seen in 2016, which was reported to be a very busy year.

19. The Association tendered Andrew Gray, P. Eng., as an expert regarding structural engineering, including the field of wood frame construction. He testified that he was appointed by the Association as the designated reviewer in respect of the complaint for the initial purpose of making a recommendation as to whether the complaint should be referred for investigation. He reviewed the complaint and the plans provided by the complainant (Exhibit 2) and the first response from Mr. Lim dated July 25, 2016. He opined that the drawings that he reviewed do not provide sufficient information to:

- a) prepare shop drawings for the roof framing and floor joists,
- b) determine load paths;
- c) determine connection and section details;
- d) provide pricing for the majority of the required framing members; and
- e) determine the extent of the interior foundations.

He testified that the provided dead loads were too low given the concrete topping shown on the detail sheet, the frost depth for foundations was insufficient and more than half the framing members are missing from the drawings.

20. Mr. Gray testified that sealed drawings submitted for a building permit should be of sufficient detail to allow an engineering check of the design to be completed prior to building permit submission, and describe a building capable of being constructed; this submission should describe a design that is about 95-98% complete. He described the drawings in Exhibit 2 as 50-75% complete.

21. Mr. Lim argued that the opinion of Mr. Gray identified deficiencies by relying upon architectural drawings prepared *after* the plans he sealed and submitted (Exhibit 6). Mr. Gray stated such drawings were necessary to understand the intended roof and overhang areas; without further details it would not be clear to a builder what is intended.

22. While Mr. Gray reviewed a copy of Exhibit 2, his evidence applies equally to Exhibit 3.

23. Brian Lytton, P. Eng., was qualified as an expert in structural engineering including wood and residential design. Mr. Lytton provided an opinion dated June 14, 2018 with respect to the required standard in structural drawings submitted to a municipality and whether the drawings at issue were sufficient.

24. Mr. Lytton stated in his opinion: “For any project designed to meet the requirements of the B.C. Building Code 2012, including at the building permit stage, the structural engineer must provide a sufficient number of design drawings and details such that the project is designed in conformance with good engineering practice, such as the Canadian Wood Council (CWC) 2009, ‘Engineering Guide for Wood Frame Construction’.” Mr. Lytton testified as to his opinion that, when a structural engineer seals a set of structural drawings, that means the structure is buildable and there should be no material omissions or discrepancies.

25. Mr. Lytton opined that “the structural engineering details for this residential building are not complete and do not meet these expected standards of a reasonable and prudent structural engineer experienced in this type of engineering”.

26. Mr. Lytton commented on Mr. Lim’s drawings in his report, summarizing that “there are several omissions on the Drawings (including floor framing details, post sizes and connections, concrete foundation reinforcement, detailed foundation layout, footing thickness) and some discrepancies...” The significant omissions and deficiencies noted by Mr. Lytton were:

- a) Regarding the drawing labelled S-1, Mr. Lytton testified that the floor dead load of 15 psf [pounds per square foot] was half of what was required if concrete topping was to be used (noting that Detail 4 on S-3 includes a notation “Conc. Topping Typ”, suggesting that concrete topping would be used). He opined that the lack of accounting for the concrete topping was the greatest deficiency with the drawings as concrete topping increased the applicable loads substantially.
- b) Regarding S-3, Mr. Lytton noted various pieces of missing information on the detail sheet, including references to a “Footing Plan” which was not provided (Detail 6), the absence of a Detail 3 (referenced on A-03 and in Detail 3b), the absence of a plan detail for stud sizing and spacing (notation in Detail 3b), and a discrepancy in the foundation wall for Detail 8 (dimensions of both 6” and 8” provided). The Panel notes that on the plans submitted to the Municipality Detail 3 had been altered to Detail 7, however this is not considered material to the Panel’s decision.
- c) Regarding A-03, Mr. Lytton noted the lack of information about the joists; the lack of detail for a major post in the garage supporting a large beam; and the lack of any detail for the retaining wall between gridlines 3 and 4 (on gridline F).
- d) Regarding A-04, Mr. Lytton again noted the lack of information about the joists; that a “dropped beam” on gridline 1 (between gridlines D and E)

was not sized; the lack of window headers; and the lack of framing in the area of the stairs.

- e) Regarding A-05, Mr. Lytton noted the lack of window headers in the ensuite area; the lack of detail regarding the floor joists; and missing support beam details.
- f) Mr. Lytton noted a large number of posts in the entire drawing set had not been dimensioned and were indicated on the drawings by black squares with no indication as to how those posts were to be designed. Mr. Lytton addressed this point specifically in the foyer entry area of the Project (A-04), where major beams extending across the room (on each level) were supported by undetailed posts that lacked any foundation or supporting footing information.

27. The Panel notes that Mr. Lytton was provided with a copy of the plans marked as Exhibit 2; however, his evidence is equally applicable to Exhibit 3, with the exception that the absence of Detail 3 was remedied in Exhibit 3. This does not impact the import of Mr. Lytton's opinion overall and the Panel does not consider this to be material to its decision.

28. Lastly, with respect to section 2.2.4.3 of the Building Code, Mr. Lytton opined that this requires sufficient detail for the structural design to be checked, but in this instance the structural design could not be completely checked due to the omissions and discrepancies he had noted.

29. Mr. Lytton stated that the design should be checked – go through a concept review – prior to sealing, and further, that a sealed Schedule B Assurance is an indication that “everything works” and that the structure is “buildable”, noting that the S1 and S3 sheets of the drawings were marked “Issued for Tender”.

30. On cross-examination, Mr. Lytton confirmed that he had reviewed the calculations submitted by Mr. Lim. Mr. Lytton found the seismic and wind calculations to be inadequate (the wind calculations were for Squamish) and lacking in detail. He further testified that the beam calculations were adequate but were of limited utility due to the absence of post information.

31. CD testified that he is an experienced custom residence designer; in this context CD was the lead designer on the Project. He had not worked with Mr. Lim prior to this Project. He supported testimony given by Mr. Lim that the client was challenging to work for, communication was difficult and often delayed, and that the client was unfamiliar with the Municipality context including expected construction costs and timelines. He also testified that the Municipality was very busy in 2016 with what may

have been the most Building Permits ever submitted in the history of the Municipality. Therefore, the goal or practice when working on a project was to get the drawings to point where they were sufficient for an application and could be submitted to “get in the queue” for a building permit, even if not complete, as the drawings would “evolve” and gaps would later be filled in. He testified that a specific foundation drawing for the Project was not completed but that a geotechnical report had been available based on historical information related to conditions on adjacent lots.

32. CD was asked by the owner on April 5, 2016 to interview another structural engineer who was engaged on April 9, 2016. Subsequently, further changes to the drawings were made after that date by an engineer other than Mr. Lim.

33. CD testified that the intent would be that the drawings would be expected to evolve to those issued for construction.

34. Richard Diamond was qualified as an expert as a building official and a building designer. In this manner he designs houses, works with structural engineers and also has worked as a building inspector and advised on permitting issues. Mr. Diamond is not a professional engineer.

35. Like CD and Mr. Lim, Mr. Diamond described the practice in the Municipality as submitting a minimum set of plans which would later “morph” to an “as constructed” set.

36. Mr. Diamond testified that the drawings were in his view of sufficient detail for the issuance of a permit: the plan checker would not review the engineering, they would rely upon the seal.

37. Mr. Diamond stated in his report and testified that “the information provided [in Mr. Lim’s drawings] is sufficient for any competent contractor to read the plans and construct the works in compliance with same”. However, when pressed, acknowledging that information was missing from the drawings, Mr. Diamond stated that there would “likely be questions” and that he would fill in the missing information by contacting the structural engineer. Mr. Diamond also stated that on such “evolving” projects, pricing may also change.

38. Jason Kinch, P. Eng. was qualified as an expert building official and as a construction and structural engineer. However, while qualified as a structural engineer, he admitted that his experience as a structural engineer is limited, as his career has focused on management and business. He testified that he has sealed about three drawings in the past five years.

39. In his written report, Mr. Kinch stated that “the purpose of his review was to determine if the drawing package [submitted by Mr. Lim]... met the BC Building Code

2012 (2012 BCBC) requirements for structural drawings in support of a building permit application”. However, in cross-examination, he testified that he did not conduct any structural engineering analysis.

40. As a building official, Mr. Kinch testified that the drawings would be sufficient for a building permit application and thus the issuance of a building permit. Mr. Kinch confirmed that a structural review is not done by building officials.

41. Mr. Kinch testified that he understands an engineer’s seal to represent a professional assurance that the drawings sealed conform to the Building Code.

42. Mr. Lim testified. He summarized his experience in his submissions as follows:

Mr. Lim has been engineering building systems since his graduation from BCIT in 1985 and University of Waterloo in 1991. He has been a Specialty Engineer for Engineered Wood Products (EWP) and roof and floor truss systems. He has reviewed and checked plans to produce Engineering Shop Drawings of Truss, Beams, I-joists and post structural systems. He has years of experience calculating, detailing, running design software and has sealed numerous design layouts and shop drawings throughout his career. He was also trained as a Certified Professional and have (sic) been a contract Building Inspector/Plan Checker for District of Squamish. He has been a Registered Licenced Builder in BC of Timber Framed buildings since 2012. He has been a Professional Engineer focused in the Sea to Sky Corridor since 1998 especially in the Resort Municipality of Whistler. He has engineered numerous buildings in BC, Alberta, Ontario and State of Washington for the last 27 years.

43. Mr. Lim testified that he had, at the time of the subject project, 20 to 25 projects underway, and emphasized that the owner was challenging to work with in the compressed time frame desired by the owner. For example, the owner insisted that plans be prepared and submitted but was not able to provide requested information regarding design details in a timely manner. Mr. Lim described the large number of emails traded with the client in an attempt to get information from the client, as well stating there was a balance outstanding from an unpaid invoice.

44. When examined on the drawings, Mr. Lim acknowledged that information was missing; however, he explained that in his view the missing information did not render the drawings incomplete or deficient. He testified that the drawings were submitted solely for building permit purposes and were not intended for tender or construction. He noted that on page 1 of drawing S-1 (Exhibit 2 and 3), it stated “issued for tender” but the other pages do not. It was his intention to update or “evolve” the design as further information was provided. He described the Schedule B Assurance as a “promissory note” – a promise that he would follow through with the design, shop drawing review,

field review and then sign off with Schedules C and B, such that the end-result would be a building that complied with the Building Code. Mr. Lim testified that this approach was taken because the Municipality was very busy and it took several months for a building permit to be issued. The purpose of submitting the drawings as they were was to get them into the queue for permit application, and the necessary details would be added or otherwise provided later.

45. At the time of the submission, Mr. Lim stated that not all details had been verified on site; the foundation was not yet defined as the site was under “8 feet of snow” and it was steep; nor were all the joists, beams, walls and roof. Mr. Lim testified that thus the building permit drawings are the “start of the process” and such details would be subsequently “worked out by shop drawings” and field review.

46. Mr. Lim testified that he had performed calculations that were not reflected in the drawings prior to submitting them. Additionally, he testified that he had performed additional calculations that he had never produced to the Association, despite the request during the investigation (February 14, 2017) that he produce his complete file. He stated that he provided the Association only with sample calculations, as it would have been a lot to print out everything.

47. Mr. Lim testified that it is professionally subjective as to what is “sufficient detail” on the drawings to submit. As an example, the “dark squares” indicated a column and that the details would be need to be “worked out”.

48. It was highlighted that some of the typical details provided on S-3 were not referenced, and other notations (e.g. spacings) on some typical details were incorrect and not in accordance with the Building Code.

49. Mr. Lim testified that it was an “oversight” that some sheets of the building permit drawings are marked “Issued for Tender”. It was noted that the sheets do not state that they are “for permit only” or that they are “not for construction”.

Summary – Findings of Fact

50. We repeat our finding that there is no material distinction between Exhibit 2 and Exhibit 3. The evidence of the experts applies to both exhibits and, therefore, to the drawings sealed by Mr. Lim and submitted to the Municipality.

51. The testimony of AB, Mr. Diamond, and Mr. Kinch is consistent: in the process of a building permit review, the building official relies upon the seal of the professional engineer as an assurance that the structural design is sufficient and that the plans meet the Building Code. The reviewer does not perform any independent engineering analysis for that purpose.

52. Mr. Lim has argued that neither Mr. Lytton nor Mr. Gray had worked as a plan reviewer. However, the issue is not whether the plans were sufficient to provide for the issuance of a building permit (which was issued); it is whether the drawings sealed and submitted meet the professional standards required of an engineer.

53. The evidence of CD, Mr. Diamond and Mr. Lim appears to be consistent that it was not untypical in the Municipality in 2016 to submit plans to the Municipality at an early stage of design and subsequently complete or modify the plans once the building permit was issued. However, that does not address the professional standard required of a professional engineer.

54. Upon a review of the evidence of the relevant experts, and its review of Exhibit 3, the Panel is satisfied that the plans sealed and submitted omitted material information, including incomplete load paths; incomplete beam, joist and column sizing; lack of foundation details; and lack of roof framing details. In this regard the Panel accepts the evidence of Mr. Lytton, described in more detail at Paragraph 26 and 27 above. The Panel accepts the expert evidence of Mr. Gray (Paragraph 20) that the drawings were 50% to 75% complete. Mr. Lim testified under cross examination that he had not verified everything on site and thus could not work out some details.

55. Additionally, the Panel finds that the drawings contained other errors and discrepancies, including:

- a) Concrete topping was not included in the floor dead load on Drawing S-1, under Section 2 – Design Loads. Detail 4 on S-3 of the drawings includes a notation “Conc. Topping Typ”, suggesting that concrete topping would be used. This is significant since the dead load allowed for by Mr. Lim on S-1 in Section 2 – Design Loads is roughly half of what would be required if concrete topping was installed.
- b) As admitted by Mr. Lim during cross-examination, the horizontal spacing for rebar on Detail 7 on S-3 was not correct as his specification was double that permitted by the Building Code and he confirmed there was no provision for the fireplace foundation, as the details had not yet been determined.
- c) As noted by Mr. Lytton in his report, the details on S-3 (pages 2-3) refer to “plans” that do not exist.

Has Mr. Lim Demonstrated Unprofessional Conduct?

56. Section 33(1)(c) of the Act provides that the Discipline Committee may determine that the member “has demonstrated incompetence, negligence or unprofessional conduct”.

Association’s Submissions

57. In this case, the Association alleges “unprofessional conduct”. It relies upon the definition adopted in a prior decision of the discipline committee of the Association, *Re Foreman*, that is, conduct that is a “marked departure from the standard expected of a competent professional”.

58. The Association relies upon the Association’s *Code of Ethics*, which state that an engineer shall “[p]rovide an opinion on a professional subject only when it is founded upon adequate knowledge and honest conviction”.

59. The Association argued that the standards of conduct can be inferred from Association and industry publications.

60. The Association referred in particular to the Association’s *Quality Management Guidelines - Use of the APEGBC Seal*. These provide that the seal “should be considered a ‘mark of reliance’, an indication that others can rely on the fact that the opinions, judgments, or designs in the sealed documents were provided by an APEGBC professional held to high standards of knowledge, skill and ethical conduct.”

61. The Association next referred to the Association’s *Guidelines for Professional Structural Engineering Services for Part 9 Buildings in British Columbia*, noting that the Project had Part 9 components. These Guidelines state that a structural engineer designing a Part 9 building should assess gravity and lateral loads in accordance with Canadian Wood Council’s *Engineering Guide for Wood Frame Construction, 2009 ed.* (“CWC Guide”):

APEGBC professionals are required to design in accordance with good engineering practice. For Part 9 buildings, this means that the vulnerability of the primary structural system to gravity and lateral loads should be evaluated and mitigated as necessary. Sentence 9.4.1.1(1)(b) and Subclause 9.23.13.1(1)(b)(iii) of the *building code* states that structural members and their connections must be designed according to good engineering practice, such as the Canadian Wood Council (CWC) 2009, *“Engineering Guide for Wood Frame Construction”*. APEGBC professionals designing Part 9 buildings are therefore required to apply the CWC 2009 as a minimum standard of practice for gravity and lateral loads. (p. 10; underlining added)

62. The Association referred to the “Design Requirements” in the CWC Guide:

3.3.1 Structural Integrity

All members shall be so framed, anchored, tied, and braced together to provide the strength and rigidity necessary for the purpose for which they are designed. All structural members shall be of adequate size and quality to carry all loads and other forces that can be reasonably expected to act upon them during construction and occupancy without exceeding the ultimate or serviceability limit states.

63. The Association submitted that section 2.2.4.3 of the Building Code directly parallels the CWC Guide and the definition of “design check” in the Association’s *Quality Management Guidelines - Documented Checks of Engineering and Geoscience Work*. These Guidelines define design check as a “documented process to confirm that the professional engineering...is complete, meets all input requirements and is suitable for its intended work or purpose”. Association counsel argued that in the circumstances of structural permit drawings, a design check would mean a check of the dimensions, location and size of all structural members.

64. As to Mr. Lim’s argument that section 2.2.4.3 refers to a “check” by a building official rather than a design check, the Association submits that such a limited check would be insufficient. It also notes that the Municipality’s *Consolidated Building and Plumbing Regulation Bylaw No. 1617, 2002* (the “Municipality Bylaw”) expressly disclaims responsibility for what is referred to as “a limited and interim spot-checking function”:

14.1 Neither the issuance of a permit under this bylaw, the review and acceptance of the drawings, plans and specifications, nor inspections made by a building official, shall constitute a representation or warranty that the Building Code or this bylaw have been complied with or that the building or structure meet any standard of materials and workmanship, and no person shall rely on any of those acts as establishing compliance with the Building Code or this bylaw or any standard of construction.

65. The Association submitted that sections 14(b)(2) and (4) of the Association Bylaws do not require that an independent review of the design is performed prior to submission of the drawings for a building permit application. However, the Association takes the position that section 2.2.4.3(1)(c) requires that sufficient detail be provided to enable a design check, as defined in the relevant Guideline, to be performed.

66. The Association argued that, taken together, the sources relied upon demonstrate an expected standard of conduct: an engineer may only seal and submit structural drawings for an application for a building permit where structural members are of

adequate size and quality to carry all loads and other expected forces and the drawings indicate that detail in a manner that can be subject to a design check.

67. The Association submits that Mr. Lim's failure to include the size and quality of beams, posts, and shear walls on the drawings fell below the minimum standards required.

68. Mr. Lim did not address the Association's arguments regarding the authorities or Association publications. Mr. Lim's arguments regarding the meaning of "checked" in section 2.2.4.3(1)(c) of the Building Code are set out below.

Mr. Lim's Submissions

69. Mr. Lim's primary position throughout these proceedings was that the drawings submitted to the Municipality were required only to meet a standard necessary for the issuance of a building permit. It was his position that any missing information or discrepancies in the drawings could and would be remedied at a later date.

70. Mr. Lim submits this standard was met on the basis of the testimony of the qualified building officials who testified that the drawings were sufficient for issuance of a building permit and because the building permit for the Project was in fact issued.

71. Mr. Lim submits that he had a professional obligation to update and "evolve" the plans after submission and prior to construction and that he acted in accordance with this obligation until he was discharged and withdrew from the Project. He repeatedly submitted that the Schedule B Assurance was a "promissory note".

72. Mr. Lim argued that section 2.2.4.3(1)(c) of the Building Code only requires that sufficient detail be provided to enable the plans submitted to be "checked" by a building official or plan reviewer. For reference, the full section is below.

2.2.4.3. Information Required on Structural Drawings

1) Structural drawings and related documents submitted with the application to build shall indicate, in addition to those items specified in Article 2.2.4.6. and in Part 4 of Division B applicable to the specific material,

a) the name and address of the person responsible for the structural design,

b) the date of issue of the Code and standards to which the design conforms,

c) the dimensions, location and size of all structural members in sufficient detail to enable the design to be checked,

d) sufficient detail to enable the dead loads to be determined, and

e) all effects and loads, other than dead loads, used for the design of the structural members and exterior cladding. (underlining added)

73. Mr. Lim noted the definition of plan reviewer in the *Building Officials' Association of BC Bylaws* – a person who has the responsibility to review building plans to determine compliance with building regulations.

74. Mr. Lim also argues that his position is consistent with practice generally, and was certainly consistent with practice in the construction industry in Whistler in 2016. The Association responds that industry practice is not available as a “defence” to a required standard of conduct, unless there is sufficient evidence to demonstrate that there is a responsible and competent body of professional opinion supporting the conduct.

Discussion

75. Unprofessional conduct is not defined in the Act. The Panel adopts the definition set out in *Re Foreman*, which is that unprofessional conduct is that which is a “marked departure from the standard expected of a competent professional”:

[93] The Association’s *Code of Ethics Guidelines* addresses the standard of professional conduct as follows:

“The APEGBC Code of Ethics serves several purposes. It designates the standard of conduct expected of engineers and geoscientists in easily understandable terms. It distinguishes appropriate professional conduct from that which fails to meet a required standard. The Code also provides a basis on which allegations of unprofessional conduct are adjudicated by the Discipline Committee or other groups charged with responsibilities related to the conduct of members.”

[94] Hence, unprofessional conduct is that which does not meet the standard expected through application of the *Code of Ethics*. The Panel accepts the submission of the Association, based on *Law Society of British Columbia v. Martin, 2005 LSBC 16*, that professional misconduct is established when there is a marked departure from the standard to be expected of a competent professional, and that minor or inadvertent failure to comply with professional standards does not constitute unprofessional conduct. (underlining added)

76. The sources that the Panel draws upon in assessing the standard expected of a member of the profession include the *Code of Ethics*, Association Bylaws, industry and Association publications and past relevant disciplinary decisions. As well, the Panel has considered the opinions of the witnesses who were qualified as experts in structural

engineering. The Panel accepts that the expert opinion evidence of professional standards is available to assist, but the ultimate determination is up to this Panel.

77. The Panel has noted the evidence of Mr. Diamond, CD and Mr. Lim that plans are commonly submitted for permit at an early and incomplete stage of development – to get them “in the queue” for consideration by the municipality. In the Panel’s view, this does not meet the test set out in *Brett v. Ontario (Board of Directors of Physiotherapy)*, 1991 CanLII 8286, aff’d 1993 CanLII 9290, of evidence that there is a body of competent and responsible opinion supporting this practice. All building officials and CD said that they do not check the engineering when reviewing drawings. That is to say, the building officials and designer rely upon the engineer to have fulfilled his or her professional responsibilities.

78. The Panel considered *Re Familamiri*, and *Familamiri v. Association of Professional Engineers and Geoscientists of British Columbia*, [2004] B.C.J. No. 995. That case was similar to that before this Panel. The engineer was alleged and eventually found to have committed unprofessional conduct when he sealed and submitted drawings in support of an application for a building permit that were inadequate due to omissions and deficiencies. The panel reasoned:

Professional engineers are held to a high standard of responsibility and professional practice. The reliance on a drafting service for drawings does not remove the need to provide clear structural instructions and details, which clearly indicate critical areas of construction and the required method of transmitting the load path from roof to foundation for all loads. The designer should not be relying on the Framing contractor to provide, on site, additional studs to transmit these loads. The engineer should also be showing this detail as well as the correct method of supporting beams and joists using metal hangers or other appropriate means.

In reviewing the evidence provided by the member and the witnesses, the Panel concluded that Mr. Familamiri did not use good judgment and demonstrated unprofessional conduct in his application procedure for a building permit from the City.

Mr. Familamiri applied for a permit when he knew he did not have sufficient information to complete his design of the structural members of the building and neglected to remove the note referring to one and a half inch concrete topping on the floors, which he has stated was never intended to be incorporated in the building. (p. 8)

79. The Panel notes the decision of the BC Supreme Court upholding the decision of the panel, and approving the passage above. The Panel also notes that the Court rejected Mr. Familamiri’s argument, much like Mr. Lim’s, that industry practice is that construction is a “dynamic process”.

80. The Panel agrees with the panel in *Re Familamiri* that professional engineers are held to a high standard of responsibility and practice. The role of an engineer in the preparation of structural plans is to analyze and document the requirements for the design and construction of a structure that will withstand forces brought to bear upon it. This is the unique expertise brought to the construction process by a qualified engineer.

81. The Association's *Guidelines for Professional Structural Engineering Services for Part 9 Buildings in British Columbia* set standards of practice for Association professionals. These Guidelines state that a structural engineer designing a Part 9 building should assess gravity and lateral loads using the CWC Guide.

82. The CWC Guide describes the structural integrity in design requirements as follows:

3.3.1 Structural Integrity

All members shall be so framed, anchored, tied, and braced together to provide the strength and rigidity necessary for the purpose for which they are designed. All structural members shall be of adequate size and quality to carry all loads and other forces that can be reasonably expected to act upon them during construction and occupancy without exceeding the ultimate or serviceability limit states.

83. The profession has a well-developed practice for the documentation and check of engineering analysis. The Panel accepts the Association's submission that section 14(b) of the Association Bylaws did not require an independent review of the plans by another engineer prior to their submission for a building permit application. However, as set out in the Association's *Quality Management Guidelines - Documented Checks of Engineering and Geoscience Work*, a design check is "a documented process to confirm that the engineering or professional geoscience work is complete, meets all input requirements and is suitable for its intended use or purpose." In the Panel's view, the dimensions, location and size of all structural members were fundamental components to the design.

84. The Panel notes Mr. Lim's testimony and argument that the plans submitted were only for building permit purposes, and not for tender or for construction. However, no limitation was expressed on the drawings. The Panel further notes that the process described by Mr. Lim, i.e. the submission of sealed drawings at an early stage to "get into the queue", with the intent of adding structural details later, adds a significant element of risk to the public that critical details will be missed, and that the structure as built may not meet the required design standards.

85. The Panel rejects Mr. Lim's argument that the Schedule B Assurance was a promise that *in future* the design would be completed and corrected. Schedule B states

that “the design of the ...structural... components of the plans and supporting documents prepared by this registered professional of record in support of the application for the building permit as outlined below substantially comply with the B.C. Building Code and other applicable enactments respecting safety except for construction safety aspects.” The Assurance expressly applies to the plans *as submitted*.

86. The Panel has also considered the argument regarding the third allegation. Mr. Lim argues that level of detail required by section 2.2.4.3(1)(c) of the Building Code (the dimensions, location and size of all structural members in sufficient detail to enable the design to be checked) is that there is sufficient detail to enable the design to be “checked” *by a plan reviewer*.

87. In the Panel’s view, this is incorrect.

88. As the building officials and building designer have testified in this hearing, the plan reviewers do not conduct any engineering analysis. They are not trained to do so. The Municipality relies upon the engineer. Their “check” is to ensure that drawings bear an engineer’s seal and that an engineer has provided the Schedule B Assurance.

89. This is consistent with the Municipality Bylaw. It states in s. 3.2: “The activities undertaken by or on behalf of the Resort Municipality of Whistler pursuant to this bylaw are for the sole purpose of providing a limited and interim spot checking function for reasons of health, safety and the protection of persons and property.” It provides that the Municipality’s review is not for the purposes of ensuring compliance with the Building Code, and that its review and issuance of a building permit is not a representation or warranty of compliance (s. 14.1).

90. Therefore, section 2.2.4.3 of the Building Code clearly cannot be read to mean that a plan reviewer is to perform a check of the dimensions, location and size of structural members.

91. The Panel also notes that the wording of section 2.2.4.3 parallels the language in the Association’s *Quality Management Guidelines - Documented Checks of Engineering and Geoscience Work* and CWC Guide which set the standards for engineers.

92. In the Panel’s view, the “check” required by section 2.2.4.3 is a “design check”, as that term is defined in Association publications and engineering practice. That is to say, the level of detail required is that which would enable a design check by a professional engineer.

93. The Panel then considered the use of the engineering seal. The Association’s *Quality Management Guidelines - Use of the APEGBC Seal* states:

3.1.1. The purpose of the proper and appropriate use of the seal is to authenticate documents prepared and delivered by APEGBC professionals in their professional capacity or under their direct supervision. The seal is not a mark of warranty. It is not a guarantee of accuracy. Instead, it should be considered a “mark of reliance”, an indication that others can rely on the fact that the opinions, judgments, or designs in the sealed documents were provided by an APEGBC professional held to high standards of knowledge, skill and ethical conduct.

...

3.1.3 Aside from the issue of authentication, the seal is important because it is a visible commitment to the standards of the professions, and signifies to the user of the document that an APEGBC professional has accepted professional responsibility for the document. When an APEGBC professional seals, signs and dates a document he or she is confirming the following:

...

- the relevant legislation has been met
- the applicable requirements under the Act and Bylaws have been met including the quality management Bylaw and the code of ethics...(underlining added)

94. An engineer’s seal is an attestation that the sealed document meets the high standards of the profession. When an engineer applies his or her seal to drawings submitted in support of a building permit application, he or she confirms their reliability and that the “relevant legislation” – in this case, the Building Code – has been met.

95. In this case, the drawings sealed and submitted by Mr. Lim to the Municipality did not meet these standards. There were material omissions and deficiencies, and the omissions were such that a design check could not be performed. The Panel is therefore satisfied that Mr. Lim engaged in unprofessional conduct by sealing and submitting the drawings dated February 19, 2016, which were materially incomplete and lacking in sufficient detail to allow the design to be checked.

96. While the Panel was in deliberations, Association counsel sent a copy of the decision of a discipline committee of the Association dated February 15, 2019, *Re Syed*, to the Panel and to Mr. Lim. The Association drew the Panel’s attention to a finding by the Syed panel that by failing to detail primary structural elements, Mr. Syed failed to meet professional standards. Mr. Lim responded that Mr. Syed had not appeared at his hearing and therefore mounted no defence to the Association’s arguments. This Panel has found that the Syed decision is unnecessary to its analysis herein.

Summary

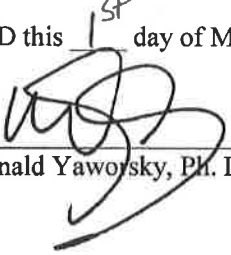
97. In summary, the Panel finds the allegations have been proven to the required standard, and, pursuant to s. 33(1)(c) of the Act, finds that Mr. Lim has demonstrated unprofessional conduct.

98. The Panel is now required to determine whether sanctions should be imposed upon Mr. Lim pursuant to s. 33(2) of the Act and whether to impose costs pursuant to s. 35 of the Act. The Panel requests that the parties provide written submissions in accordance with the following schedule:

- a) Submissions must be delivered by counsel for the Association (“Association Submissions”) to Mr. Lim and to the Panel within 30 days of the date of this decision.
- b) Submissions must be delivered by Mr. Lim to counsel for the Association and to the Panel within 30 days of the receipt of the Association Submissions.
- c) Reply submissions may be delivered by counsel for the Association to Mr. Lim and to the Panel within 15 days of receipt of Mr. Lim’s submissions.
- d) Submissions for the Panel shall be delivered to Jean Whittow Q.C., counsel for the Panel and may be delivered electronically.

99. In lieu of preparing a written submission, Mr. Lim may choose to request an oral hearing no later than within 15 days of receipt of the Association Submissions.

DATED this ^{1st} day of March 2019.



Dr. Ronald Yaworsky, Ph. D., P. Eng., Chair

Neil Cumming, P. Eng.

Christopher Arthur, P. Eng.

Summary

97. In summary, the Panel finds the allegations have been proven to the required standard, and, pursuant to s. 33(1)(c) of the Act, finds that Mr. Lim has demonstrated unprofessional conduct.


98. The Panel is now required to determine whether sanctions should be imposed upon Mr. Lim pursuant to s. 33(2) of the Act and whether to impose costs pursuant to s. 35 of the Act. The Panel requests that the parties provide written submissions in accordance with the following schedule:

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99. In lieu of preparing a written submission, Mr. Lim may choose to request an oral hearing no later than within 15 days of receipt of the Association Submissions.

DATED this 1st day of March 2019.

Dr. Ronald Yaworsky, Ph. D., P. Eng., Chair



Neil Cumming, P. Eng.

Christopher Arthur, P. Eng.

Summary

97. In summary, the Panel finds the allegations have been proven to the required standard, and, pursuant to s. 33(1)(c) of the Act, finds that Mr. Lim has demonstrated unprofessional conduct.

98. The Panel is now required to determine whether sanctions should be imposed upon Mr. Lim pursuant to s. 33(2) of the Act and whether to impose costs pursuant to s. 35 of the Act. The Panel requests that the parties provide written submissions in accordance with the following schedule:

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- d) Submissions for the Panel shall be delivered to Jean Whittow Q.C., counsel for the Panel and may be delivered electronically.

99. In lieu of preparing a written submission, Mr. Lim may choose to request an oral hearing no later than within 15 days of receipt of the Association Submissions.

DATED this 2nd day of March 2019.

Dr. Ronald Yaworsky, Ph. D., P. Eng., Chair

Neil Cumming, P. Eng.



Christopher Arthur, P. Eng.