IN THE MATTER OF the *Public Inquiries Act*, 2009, S.O. 2009, c. 33, Sched. 6

AND IN THE MATTER OF The Elliot Lake Commission of Inquiry, established by Order in Council 1097/2012 dated July 19, 2012

SUBMISSIONS OF THE ASSOCIATION OF PROFESSIONAL ENGINEERS OF ONTARIO ("PEO")

Professional Engineers Ontario
40 Sheppard Ave. West
Suite 101
Toronto, ON M2N 6K9

Leah Price
Counsel, Regulatory Compliance
Tel: 416-840-1099
Fax: 416-224-9562

Stockwoods LLP
Barristers
Royal Trust Tower
77 King Street West
Suite 4130, P.O. Box 140
Toronto-Dominion Centre
Toronto, ON M5K 1H1

Phil Tunley LSUC#: 26402J
Direct: 416-593-3495

Luisa Ritacca LSUC#: 44214H
Direct: 416-593-2492

Tel: 416-593-7200
Fax: 416-593-9345

INDEX

I) Overview

1. PEO sought and obtained standing as a Participant in Part 1 of the Elliot Lake Commission of Inquiry (the "Inquiry") for the purpose of assisting the Inquiry by:
   a) providing information concerning the regulation of professional engineers and professional engineering in Ontario; and
   b) recommending appropriate changes or additions to applicable legislation, regulations, standards and codes in relation to professional engineers, in areas relevant to the events leading up to the collapse of the Algo Centre Mall (the "Mall").

2. The Inquiry has heard a great deal of evidence concerning the involvement of professional engineers with the Mall over the 30 years preceding the collapse. The witnesses before the Inquiry have highlighted a number of areas of concern. These include:
   a) the lack of any legislative requirements or standards for structural engineering inspections of existing buildings such as the Mall;
   b) the apparent unavailability of prior engineering inspection reports;
   c) the inaccessibility of comprehensive information concerning the licensing and discipline history of professional engineers;
   d) the qualifications of the professional engineers conducting or supervising inspections of large structures such as the Mall; and
   e) the standards applicable to supervision by professional engineers of work carried out by non-licensees, or persons whose licences have been suspended or revoked.

3. These submissions contain PEO's initial recommendations to the Commissioner in each of the foregoing areas of concern, as a starting point for discussion. PEO proposes to refine, clarify or adjust these recommendations during and following the policy "roundtable" process expected to take place this fall.

4. As PEO's participation relates solely to its regulatory role and expertise, PEO will not be seeking any factual findings, and does not propose to make any submissions concerning factual findings.

II) Submissions and Recommendations

A) Structural Review of Existing Buildings

5. *The Building Code Act 1992*, S.O. 1992, c.23, requires that the construction, alteration or enlargement of buildings like the Algo Centre Mall be reviewed by an engineer.[1]

6. The *Building Code* requires that this review be conducted in accordance with the performance standards of PEO.[2] PEO has in turn promulgated a performance standard (the "Performance Standard") for such reviews that has the force of the law.[3] Among other things, the Performance Standard requires the reviewing engineer to "record deficiencies found during site visits and provide the client, the contractor and the owner with written reports of the deficiencies and the actions that must be taken to rectify the deficiencies."[4]

7. The *Building Code* requires that such reports be provided to the Chief Building Official ("CBO") of the relevant municipality.[5]

8. None of the foregoing requirements apply to *existing* buildings. Accordingly, there is no clear legislative requirement for structural review of existing buildings such as the Mall. Furthermore, if an owner chooses to retain a professional engineer to carry out a review, inspection or examination of the structure of an existing building, there is no legislatively

[1] *Building Code*, O.Reg. 332/12 s. 1.2.2.1
[2] *Building Code*, s. 1.2.2.1(2)
[3] O.Reg. 260/08 passed under subsection 7(1)(17) of the *Professional Engineers Act* ("PEA")
[4] Performance Standard s. 2(2)1(ii)
[5] *Building Code*, s.1.2.2.1(3)

mandated standard for carrying out the work. The scope of the inspection and the nature of the report are matters left to be resolved by agreement between the owner and the professional engineer.

9. Even where a CBO or other municipal official has mandated a review or inspection by way of an order, the scope of the review will be a matter left strictly to agreement between the owner and the professional engineer, unless the Order itself spells out specifically what is to be done, and how it is to be done.

10. In this case, for example, Bruce Ewald, Elliot Lake's CBO, issued an Order to Remedy on September 25, 2009[6] to the owner of the Mall. The Order to Remedy required the owner of the Mall to "have the entire mall area inspected by a Structural Engineer licensed in the Province of Ontario...". Mr. Ewald testified that he would have expected the engineer retained by the owner to check the connections, and to proceed to destructive testing, if he thought it was needed. Mr. Ewald did not expect that the engineer would have just inspected the areas referred to in the body of the Order to Remedy.[7]

11. The evidence of Robert Wood was, however, that he carried out the instructions of his client, the owner, and performed a visual inspection only. He did not obtain detailed background information concerning, for example, the history of leaking at the Mall.[8]

12. Had there been a legislated standard for inspection of existing buildings, both the Order to Remedy and Mr. Wood's scope of work would have been guided by such a standard. It is reasonable to expect that in these circumstances the inspection might have been more extensive, and detailed background information would likely have been obtained.

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[6] Order to Remedy dated September 25, 2009, Exhibit 1241

[7] Evidence of Bruce Ewald, Transcript, May 27, p. 11626, lines 9-14; p. 11656, line 7, to p. 11657, line 6

[8] Evidence of Robert Wood, Transcript, June 6, pp.13314-13317, and see MRW Letter dated October 28, 2009, Exhibit 103

13. After the collapse of the Mall, PEO prepared and released a Practice Bulletin entitled *Structural Engineering Assessments of Existing Buildings* (the "Bulletin").[9] The following extracts from the Bulletin deal with issues that might have been of assistance in connection with inspections of the Mall:

> "...
>
> Engineers conducting structural engineering assessments of existing buildings should work with written agreements with their clients that specify, but are not limited to:
>
> 1. access to all documents and drawings they say they require to conduct the assessments, such as original design and construction documents and drawings. Alternatively, if these documents and drawings are not available, engineers may determine that they require additional field work, such as obtaining measurements of the structural elements, to obtain the needed information to conduct their assessments;
>
> 2. access to copies of prior building assessments, as well as maintenance and repair records of buildings being assessed;
>
> 3. access to buildings being assessed and all the critical areas engineers identify; and
>
> 4. additional investigations engineers determine to be required after reviewing preliminary data.
>
> ...
> Engineers conducting structural engineering assessments of existing buildings are expected to visit the buildings and carry out, with due diligence, visual inspections of:
>
> - the condition of building structures – to identify types of structural defects, signs of structural distress and deformation, and signs of material deterioration;
>
> - the loading on building structures – to identify deviations from their intended uses, and/or misuse and abuse, which can result in overloading;
>
> - additions or alteration works affecting building structures – to identify additions or alteration works that can result in overloading or adverse effects on structures; and
>
> - non-structural components that might affect structural systems.

[9] Bulletin, Exhibit 5160

If signs of structural deterioration or defects are present, engineers should provide opinions on the severity of the deteriorations or defects and recommend appropriate actions to be taken. Such actions might involve repair works or full structural investigation to parts or the whole of the buildings.

Conducting visual inspections can be difficult, as main structural elements, in buildings may have been covered up by finishes. It is, therefore, important that engineers exercise professional judgement to determine which covered areas should be exposed for inspection. Reference to structural layout plans to determine the presence of critical structural elements is crucial under such circumstances.

Inspections will, on occasion, yield information that indicates a structural problem might exist, requiring testing that was not included in the original scope of the inspection. Engineers should not hesitate to recommend to clients additional tests to uncover potential structural problems.

...

Engineers need to quantify observed structural deterioration or defects and analyze their potential impact on structures, as well as provide engineering opinions on the potential impacts of deterioration or defects. For example, a structural steel element under corrosion should be measured for section loss and the engineer should provide an engineering opinion on the potential impact of the measured loss.

...

Engineers should present their findings in reports addressed to their clients. The level of appropriate report detail depends on the original reason for assessments and will, by necessity, match the degree of complexity of the inspections and analyses. Reports should include but not be limited to:

- reasons for conducting structural engineering assessments;
- names of clients;
- addresses of buildings assessed;
- descriptions of buildings' main usages;
- clear descriptions of the actions performed, including when they were performed, and by whom;
- descriptions of areas not covered by visual inspections, why they were not covered, and engineering opinions about whether such areas are critical to the overall structural integrity of buildings;

...

- records of observations of signs of structural defects, damage, distress, deformation or deterioration;

...

- engineering opinions on the extent, possible causes and seriousness of identified problems;

- engineering opinions about whether identified problems are:
  - defects of no structural significance,
  - defects requiring remedial action and/or monitoring, or
  - suspected defects of structural significance requiring full structural investigation and immediate action;
- recommendations on remedial actions and/or monitoring to be undertaken by clients to ensure buildings' structural integrity, for example, restricting usage, relocating heavy machineries, removing additions, further investigation on structural adequacy, or phasing buildings out of service. Such recommendations should include timeframes within which repairs are recommended;

...

All opinions expressed in reports should be supported by relevant analyses or discussions. For example, if the opinion on a particular problem is that it is of no structural significance, the report should provide sufficient explanation to support that opinion.

The *Professional Engineers Act* requires engineers to affix their seals to final documents containing engineering content provided as part of services to the public. Reports of structural engineering assessments of existing buildings contain statements of professional opinion and therefore must be sealed. For further information on the use of the seal, refer to the guideline *Use of the Professional Engineer's Seal* at www.peo.on.ca/Guidelines/UseOfTheProfEngSeal2010.pdf."

14. Hassan Saffarini, P.Eng., testified that the Bulletin provided more specific language and guidance regarding what is to be done than had been available before.[10]

15. Under Regulation 941, passed under the PEA, it is professional misconduct to fail "to make responsible provision for complying with applicable statutes, regulations, standards, codes, by-laws and rules...".[11] It is also professional misconduct to breach the PEA or any regulation passed thereunder (other than the code of ethics).[12] It is *not*, however, necessarily professional misconduct to fail to comply with, or even to breach, the requirements set out in any guidelines, even Guidelines promulgated by PEO and published on PEO's own website.

[10] Evidence of Hassan Saffarini, Transcript, May 29, p.12324
[11] Regulation 941, s. 72(2)(d)
[12] Regulation 941, s. 72(2)(g)

16. The Bulletin currently has no more legal force than any other guideline. PEO believes that the public interest would be better served if the Bulletin were made binding and enforceable. The Bulletin should be enacted by a regulation, as a Performance Standard under section 7(1)17 of the PEA.

17. The Bulletin contains provisions dealing with the report to be prepared in connection with structural assessments of existing buildings (the "Structural Adequacy Report"). The upcoming "roundtable" process will be helpful to PEO, in its consideration of the question of whether the contents of the Structural Adequacy Report should be further expanded beyond the elements currently delineated in the Bulletin. In any event, the Structural Adequacy Report should be dated, signed, and sealed, in order that its contents can be relied upon.[13]This should form part of the Performance Standard under the regulation to be passed.

18. Further, the Ontario *Building Code* should be amended to set out the circumstances in which the Performance Standard would apply as a matter of law. The *Building Code* could provide that a Structural Adequacy Report prepared in accordance with the strictures of the Performance Standard will be required where a structural engineering assessment is done for the purpose of:

    a) complying with an order issued by a CBO or a Ministry of Labour inspector;
    b) verifying that damage caused by fire, earthquake or vibration, impact, flooding or the imposition of live or snow loads exceeding those specified in the building code does not compromise the structural integrity of the building;
    c) carrying out any scheduled structural inspections that may be called for in legislation by reason of the age of a structure;
    d) verifying that any loading imposed by a new or proposed adjacent building does not compromise the structural integrity of the existing building;
    e) verifying that any excavation done adjacent to the building does not compromise the structural integrity of the building; or

[13] See, in this connection, Regulation 941, s. 53, and PEO's Guideline Respecting Use of the Professional Engineer's Seal published on PEO's website

f) carrying out any other structural engineering assessments specifically called for in legislation.

Recommendation #1

19. **PEO's Practice Bulletin entitled "Structural Engineering Assessments of Existing Buildings" should be enacted as a Performance Standard under the authority of subsection 7(1)(17) of the PEA for the purpose of carrying out structural engineering assessments.**

Recommendation #2

20. **The Performance Standard should require that the report to be prepared by a professional engineer following a structural assessment of an existing building could include the following information:**

- **reasons for conducting structural engineering assessments;**
- **names of clients;**
- **addresses of buildings assessed;**
- **descriptions of buildings' main usages;**
- **clear descriptions of the actions performed, including when they were performed, and by whom;**
- **descriptions of areas not covered by visual inspections, why they were not covered, and engineering opinions about whether such areas are critical to the overall structural integrity of buildings;**
- **records of, and comments on, observations of loading conditions, indicating usages at different parts of buildings, and identifying misuse, abuse or deviations from intended uses;**
- **records of and comments on findings of additions and alteration works to building structures;**
- **records of observations of signs of structural defects, damage, distress, deformation or deterioration;**
- **engineering opinions about whether existing usages and loading conditions are compatible with structures' intended uses;**
- **engineering opinions on the extent, possible causes and seriousness of identified problems;**
- **engineering opinions about whether identified problems are:**
  - **defects of no structural significance,**
  - **defects requiring remedial action and/or monitoring, or**
  - **suspected defects of structural significance requiring full structural investigation and immediate action;**

- **recommendations on remedial actions and/or monitoring to be undertaken by clients to ensure buildings' structural integrity, for example, restricting usage, relocating heavy machineries, removing additions, further investigation on structural adequacy, or phasing buildings out of service. Such recommendations should include timeframes within which repairs are recommended;**
- **relevant sketches, plans and photographs with titles, explanations, and references to written portions of reports;**
- **disclaimers that limit the liability of C of A holders to the specific intent and content of reports;**
- **limitations and restrictions on engineers' work; and**
- **additional recommended tests or investigations**

Recommendation #3

21. **The Report should be called a "Structural Adequacy Report", and should be required to be dated, signed and sealed.**

B) Availability of Engineering Inspection Reports

22. It appears from the evidence of a number of witnesses that there was a general lack of information about the problems experienced at the Mall. More particularly, professional engineers retained to carry out inspections of various types did not have information about the history of leaking problems, nor did they have copies of prior engineering reports. It is possible that, had such information been shared, more comprehensive recommendations and remedial work might have ensued.

23. For example, Brian Macdonald of CCI Group (formerly Construction Control Inc.) testified that if he had known that the parking deck had been leaking for a prolonged period of time, and that Trow had made recommendations regarding the parking deck that had not been followed, it might have changed his approach. He would have wanted to do a more thorough review, which might have included the connections.[14]

24. Similarly, the NORR Report[15] notes at page 130, that:

[14] Evidence of Brian Macdonald, Transcript, April 24, pp. 6560-6561, 6606-6608
[15] Exhibit 3007

> "engineering reports pertaining to the condition of the structure do not appear to have been passed on to subsequent owners. ...The outcome of subsequent engineering reports could have been informed by the findings of earlier investigations. ..."

25. Engineering reports were not shared with subsequent owners, or with engineers carrying out later inspections. They were also not shared with municipal officials. This meant that municipal officials may not have had sufficient information upon which to act.

26. Fred Bauthus, Elliot Lake's former Chief Administrative Officer, testified that if the information in the Trow reports had come to his attention, he would have turned them over to the CBO to review and take action.[16]

27. Mr. Bauthus agreed with Commission Counsel that, from a public policy perspective, it would be a benefit to require reports for buildings such as the Mall to be given to the municipality. Mr. Bauthus noted that at present "it is up to the owner", and "the regulatory authority may not receive information that might cause that authority to act."[17]

28. This point was echoed by other witnesses. For example, Jeff Truman, P.Eng., said that such a requirement would enable engineers to obtain prior reports, and also allow city officials to track the condition of a building through multiple owners.[18] Blaine Nicholls, an architect, thought that having a registry of engineering reports would be a good idea. The challenge would be to make it easily accessible to the public.[19]

29. PEO agrees that, structural engineering reports should be provided to the local CBO for structures referred to in Division A, Part 1, clause 1.1.2.2 of the Ontario *Building Code*. As such, they should be readily available to subsequent owners, engineers and the public. This could be accomplished by either or both of the following methods:

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[16] Evidence of Fred Bauthus, Transcript, March 26, pp. 2935-2943
[17] Evidence of Fred Bauthus, *supra*, p. 3060
[18] Evidence of Jeff Truman, Transcript, April 9, p. 4684
[19] Evidence of Blaine Nicholls, Transcript, April 30, pp. 7365-7366

a) including a requirement in the Performance Standard to be enacted under Recommendation #1, that a copy of the Structural Adequacy Report be forwarded to the CBO; and

b) amending the *Building Code* to include a reference to the Performance Standard, and a requirement that a copy of the Structural Adequacy Report be forwarded to the CBO.

Recommendation #4

30. The regulation to be passed pursuant to Recommendation #1, above, should include a requirement that a copy of the Structural Adequacy Report be provided to the appropriate CBO, in all cases where a Structural Adequacy Report is prepared in connection with structures referred to in Division A, Part 1, clause 1.1.2.2 of the *Building Code*.

Recommendation #5

31. The Ontario *Building Code* should be amended to include references to the Structural Adequacy Report and the situations in which the building owner is required to obtain such a report, in the circumstances delineated in the Performance Standard.

C) Public Access to Licensing and Discipline Information

32. Section 28 of the PEA includes provisions relating to the publication of certain information respecting the outcome of discipline hearings. The publication referred to in that section is PEO's official publication, entitled *Engineering Dimensions*, which is distributed to all licensees.

33. Subsection 28(5) of the PEA provides that orders suspending or revoking a licence or certificate of authorization *shall* be published in the official publication, with names. In

the case of other penalty orders, the Discipline Committee *may* direct that its order be published, with or without names.[20]

34. Accordingly, where a licence has been suspended *or* revoked, or the Discipline Committee has ordered publication with names, other licensees will be apprised of the outcome of the discipline proceedings.

35. The PEA also contains provisions concerning the Register required to be maintained by the Registrar of PEO. Section 21 requires that the Register contain the following information:

a) the name of every licensee and every holder of a certificate of authorization;

b) the terms, conditions and limitations attached to the licence or certificate of authorization;

c) a note of every revocation, suspension, cancellation or termination of a licence or certificate of authorization; and

d) such other information as the Registration Committee or Discipline Committee directs.

36. Pursuant to subsection 21(2) of the PEA:

"any person has the right, during normal business hours, to inspect the registers."

37. Until recently, information was not available on PEO's website concerning current licence suspensions, revocations, cancellations or terminations. Such information would be provided by staff to persons making telephone or written inquiries. The information is now, however, publicly searchable on PEO's website, by name. However, information concerning licence terms, conditions or limitations is still not available on PEO's website. A member of the public who seeks such information would have to contact staff at PEO to obtain it.

[20] PEO Overview Report, Exhibit 5331, at p.21

38. As a result, where a licensee's licence has been suspended or revoked, at present, that information is both *published* (in *Engineering Dimensions*) and *publicly available* (on PEO's website).

39. At this time, the Register maintained pursuant to section 21 of the PEA contains information concerning suspensions, revocations, cancellation, termination, limitations and conditions. It also contains such information as is directed to be placed there by the Discipline Committee, such as a recorded reprimand.

40. As noted above, it has only been recently that the foregoing information has been added to PEO's website. As a result, as is clear from the evidence at the Inquiry, a number of the witnesses were unaware that the licence of John Kadlec, who had designed the Mall, had been subsequently revoked.[21]

41. With regard to Robert Wood, the decision of the Discipline Committee was published, hence other licensees would have been apprised of the order of the Discipline Committee suspending his licence for two months, and the requirement that he write certain examinations, failing which his licence would be suspended. However, that information was not then searchable by name on PEO's public website.

42. There is also no statutory obligation on a licensee to inform his or her clients about a licence suspension. Gregory Saunders testified that there was no discussion, as far as he could recall, about notifying clients of the firm about the suspension of Mr. Wood's licence. He could not say whether Eastwood Mall (the client), or indeed the City of Elliot Lake, was aware that Mr. Wood's licence was suspended at the time he carried out the May 3, 2012 inspection and wrote the report of that inspection.[22]

[21] See, for example, the evidence of Brian MacDonald, Transcript, April 24, pp. 6604-6605
[22] Evidence of Gregory Saunders, P.Eng., Transcript, June 6, pp. 13111-13112

43. Paul Officer, currently the fire chief and formerly building inspector and CBO of Elliot Lake, testified that he did not at any time know anything about Mr. Wood's discipline history, or that Mr. Wood had lost his licence.[23]

44. PEO has considered the practices of other self-regulated professions regarding access to licensing information. PEO notes that the registers for the health professions regulated under the *Regulated Health Professions Act, 1991*, S.O. 1991, c.18 ("RHPA") and Schedule 2 thereunder ("RHPA Procedural Code") are required to contain, *in addition* to the information required to be kept in the Register under the PEA:

a) referrals to discipline;

b) the results and details of each discipline or incapacity finding, including any appeal status;

c) professional negligence or malpractice findings; and

d) if the member resigned and undertook not to reapply in the face of a complaint or investigation.[24]

45. The RHPA Procedural Code requires that all of the information required by it to be kept in the register shall be available to the public during normal business hours and "shall be posted on the College's website in a manner that is accessible to the public."[25]

46. Some other self-regulators that include discipline history information on their websites are: lawyers and paralegals (Law Society of Upper Canada), real estate agents and brokers (RECO), and teachers (OCT).

47. The Law Society also requires that a suspended licensee notify former or prospective clients who contact him or her of the suspension order.[26]

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[23] Evidence of Paul Officer, Transcript, April 23, p. 6297
[24] RHPA Procedural Code, s. 23(2)
[25] RHPA Procedural Code, s. 23(5)
[26] By-Law 7.1, made by the Law Society of Upper Canada, ss. 10-11

48. On the other hand, the bodies that regulate professional engineering in other provinces generally do not include discipline history information on their websites.[27]

49. PEO believes that enhanced transparency serves the public interest, and is consistent with the modern trend towards greater openness. To that end, PEO recommends that the PEA be amended to include additional information in the Register, and that all information in the Register be also posted on PEO's public website.

Recommendation #6

50. PEO proposes to continue to make or to add, as the case may be, the following information available on its public website, searchable by name:

- **a) the name of every licensee and every holder of a certificate of authorization;**
- **b) the terms, conditions and limitations attached to the licence or certificate of authorization;**
- **c) a note of every revocation, suspension, cancellation or termination of a licence or certificate of authorization**
- **d) information concerning upcoming Discipline Committee hearings, where a Notice of hearing has been issued;**
- **e) information concerning any findings of professional misconduct or incompetence, for a period of ten (10) years from the date of the finding(s), so long as the Discipline Committee had ordered publication with names; and**
- **f) such other information as the Registration Committee or Discipline Committee directs**

Recommendation #7

51. Subsection 21(1) of the PEA should be amended to require inclusion in the Register of:

- **a) information concerning upcoming Discipline Committee hearings, where a Notice of hearing has been issued; and**

[27] PEO has made inquiries of regulators in British Columbia, Alberta, Saskatchewan, Manitoba, Nova Scotia, Newfoundland and Yukon, and has been advised that their practices generally mirror that of PEO in so far as discipline history information is concerned.

b) **information concerning any findings of professional misconduct or incompetence, for a period of ten (10) years from the date of the finding(s), so long as the Discipline Committee had ordered publication with names.**

D) Specialist Certification

52. Under subsection 7(1)(22) of the PEA, PEO Council may make regulations, among other things, providing for the designation of licensees as specialists and prescribing the qualifications and requirements for designation as a specialist.

53. No regulation has been passed pursuant to this power. Accordingly, there are currently no legislative constraints on the areas in which a licensee may practice, and no specialty-specific certification procedures.

54. Following the Inquiry into the collapse of the Save-On-Foods store in Burnaby, steps were taken in British Columbia to enhance the qualifications of structural engineers. In 2001, the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) established a specialist designation for structural engineering. The requirements for obtaining the status of Designated Structural Engineer, or "Struct. Eng." include:

a) registration as a P.Eng. in British Columbia;
b) six years of structural engineering experience, at least two of which must be in charge of significant engineering work;
c) a demonstrated commitment to continuing professional development; and
d) completion of specified examinations.[28]

55. The design, the construction, and the structural review and inspection of large or public structures affect public safety. Inadequate design, construction, or structural review and inspection result in obvious risks to the public, as this case has so vividly demonstrated.

[28] "Registration & Licensing," APEGBC Website, http://www.apeg.bc.ca/reg/structeng

In these circumstances, PEO considers that it would be a worthwhile exercise to develop a "Structural Engineering Specialist" designation. The Structural Adequacy Report referred to in Recommendation #3, above should be prepared by a Structural Engineering Specialist in cases involving structures referred to in Division A, Part 1, clause 1.1.2.2 of the Ontario *Building Code.*

Recommendation #8

56. **PEO should develop appropriate criteria, and then enact a regulation under subsection 7(1)(22) of the PEA, prescribing the qualifications and requirements for designation as a Structural Engineering Specialist.**

Recommendation #9

57. **The Performance Standard referred to in Recommendation #2 above should provide that a Structural Adequacy Report prepared in connection with structures referred to in Division A, Part 1, clause 1.1.2.2 of *Building Code* should be prepared or checked[29], and be signed and sealed, by a Structural Engineering Specialist.**

E) Supervision of the Work of Others

58. Under subsection 12(1) of the PEA, persons who are not licensed under the PEA are prohibited from engaging in the practice of professional engineering. Subsection 12(2) prohibits offering services to the public that are within the practice of professional engineering except under and in accordance with a certificate of authorization.

59. Subsection 12(3) of the PEA contains a number of exceptions to the prohibitions contained in the subsections 12(1) and 12(2). One of the most important of these is subsection 12(3)(b), which provides:

[29] Section 53 of Regulation 941 under the PEA provides in part that final reports or other documents "prepared or checked" by a professional engineer shall be signed, dated and sealed before issuance. The word "checked" is not defined.

> "Subsections (1) and (2) do not apply to prevent a person, from doing an act that is within the practice of professional engineering where a professional engineer assumes responsibility for the services within the practice of professional engineering to which the act is related."

60. The effect of the foregoing exception is that there are no acts that must exclusively be performed by licensees. All acts that are within the practice of professional engineering may be performed (in theory) by anyone at all, *so long as* a licensed professional engineer assumes responsibility for those acts.

61. As a result of this provision, even persons whose licences are suspended, or whose licences have been revoked, may continue to practice engineering, albeit under supervision.

62. As the Inquiry has heard, Robert Wood's licence was suspended in November, 2011. He was nevertheless able to continue to practice engineering, and in fact carried out inspection that led to the May, 2012 report, which he also signed.

63. The May report was co-signed by Gregory Saunders, who also sealed it. Mr. Saunders testified that he has never been to the Mall. However, because Mr. Wood's licence was suspended, Mr. Saunders "signed off" on the May report.[30]

64. Mr. Saunders explained that he read the report and reviewed the photographs. He testified that he met with Mr. Wood for about 45 minutes. Mr. Saunders said he signed the report based on Mr. Wood's experience, the photographs, and what Mr. Wood told him.[31]

65. There is nothing in the PEA or the Regulations passed under it that specifically delineates the responsibilities of a professional engineer who supervises or co-signs a report done by another person.

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[30] Evidence of Gregory Saunders, P.Eng., Transcript, June 6, pp. 13144-131145

[31] Evidence of Gregory Saunders, P.Eng., *supra*, at pp. 13148-13149

66. Similarly, there are no Guidelines that specifically address the steps to be taken by a supervising professional engineer. The Guideline on Use of the Professional Engineer's Seal (the "Seal Guideline") does address some of these kinds of issues, however, it is neither binding (it does not have the force of a Regulation), nor comprehensive.[32]

67. The Seal Guideline contains the following relevant comments concerning the use and significance of the seal:

> "...
> For the public, the seal constitutes the distinctive mark of the professional engineer. It must be used to identify all work prepared by, or under the direct supervision of, a professional engineer as part of professional engineering services rendered to the public. It assures the document's recipient that the work meets the standards of professionalism expected of competent, experienced individuals who take personal responsibility for their judgements and decisions. The seal is important because it is a visible commitment to the standards of the profession and signifies to the public that a particular P.Eng. accepted professional responsibility for the document.
>
> Affixing the seal to a document is a statement by a professional engineer to others that they can, with a high degree of confidence, depend upon the contents of the document for the furtherance of their projects.
> ...
> Proper use of the seal is essential, since universal compliance with these rules provides the following assurances to the public:
>
> - *authorship*- signing and sealing identifies the document was created by or under the supervision of a licensed professional engineer;
>
> - *responsibility*- signing and sealing establishes that the individual identified by the seal assumes professional responsibility for the contents of the document or the portion of the contents of the document he or she prepared, and acknowledges that he or she can be held accountable for those contents; and
>
> - *reliance*- by signing and sealing a document, a professional engineer attests to the fact that others can rely on the designs, decisions, opinions, judgements or other professional statements expressed therein.
>
> ...
> Engineers must seal all final documents that are within the practice of professional engineering, provided as part of a service to the public.
> ...

[32] The Seal Guideline can be found on PEO's website, www.peo.on.ca under the heading "Publications"

Draft or incomplete documents and documents of a non-engineering nature (personal or business correspondence, contracts, leases, sales brochures, passport applications, etc.) should not be sealed.
..."

68. Subsection 7(1)(12) of the PEA empowers PEO's Council to make regulations:

"...requiring and governing the signing and sealing of documents and designs by members of the Association, holders of temporary licences and holders of limited licences, specifying the forms of seals and respecting the issuance and ownership of seals;
..."

69. As noted above, subsection 7(1)(17) of the PEA provides authority to pass regulations "respecting and governing standards of practice and performance standards for the profession."

70. PEO considers that the public interest would be served by the development and implementation of a performance standard for supervision of persons who are either unlicensed, whose licenses contain terms, conditions or limitations, or whose licences are suspended or revoked. Such a performance standard should be passed by Regulation under section 7 of the PEA.

71. PEO is not at this time in a position to delineate the details of the proposed performance standard for supervision of the work of others. However, the Law Society's By-Law 7.1 could be a useful approach.[33] It provides in section 4 as follows:

"...

1) A licensee shall assume complete professional responsibility for her or his practice of law or provision of legal services in relation to the affairs of the licensee's clients and shall directly supervise any non-licensee to whom are assigned particular tasks and functions in connection with the licensee's practice of law or provision of legal services in relation to the affairs of each client.

2) Without limiting the generality of subsection (1),

(a) the licensee shall not permit a non-licensee to accept a client on the licensee's behalf;

[33] The By-Law can be found on the website of the Law Society of Upper Canada, www.lsuc.on.ca

(b) the licensee shall maintain a direct relationship with each client throughout the licensee's retainer;

(c) the licensee shall assign to a non-licensee only tasks and functions that the non-licensee is competent to perform;

(d) the licensee shall ensure that a non-licensee does not act without the licensee's instruction;

(e) the licensee shall review a non-licensee's performance of the tasks and functions assigned to her or him at frequent intervals;

(f) the licensee shall ensure that the tasks and functions assigned to a non-licensee are performed properly and in a timely manner;

(g) the licensee shall assume responsibility for all tasks and functions performed by a non-licensee, including all documents prepared by the non-licensee; and

(h) the licensee shall ensure that a non-licensee does not, at any time, act finally in respect of the affairs of the licensee's client.

..."

Recommendation #10

72. **PEO should develop criteria for a performance standard respecting supervision of the work of persons who are:**

a) not licensed under the PEA;

b) whose licences contain terms, conditions or limitations; and

c) whose licences are under suspension, or whose licences have been revoked.

This performance standard should be enacted as a Regulation under subsection 7(1)(17) of the PEA.

Recommendation #11

73. **The performance standard referred to above should include the circumstances under which the work product of others must be signed and sealed by the supervising professional engineer. The criteria in connection with the use of the professional engineering seal, more generally, should be converted from a Guideline to a Standard to be passed by Regulation under subsection 7(1)(12) of the PEA.**

III) Concluding Submissions

74. PEO is participating, and provides these Submissions, in its capacity as the regulator of professional engineers and professional engineering in Ontario. The events leading up to the collapse of the Mall, as revealed in the evidence of many witnesses, suggest that there are areas in which PEO's regulatory framework could be enhanced. These are the areas that have been addressed in the Recommendations. It is expected that the upcoming "roundtable" sessions will give PEO, the Commission, and other Participants, the opportunity to more fully develop the ideas set out in these Submissions.

75. PEO submits that two areas that could be usefully addressed in these sessions are:

a) the lessons learned from other collapse inquiries; and

b) the views of other regulators – more particularly, other provincial engineering regulators.

76. PEO appreciates the opportunity to participate in the upcoming "roundtable" sessions. PEO proposes that these sessions be open to the public and that key PEO staff participate in these sessions. PEO's representative(s) can speak directly to current practices, and offer comments on potential changes to PEO's legislation, regulations or practices as suggested herein, or as may be under consideration by the Commission or recommended by other Participants.

IV) List of Recommendations

Recommendation #1

PEO's Practice Bulletin entitled "Structural Engineering Assessments of Existing Buildings" should be enacted as a Performance Standard under the authority of subsection 7(1)(17) of the PEA for the purpose of carrying our structural engineering assessments.

Recommendation #2

The Performance Standard should require that the report to be prepared by a professional engineer following a structural assessment of an existing building could include the following information:

- reasons for conducting structural engineering assessments;
- names of clients;
- addresses of buildings assessed;
- descriptions of buildings' main usages;
- clear descriptions of the acts performed, including when they were performed, and by whom;
- description of areas not covered by visual inspections, why they were not covered, and engineering opinions about whether such areas are critical to the overall structural integrity of the buildings;
- records of, and comments on, observations of loading conditions, indicating usages at different parts of buildings, and identifying misuse, abuse or deviations from intended uses;
- records of and comments on findings of additions and alteration work to building structures;
- records of observations of signs of structural defects, damage, distress, deformation or deterioration;
- engineering opinions about whether existing usages and loading conditions are compatible with structures' intended uses;
- engineering opinions on the extent, possible causes and seriousness of identified problems;
- engineering opinions about whether identified problems are:
  - defects of no structural significance,
  - defects requiring remedial action and/or monitoring, or
  - suspected defects of structural significance requiring full structural investigation and immediate action;
- recommendations on remedial actions and/or monitoring to be undertaken by clients to ensure buildings' structural integrity, for example, restricting usage, relocating heavy machineries, removing additions, further investigation on structural adequacy, or phasing buildings out of service. Such recommendations should include timeframes within which repairs are recommended;
- relevant sketches, plans and photographs with titles, explanations, and references to written portions of reports;
- disclaimers that limit the liability of C of A holders to the specific intent and content of reports;
- limitations and restrictions on engineers' work; and
- additional recommended tests or investigations

Recommendation #3

The Report should be called a "Structural Adequacy Report", and should be required to be dated, signed and sealed.

Recommendation #4

The regulation to be passed pursuant to Recommendation #1, above, should include a requirement that a copy of the Structural Adequacy Report be provided to the appropriate CBO, in all cases where a Structural Adequacy Report is prepared in connection with structures referred to in Division A, Part 1, clause 1.1.2.2 of the *Building Code*.

Recommendation #5

The Ontario *Building Code* should be amended to include references to the Structural Adequacy Report and the situations in which the building owner is required to obtain such a report, in the circumstances delineated in the Performance Standard.

Recommendation #6

PEO proposes to continue to make or to add, as the case may be, the following information available on its public website, searchable by name:

a) **the name of every licensee and every holder of a certificate of authorization;**
b) **the terms, conditions and limitations attached to the licence or certificate of authorization;**
c) **a note of every revocation, suspension, cancellation or termination of a licence or certificate of authorization**
d) **information concerning upcoming Discipline Committee hearings, where a Notice of Hearing has been issued;**
e) **information concerning any findings of professional misconduct or incompetence, for a period of ten (10) years from the date of the finding(s), so long as the Discipline Committee had ordered publication with names; and**
f) **such other information as the Registration Committee or Discipline Committee directs**

Recommendation #7

Subsection 21(1) of the PEA should be amended to require inclusion in the Register of:

a) **information concerning upcoming Discipline Committee hearings, where a Notice of hearing has been issued; and**

b) **information concerning any findings of professional misconduct or incompetence, for a period of ten (10) years from the date of the finding(s), so long as the Discipline Committee had ordered publication with names.**

Recommendation #8

PEO should develop appropriate criteria, and then enact a regulation under subsection 7(1)(22) of the PEA, prescribing the qualification and requirements for designation as a Structural Engineering Specialist.

Recommendation #9

The Performance Standard referred to in Recommendation #2 above should provide that a Structural Adequacy Report prepared in connection with structures referred to in Division A, Part 1, clause 1.1.2.2 of the *Building Code* should be prepared or checked, and signed and sealed by a Structural Engineering Specialist.

Recommendation #10

PEO should develop criteria for a performance standard respecting supervision of the work of persons who are:

a) **not licensed under the PEA;**

b) **whose licences contain terms, conditions or limitations; and**

c) **whose licences are under suspension, or whose licences have been revoked.**

This performance standard should be enacted as a Regulation under subsection 7(1)(17) of the PEA.

Recommendation #11

The performance standard referred to above should include the circumstances under which the work product of others must be signed and sealed by the supervising professional engineer. The criteria in connection with the use of the professional engineering seal, more generally, should be converted from a Guideline to a Standard, to be passed by Regulation under subsection 7(1)(12) of the PEA.

All of which is respectfully submitted this 8th day of August, 2013.

Leah Price
Counsel, Regulatory Compliance
Professional Engineers of Onratio

Luisa Ritacca
Barrister
Stockwoods LLP