

THE ELLIOT LAKE INQUIRY
LA COMMISSION D'ENQUÊTE SUR ELLIOT LAKE

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**Held at the Ernst Young Center
Room A, Ottawa, Ontario
on Wednesday, November 20, 2013**

**Tenu au Centre Ernst Young,
Salle A,
Ottawa, Ontario
Le mercredi , 20 novembre , 2013**

**ROUNDTABLE 3 – ROLE OF PROFESSIONALS and OTHER BUILDING
CONSULTANTS**

**BEFORE /DEVANT : The Honorable/l'honorable P.R. Bélanger,
Commissioner/Commissaire**

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APPEARANCES:

B. Carr-Harris) Roundtable Mediator

PARTICIPANTS:

C. Roney) PEO
P. Acchione) Ontario Society of Professional Engineers
J. W. Birdsell) Ontario Association of Architects
G. Miller) OACETT
D. Craig) J.L. Richards and Associates Ltd.
J. Humar) Carleton University

1 Upon commencing in Ottawa, Ontario, on Wednesday,
2 November 20, 2013 at 9:00 a.m.

3 **THE COMMISSIONER:** Welcome, Ladies and
4 Gentlemen.

5 Good morning everybody, and welcome to
6 the new participants. Welcome to the observers in this
7 room here at the Ernst Young Centre.

8 Welcome to those who are watching on
9 our website who are watching the proceedings being
10 webcasted and perhaps welcome to those who are at the
11 White Mountain Building in Elliot Lake.

12 So far that room has been rather
13 empty.

14 My name is Paul Bélanger and I am a
15 retired Judge of the Ontario Court of Justice and I am
16 the Commissioner of the Elliot Lake Inquiry.

17 I apologize to those who have heard me
18 make these comments on Monday morning, but I will
19 repeat them because we do have a new group of
20 participants.

21 Some of you may know that there are
22 three phases to the Inquiry's mandate.

23 The first was or is to examine the
24 events leading to the collapse of the Algo Centre Mall
25 in Elliot Lake on June 23rd, 2012.

1 The second phase is to examine the
2 emergency response to the collapse.

3 And third, and perhaps most important,
4 is to make recommendations, both to prevent a
5 recurrence of such a tragedy and perhaps to improve the
6 emergency management process.

7 Between March and October of this year
8 we had approximately 125 days of hearings.

9 We heard from 117 witnesses, I think.

10 We are well over 30,000 pages of
11 transcript and we are now in Ottawa for the next phase
12 of our work, which is these Policy Roundtables, after
13 which we write, write, write.

14 The purpose of these sessions is
15 simply to gather information to assist me in making
16 recommendations to the Provincial Government.

17 And as I have said, this is the most
18 important part of our mandate.

19 We cannot change the past, obviously,
20 that is a cliché.

21 But hopefully with your assistance,
22 your wise counsel, your guidance, your expertise and
23 your experience we can make collectively Ontario a
24 safer place for its citizens.

25 We were determined to hold all of our

1 hearings in Elliot Lake so that the residents could
2 feel that they had a direct way of participating in our
3 process.

4 I think we succeeded in that aspect of
5 our mandate.

6 However, these Policy Roundtables
7 being what they are, it was simply not economically
8 feasible to transport everybody up to Elliot Lake,
9 although I am sure many of you wanted or would have
10 relished the opportunity to do that.

11 These sessions, as I have said, are
12 being webcasted on our website. They are screened on a
13 large screen in the White Mountain Building in Elliot
14 Lake.

15 There will be two sets of Roundtables.

16 The first this week will consider
17 issues related to the Inspection of Buildings and
18 Property Standards and Trainings and Qualification of
19 Building Officials.

20 We will consider whether or not there
21 should be greater sharing of reports and information
22 relating to the conditions of buildings and the role of
23 architects, the role of engineers, the role of building
24 inspectors and inspection companies.

25 Finally, on December 5th and 6th we

1 will be considering issues relating to Emergency
2 Response.

3 Each session we will discuss a series
4 of questions, which are available to all of the
5 participants here and are also posted on our website.

6 In addition, we have posted the
7 preliminary responses to the questions outlined in the
8 materials that you have received.

9 At the end of each Roundtable there
10 will be an opportunity for those in attendance here in
11 Ottawa to ask questions of the panelists; and for those
12 residents of Elliot Lake who may be watching at the
13 White Mountain Building, to send in written questions
14 and as well counsel withstanding at the Inquiry will
15 have an opportunity to phone in or ask questions
16 directly by phone. We have had that experience twice
17 this week already.

18 We have assembled an outstanding group
19 of experts here this morning.

20 I feel that looked at in a certain way
21 I am the only student enrolled in a course given by an
22 emeritus faculty of distinguished experts in relation
23 to complex and important subjects.

24 My thesis assignment is to write a
25 dissertation on the various themes that we will be

1 discussing and that dissertation will be one of the
2 important parts of this Commission's work.

3 My ambition is to get straight A's.

4 My problem, of course, is that I have
5 little or no experience, background or previous
6 education in relation to the subject matter of this
7 course.

8 I am a Criminal Court Judge by
9 vocation.

10 And indeed my only acquaintance with
11 the subject matter that we will be discussing has been
12 the evidence presented to the Commission in Elliot
13 Lake.

14 Thank you for having taken the time
15 from your very busy occupations and from your
16 professional lives to be with us today and for the
17 remainder of the week, tomorrow, Thursday, and sharing
18 your experience and advice with us.

19 By doing so, you render an important
20 service to the citizens of this Province and indeed the
21 citizens of this Country.

22 So without further ado, let the
23 classwork begin and let my education commence in the
24 process.

25 I turn proceedings over to our

1 moderator today, Mr. Bruce Carr-Harris, who is one of
2 the Commission's senior counsel.

3 Mr. Carr-Harris?

4 **MR. CARR-HARRIS:** Thank you, Mr.
5 Commissioner.

6 Good morning, everyone.

7 It is a pleasure to have you all here
8 and we appreciate completely the fact that you are
9 prepared to put so much time to help us make better
10 recommendations coming out of this Inquiry.

11 So welcome to you all.

12 It is also my pleasure to introduce
13 you individually.

14 You are all known to each other and to
15 us, but to many of the people who are watching or are
16 in the audience it will be useful to have each of your
17 backgrounds.

18 So if you will bear with me and grin
19 and bear it, I will go through your CV's.

20 And I am just going to follow the
21 order of seating, if I may.

22 Mr. Birdsell is here on behalf of the
23 OAA.

24 He was elected as president of the OAA
25 in January of 2013.

1 He was appointed to the OAA Council in
2 2009 and elected the following term.

3 He served as Senior Vice President and
4 Treasurer of the OAA in 2011 and 2012.

5 He served on the Human Resources and
6 Governance Committees.

7 In 2010 he was the Vice President,
8 practiced and served on the Complaints Committee and
9 the Experience Requirements Committee.

10 Mr. Birdsell is the principal of J.W.
11 Birdsell Architect in Guelph, which is a full service
12 architectural firm, working with institutional and
13 private clients on a wide range of projects, including
14 residential, commercial, industrial and institutional
15 and adaptive reuse of many existing structures.

16 After receiving his Bachelor of
17 Environmental Studies from the University of Waterloo
18 in 1982, he completed his Bachelor of Architecture in
19 1984.

20 He joined to OAA and opened his
21 practice.

22 Three years later he was merged with
23 William R. Jarrett to form Jarrett and Birdsell
24 Architects Inc.

25 He has also served on the Board of

1 Prodemnity Insurance Company and on the OAAS Board of
2 Representatives and is active in his community.

3 He is a member of the City of Guelph
4 Committee of Adjustment.

5 In addition to his speaking
6 engagements, he is a contributor to several
7 publications and currently writes for the *Guelph*
8 *Mercury*.

9 Welcome, Mr. Birdsell.

10 Next is Mr. Miller.

11 He is here on behalf of OACETT.

12 May I call it "OACETT"?

13 Thank you.

14 He is here, he is Vice President of
15 the Institute of Technology Ontario, which is IETO, and
16 has served on OACETT, which is the Ontario Association
17 of Certified Engineering Technicians and Technologists.

18 Council since 2007, he has volunteered
19 for 15 years in various roles for OACETT, including
20 Georgian Bay Chapter Chair, College Liaison and
21 Regional Secretary Treasurer for the Central Region.

22 He is currently the Manager, Building
23 and By-Law Services and the Chief Building Official
24 with the Town of Blue Mountain and oversees the day-to-
25 day operations of the towns *Ontario Building Code*

1 Program By-Law Enforcement and security alarm
2 registrations.

3 Mr. Miller currently chairs the OACETT
4 government relations committee and has represented
5 OACETT on the *Ontario Building Code* Technical Advisory
6 Committee and the Training and Qualifications Committee
7 to review Building Code qualifications and the currency
8 of maintenance requirements.

9 He is a graduate of Georgian College's
10 Civil Engineering Technology Municipal Program.

11 He also holds a Master's Certificate
12 in Municipal Leadership from the University of Toronto
13 Professional Development Centre.

14 He is qualified for all eleven
15 categories of qualifications under the *Ontario Building*
16 *Code*.

17 Welcome, Mr. Miller.

18 Thank you.

19 Mr. Chris Roney is here on behalf of
20 the PEO, the Professional Engineers of Ontario.

21 Mr Roney holds an Honours Degree in
22 Civil Engineering from Queen's University.

23 He is a third generation engineer.

24 He heads Roney Engineering Limited, a
25 Kingston consulting firm offering a full range of

1 structural engineering services related to the
2 building, design and construction investigations and
3 restorations.

4 Mr. Roney is a practicing structural
5 engineer and is accredited as a building design
6 specialist and consulting engineer.

7 He serves as a member of the Ministry
8 of Municipal Affairs and Housing and Building Advisory
9 Council.

10 The mandate of that council is to
11 provide strategic advice to the Minister on matters
12 related to ongoing policy, administration and technical
13 issues related to the *Building Code Act* and the
14 Building Code.

15 Mr. Roney also served as Chair of the
16 Part Four Structural Technical Advisory Committee for
17 the *Ontario Building Code 2012*.

18 Mr. Roney currently serves on the
19 Council of Professional Engineers of Ontario.

20 He has held a number of positions over
21 a period of more than ten years.

22 He currently serves on the Complaints
23 Committee.

24 He serves on the Engineers Architect
25 and Building Officials Committee.

1 That group's mandate is to deal with
2 issues of mutual concern and interest between the PEO,
3 the Ontario Association of Architects and the Ontario
4 Building Officials Association.

5 That committee works to find common
6 positions or industry standards practices on certain
7 elements of design and construction industry.

8 He also currently sits on the
9 Consulting Engineering Designation Committee of the PEO
10 and OAA Joint Liaison Committee, to name a few. And
11 there are others.

12 Mr. Roney is a director on the Board
13 of the Engineers Canada, the National Organization of
14 the Twelve Provincial and Territorial Associations that
15 regulate the profession of engineering in Canada and
16 license the country's more than 260,000 members of the
17 engineering profession.

18 He has served on several committees on
19 that board as well.

20 Mr. Roeny served a term on the Council
21 for the Association of the Professional Geo Scientists
22 of Ontario as well from 2005 to 2007.

23 Thank you, Mr. Roney for coming. We
24 appreciate your presence.

25 Next is Professor Jag Humar.

1 Professor Humar is a distinguished
2 research professor at Carleton University.

3 Between 1990 and 2000 he was Chair of
4 the Department of Civil Engineering and Environmental
5 Engineering, and was a professor in the department
6 between 1975 and 2003.

7 He was Superintending Engineer,
8 Executive Engineer and Assistant Executive Engineer in
9 the Central Public Works Department in India between
10 1960 and 1975.

11 He obtained a BSC in Engineering,
12 Civil Engineering, from Banaras Hindu University,
13 India, in 1958, an M. Tech. from the Indian Institute of
14 Technology in India, 1959, and a PhD Civil Engineering
15 from Carleton University in 1974.

16 He has been a member of the Standing
17 Committee on Earthquake Design of *the National Building*
18 *Code of Canada* since 1995, and a member of the
19 Editorial Board of the International Journal Earthquake
20 Engineering and Structural Dynamics since 2008.

21 He was an associate editor of the
22 Canadian Journal of Civil Engineering from 1995 to
23 2002.

24 He has been a consultant to Public
25 Works and Government Service Canada on various

1 projects, including the development of design and
2 analysis software, vibrations study on the Alexandra
3 Bridge, dynamic vehicle crash studies, and blast
4 induced vibration studies for the Parliamentary
5 Precinct.

6 Thank you, Professor Humar. We are
7 delighted to have you.

8 Next, Paul Acchione, who is here on
9 behalf of the Society, also known as OSPE.

10 He is currently the 2013 and 2014
11 President and Chair of the Ontario Society of
12 Professional Engineers.

13 He began his career at Ontario Hydro,
14 holding various roles from 1971 to 2002, including
15 design engineer, design engineer specialist,
16 supervising design engineer and department manager.

17 Since 2002 he has worked as a
18 management consultant with market intelligence and data
19 analysis corporation.

20 He has been an active member of the
21 Ontario Society of Professional Engineers, political
22 action network since 2006, and participated as a member
23 of OSPE's professional engineers task force.

24 He became actively involved in OSPE's
25 energy task force in 2007 and chaired the task force

1 from 2010 to mid-2013.

2 He is a member of four technical
3 societies and has co-authored 12 technical papers
4 related to project engineering, management, simulation
5 analysis, engineering design and application of digital
6 computers.

7 Thank you for being here, Mr.
8 Acchione.

9 We will find your presence very
10 helpful, I know.

11 Next is Dale Craig.

12 He is an Associate and Chairman of
13 J.L. Richards and Associated Ltd., and leads the
14 engineering firm's major business development
15 initiatives for P3 design build, fast track CM and
16 design bid build projects.

17 He is responsible for the management
18 of key client and partner relations and organization of
19 project teams and presentations for contract
20 negotiations.

21 He maintains direct involvement in the
22 management of major complex assignments for the firm to
23 ensure that the client's needs and project objectives
24 are met.

25 He has decades of experience managing

1 multi-disciplinary teams on projects up to 310 billion
2 in value.

3 These projects typically involve all
4 engineering disciplines, architectural planning,
5 project management and specialty consultants.

6 In addition to his duties with his
7 firm, Mr. Craig has maintained an active involvement in
8 his community and professional industry as well.

9 He is on the Board of Governors of
10 Carleton University, the Board of Hydro Ottawa Holdings
11 Inc., and he has just completed two terms on the board
12 of Ottawa's Convention Centre, acting as Chair of the
13 Redevelopment Committee, which was responsible for
14 managing the design and construction of the recent
15 state of the art convention facility there, having a
16 value of 190 million dollars.

17 He has been active in charitable in
18 his community and he is a founding member of the
19 National Steering Committee on Innovation and
20 Construction.

21 He has a BN in Civil Engineering with
22 distinction from Carleton University in 1970.

23 Welcome and thank you, Mr. Craig.

24 What I propose to do with this
25 distinguished Panel is milk you for as much information

1 as we possibly can.

2 You are the experts, we are not,
3 although we may try to sound like it from time to time.

4 So we need your help.

5 This is to be a conversation. It is
6 not adversarial.

7 We just want to get your thoughts and
8 all of your thoughts so that I may pick somebody to
9 respond initially to a question does not mean I think
10 you are the best person. You may be the best looking
11 at the moment.

12 We need you all to join in and if you
13 have something to say and I am not paying attention,
14 put your hand up or just get yourself engaged in the
15 exchange, because we have limited time.

16 We have got all the talent we could
17 possibly hope for here and we need to get all we can
18 from you.

19 Now, just to start you off with an
20 easy one, and I am going to follow the questions, Mr.
21 Roney raised this, I am going to follow the questions
22 in order, unless somebody has some other approach, and
23 then we will just do them one at a time.

24 Some of them we will resolve much more
25 quickly than others, but I think it will be a useful

1 process nonetheless.

2 So could I ask you, first of all, to
3 deal with Question number 1 in our list of questions,
4 and it is: *Should 'prime consultant' be defined along*
5 *with its roles and responsibilities?*

6 Now, I said I would not talk too much,
7 but this arose many times at the hearings.

8 Any time an architect was in the box,
9 somebody asked him what a prime consultant was and it
10 was always confusing because it was sometimes different
11 from others, or even engineers.

12 And this arose out of the original
13 construction of the mall.

14 So the question is: is this something
15 we should try to define and if so, how would you define
16 it?

17 Why don't I start with Mr. Birdsell,
18 who is the closest?

19 Do you have a comment about this?

20 **MR. BIRDSELL:** Yes.

21 Coordination is critical to public
22 safety.

23 We believe that more success will be
24 found by identifying critical roles of coordination and
25 design in general review during construction, ensuring

1 that there are always in place, rather than defining
2 the term "prime consultant".

3 Legislation already exists requiring
4 design and general review by architects and
5 professional engineers, allowing non-professionals to
6 coordinate professional services.

7 That negates and is contrary to public
8 safety polls of existing provisions.

9 Prime consultant is not defined
10 outside of contractual relationships.

11 Therefore, because protecting public
12 interest and what is good practice for an architect is
13 best set out and is in governing legislation.

14 However, so we come back to the issue,
15 coordination is the critical public issue.

16 **MR. CARR-HARRIS:** Any other comments?

17 Mr. Craig?

18 **MR. CRAIG:** The definition of a
19 "prime consultant" is something that could be more a
20 matter of semantics.

21 But I agree with Mr. Birdsell that the
22 key role, traditionally, has been an architect or an
23 engineer who is taking the lead in managing the design
24 and construction of a project.

25 They are responsible for coordinating

1 all of the various disciplines that are contributing to
2 the design and seeing to it that they join together
3 seamlessly so that there are no mistakes or gaps
4 between the various disciplines.

5 It has traditionally been filled by an
6 architect or an engineer, but the more we develop
7 alternative forms of project delivery, the roles and
8 the lines of responsibility are blurring.

9 You have project management
10 specialists who are coming in and fulfilling the role
11 to some extent of prime consultant insofar as the
12 coordination aspect of it.

13 So I don't think that the definition
14 is as important as fulfilling the functions of having
15 someone responsible for pulling together a cohesive
16 design.

17 **THE COMMISSIONER:** If it is beyond
18 definition, Mr. Craig, should we simply do away with
19 that expression?

20 **MR. CRAIG:** I think there is a good
21 form to be had, Mr. Commissioner, to see whether it is
22 still a term that needs to be defined and formally
23 filled, or whether we define the roles of the various
24 participants in the design and construction process.

25 **MR. CARR-HARRIS:** In other words, do

1 we need it?

2 As I take your statements, Mr. Craig,
3 and I think Mr. Birdsell too, the key is coordination
4 and if we can get coordination and people in charge of
5 coordination in the contractual matrix, what do we need
6 to define them is whether it is a prime consultant or I
7 think in British Columbia they call it a "coordinating
8 engineer of record" is in charge of it out there.

9 So why do we need this old term "prime
10 consultant"?

11 Any comments?

12 Yes, Mr. Roney?

13 **MR. RONEY:** What guides you should be
14 what you are trying to achieve or the weakness that you
15 have addressed as opposed to determining whether or not
16 prime consultant is the model you are trying to follow.

17 What we have heard is the important
18 things are such things as facilitating communication
19 through the course of a project, coordination of the
20 different disciplines, building projects are very
21 complex endeavours.

22 In that there is the danger of gaps,
23 things falling between the cracks and that would be an
24 important aspect to try to address.

25 And the other thing that you need to

1 wrap your head around is if someone is going to fulfill
2 this role, what sort of accountability do you expect,
3 in terms of professional responsibility for that role,
4 it would be seem to be an important role.

5 So those are the guiding principles
6 that I think would help you then decide upon what to do
7 with it, be it either a coordinating professional, a
8 prime consultant or what have you.

9 Whatever it is, PEO is generally
10 supportive of any clearer definitions of roles and
11 responsibilities that would help to facilitate those
12 things that I articulated there.

13 **MR. CARR-HARRIS:** So are you saying
14 it is in the contractual matrix, for the project, in it
15 will be somebody who is designated as the coordinator
16 that will be identified, he or she will carry those
17 responsibilities throughout the project as the
18 coordinating engineer or architect of record.

19 Mr. Birdsell?

20 **MR. BIRDSELL:** And we feel that
21 precisely what you just said, through contractual
22 arrangements, non-professionals have begun to fill the
23 role of the coordinating agent.

24 We feel that because we are dealing
25 with professional services, it is very important that a

1 professional fill that role, either an architect or a
2 professional engineer.

3 **MR. CARR-HARRIS:** Yes, Mr. Acchione?

4 **MR. ACCHIONE:** I would like to add
5 just one different aspect on the discussion because we
6 haven't really clarified, certainly not for the people
7 listening in.

8 In the case of the *Professional*
9 *Engineers Act* the client or the owner that is getting
10 the work done can ignore the advice of the engineer.

11 The client and the owner, when they
12 set up the contracts, decide the reporting
13 relationships, roles and responsibility of the
14 participants as Bill has indicated and Christ has
15 indicated.

16 So if you have a competent owner in
17 writing contracts, then you will get a contract that
18 has very clear lines of authority, responsibility and
19 roles, and generally those contracts don't get into
20 trouble because they will also have provisions in there
21 for one of those professionals, whether it is an
22 architect, in most cases, that is picked as the so-
23 called prime consultant or an engineering firm.

24 They will be given certain powers to
25 act and make decisions to keep the project moving.

1 However, if you have an owner that
2 puts together a poorly written contract, you can have
3 considerable difficulty in executing the project,
4 because the roles and responsibilities are not clearly
5 laid out in the contract.

6 The contract is the governing
7 document, it is what everybody gets paid by.

8 So if we feel that the roles and
9 responsibilities from the execution of either an
10 architectural or an engineering project is important,
11 then the person that needs to be brought up to speed is
12 the person writing the specification.

13 That is typically the owner.

14 And I am not sure that we are going to
15 be able to train all the owners to be outstanding spec
16 writers.

17 So the Society prefers that if certain
18 roles are critical to the execution of the project,
19 that they be defined and that they be placed somewhere.

20 Now, we have suggested leaving it with
21 the regulators involved, whether it is the architects
22 or the engineers, and the Society represents the
23 engineers themselves, Professional Engineers Ontario
24 represents the -- is the regulator and licensing body
25 and the OAA is the -- actually has both functions, I

1 believe, for the architects, because they have not
2 split their advocacy and member services function from
3 their regulatory function like the way the engineers
4 have done.

5 We followed the legal and the medical
6 profession model for governance in the profession.

7 So we have two organizations for
8 engineers.

9 That is why I am here today.

10 But if we want to solve the problem,
11 if we think it is important, then you should be
12 defined, whether you put it in the *Building Code* or you
13 leave it with the individual regulators, I do not think
14 that is as critical.

15 Clearly there is one advantage with
16 the *Building Code*, it has power of law, but the real
17 problem is that the owners and clients are not bound by
18 the *Engineering Act* or, I believe, the *Architects Act*.

19 They only bind the practitioners and
20 the practitioners do not have the power in a
21 contractual relationship to make things happen, only
22 the owner or the client does.

23 **MR. CARR-HARRIS:** I would like to ask
24 you ask about more comments.

25 So that would argue in favour of

1 putting the requirement for a prime consultant with the
2 particulars of the role, perhaps, in the architects or
3 in the engineers, under their statutes and regulations,
4 would argue for making it law under the *Code Act*.

5 Is that the solution here?

6 **MR. ACCHIONE:** Well, if you want to
7 tie down the owners the *Building Act* is the place to do
8 it.

9 If you want to tie down the
10 professionals, it is the two professional Acts.

11 But it is important what it is that
12 you want to fix.

13 **MR. CARR-HARRIS:** You made the point,
14 I think, that the engineers will have this thing from
15 their own Act, but they are dealing with the owner and,
16 you know, you may give more than you should because
17 there is nothing in the *Code Act* that insists that this
18 prime consultant or coordinating consultant carry out
19 the role that is specified by the PEA or the
20 architects.

21 In other words, the teeth is in having
22 this in a force of law in something, in legislation
23 that is going to make it happen because you have to
24 show up with this prime consultant and this prime
25 consultant has to have these duties.

1 **MR. ACCHIONE:** As you say, if you
2 really want to make sure it gets done, then you have to
3 bind the owners and the clients.

4 The only mechanism we have right now
5 is the *Building Code*, because the two professional acts
6 do not apply to the owners and the clients.

7 **MR. CARR-HARRIS:** Yes, thank you.

8 **MR. CRAIG:** I wanted to support that.

9 I think that the *Building Code Act* is
10 the place to do the assignment of whether you call it a
11 prime consultant or whether it is a professional of
12 record, I think it should be a professional, an
13 engineer or an architect who have codes of conduct and
14 practice guidelines and are accountable.

15 I think it needs to be defined as to
16 who is taking the responsibility for filling that role
17 of coordinating, organizing and ensuring a complete,
18 proper set of contract documents.

19 **MR. CARR-HARRIS:** Professor Humar?

20 **MR. HUMAR:** I agree with Dale. I
21 think coordination is most important.

22 And I can give you a couple of
23 examples.

24 Supposing you have a steel beam and
25 you want to pass a mechanical duct through it.

1 Somebody has to coordinate between the
2 mechanical engineer and the civil engineering to take
3 the fact that this hole in the beam has to be accounted
4 for.

5 Or to be specific to Elliot Lake, if
6 you want to put parking on the rooftop, then you are to
7 required to apply a wearing coat of concrete and to
8 account for this extra load of concrete, and you have
9 to put a proper membrane and all this needs to be
10 coordinated between architect, engineer and the other
11 trades.

12 Whatever name you give it, consulting
13 engineer or consulting professional, you should put it
14 in the Act. That's number one.

15 I agree with my colleagues here that
16 it should be professional, because some of these things
17 cannot be understood by a layman or a layperson.

18 Therefore, I agree with Dale and I
19 agree with Bill that we should have a professional, it
20 should be specified in the Act itself so that the owner
21 is required to designate a consulting professional for
22 the project, particularly a project that has multiple
23 disciplines in it.

24 **MR. CARR-HARRIS:** And should there be
25 a standard of performance as to the roles and

1 responsibilities and where should that be located?

2 **MR. HUMAR:** As soon as you define
3 what is the necessity for a consulting or coordinating
4 consultant, you should also define in broad terms at
5 least what would be the roles of that person in the Act
6 itself.

7 And then require to put the onus on
8 the owner to designate such a person.

9 In addition, of course, requiring that
10 it must be a professional rather than a person.

11 **MR. BIRDSELL:** I would reinforce that
12 the professions currently have standards of
13 professional practice.

14 We do a great deal of work to
15 establish levels and standards of practice for our
16 members.

17 However, what has happened is the
18 responsibility from it has become blurred by the
19 contractual arrangements.

20 **MR. CARR-HARRIS:** Thank you.

21 Mr. Miller?

22 **MR. MILLER:** Thank you.

23 We agree with a lot of the comments
24 around the table here that the term "prime consultant"
25 needs to be defined, as well as the roles and

1 responsibilities.

2 I am hearing the term "design
3 professional" and just further to the point, members of
4 OACETT are certified engineering technologists and
5 technicians, so they are an integral and important part
6 of the engineering team.

7 So we would say that that does not
8 need to be restricted just to the engineers and
9 architects. And that should include OACETT certified
10 members as well.

11 **MR. CARR-HARRIS:** Thank you.

12 Yes, Mr. Roney?

13 **MR. RONEY:** Just to further elaborate
14 on where the distinctions lie between what belongs to
15 the *Building Code Act*, what might belong within the
16 Architects or the *Engineers Act*.

17 What we would see is if you were to
18 move forward with, as a public policy, deciding that it
19 is in the public interest to have a designated
20 professional, be it a prime consultant or a
21 coordinating professional, then that would find its
22 way, that requirement, the obligations and
23 responsibilities of that individual would typically
24 fall, the way we see it, in the *Ontario Building Code*
25 or the *Building Code Act*.

1 But then the individual, how the
2 professional carries out those duties and what the
3 standards that professional is held to, that belongs
4 with the *Professional Engineers Act* in the case of
5 engineers and in the *Architects Act*, obviously, in the
6 case of the architects.

7 With regards to public policy and just
8 picking up on the last comments, it has to be a public
9 policy decision which is what I alluded to in terms of
10 accountability.

11 Should it be a licensed professional
12 and as a licensed professional and as an individual
13 that takes professional responsibility and is held
14 accountable for their work, the term that we sometimes
15 use loosely around PEO is you are taking career ending
16 responsibility for your actions.

17 Is that level of accountability, would
18 that be a good public policy move?

19 And I believe that is to the
20 Commission to consider.

21 **MR. CARR-HARRIS:** So I am clear, Mr.
22 Roney.

23 Are you concerned there would be no
24 insurance for such a person, whether it is an architect
25 or an engineer?

1 Assuming it is a licensed
2 professional, is it a concern about available
3 insurance?

4 Is that the point?

5 **MR. RONEY:** Insurance is one aspect
6 of professional accountability, but it is just one
7 aspect.

8 The risk to one's ability to earn a
9 livelihood carrying out what they do is also something
10 that guides people in their actions and raises it to a
11 high level of responsibility.

12 The other thing is the standards which
13 become mandatory standards under law, both the
14 *Architects Act* and the *Professional Engineers Act* allow
15 for regulation making powers to move things into
16 standards, since they have the force of law, as opposed
17 to simply being good practice guidelines of a society
18 or an association.

19 **MR. CARR-HARRIS:** Mr. Birdsell, you
20 had a comment?

21 **MR. BIRDSELL:** Yes.

22 Currently within the regulations of
23 the *Architects Act*, mandatory insurance is in place so
24 that every architectural firm in the province provides
25 insurance, which is truly a protection of the public

1 interest, even more greatly than the protection of
2 architects.

3 **MR. CARR-HARRIS:** I believe the
4 professional engineers have the same mandatory
5 requirement that they are insured.

6 Am I correct, Mr. Roney?

7 **MR. RONEY:** We have similar insurance
8 requirements.

9 **MR. CARR-HARRIS:** Yes.

10 Are there any other comments?

11 --(No response)

12 **MR. CARR-HARRIS:** It seems to me we
13 have moved towards a channel of consensus, which I will
14 articulate in your absence.

15 But it seems that everybody agrees you
16 need somebody in this capacity.

17 It needs to be in a place in
18 legislation where it has teeth and that the actual
19 regulation of how the roles and responsibilities are
20 expressed in the relative professional engineer
21 architect under their statutes as a regulation.

22 Are we generally in the ballpark with
23 that?

24 ---(No response)

25 **MR. CARR-HARRIS:** Thank you.

1 Can we then go to the next Question.
2 Number 2.

3 *"Should Consultants (engineers,*
4 *architects, building inspection companies) be required*
5 *to clarify their scope of expertise to clients and to*
6 *clearly establish which elements of the building they*
7 *are qualified to provide an opinion and which elements*
8 *of the building they will not be inspecting due to lack*
9 *of sufficient expertise?"*

10 Who would like to take a try at this?

11 We will let Mr. Craig go.

12 **MR. CRAIG:** I agree that in instances
13 where a building condition report or a building
14 assessment report or some form of documentation and
15 inspection is undertaken by a professional, that they
16 should always clearly outline the scope of their
17 services, the limitations if there are any in contract
18 to them, and defining which areas they are or are not
19 qualified to include under the scope of the report.

20 If those are key areas, then it would
21 be expected that they would actually obtain additional
22 professional support to properly comment on those
23 areas.

24 I think it is absolutely essential and
25 it is incumbent on professionals, architects and

1 engineers, to not undertake work for which they are not
2 duly qualified and thoroughly competent to undertake.

3 Whether that means that they retain
4 expertise upon which they can trust and question
5 appropriately, that is a matter, but they must take
6 professional responsibility for a report that they
7 produce under their signature.

8 **MR. CARR-HARRIS:** Thank you.

9 This arises -- just for a little
10 background.

11 The sense we got, I think it is fair
12 to say certainly I got, was that in some of the
13 examinations and inspections and the conversations with
14 the owners and the operators, that it was not clear
15 that either a) the inspector had done what had been
16 expressed here, told them what the abilities were and
17 were not.

18 So the owner made certain assumptions
19 about it and as far as the inspector was concerned, I
20 think their qualities or qualifications are obvious, so
21 why would there be a question about them?

22 But often it was two ships passing in
23 the night and one of the real issues was that the
24 owners, they assumed when an expert walks in their
25 property, even if it is to look at some tiny element of

1 it and they walk out and say everything is a-okay, they
2 take that to mean the whole building, just because they
3 were there.

4 Literally, there are people that
5 things that.

6 So this is sort of directed at that
7 issue.

8 I do not know how serious it is in
9 your worlds, but if there are any other comments.

10 I mean, the obvious answer seems to be
11 there, but it does not sort of filter through to
12 reality in some cases.

13 Are there any other comments on that?

14 Yes, Mr. Birdsell?

15 **MR. BIRDSELL:** Every professional
16 providing services should be clear about their
17 expertise.

18 Clarifying the scope of that expertise
19 in general was included in an architect's scope of
20 proposal for their services.

21 It would be helpful if guidelines or
22 requirements were in place for building elements
23 related to specific critical life-safety items so that
24 owners could identify what services are required and
25 what professionals could respond.

1 There are other reasons why an owner
2 seeks the professional opinion of an architect about
3 the state of an existing building, unrelated to the
4 issues of safety or performance requirements mandated
5 by the Code, i.e. interior design improvements or space
6 utilization.

7 OAA's standard form of contracts sets
8 out an itemized scope of service, which facilitates and
9 discourages discussion in order to finalize the
10 contract.

11 **MR. CARR-HARRIS:** Thank you.

12 I am going to ask the PEO last on this
13 question.

14 But I wanted to ask from the Society's
15 perspective, how does that exchange of information
16 happen typically, Mr. Acchione?

17 Is it left entirely to the engineers
18 to make this known, whether orally or in writing?

19 **MR. ACCHIONE:** Let me sort of walk
20 you through the process, Bruce, and then Chris and Bill
21 can correct me if I don't get it quite right, because
22 they work with this stuff every day.

23 I have worked with contracts too, so I
24 can give you a sense of how it works.

25 Typically an owner or a client, if he

1 is not the actual owner, will write a specification on
2 the work to be done.

3 The engineering or architectural firm
4 then will respond to that specification.

5 If they do not want to be thrown out
6 for failing to comply with the spec, they will answer
7 every requirement, either personally they are doing it
8 with their own firm, or they will provide provisions
9 for a subcontract to a specialist firm that will come
10 in and do the work that they cannot do.

11 So they respond to every clause in
12 that specification.

13 Otherwise they would be disqualified
14 for non-compliance.

15 That means theoretically the process
16 itself should make sure that everything is covered.

17 However, the problem is when you come
18 down to evaluate the bids, you now have an engineering,
19 an architectural firm that complies entirely with the
20 specification and you have another firm that only has
21 bid a portion of the spec and is prepared to be
22 disqualified, but he has put in a price that is lower.

23 Now what do you do as an owner or as a
24 client?

25 Do you take your chances and pay less?

1 Or do you take the more expensive
2 option and you know you have got everything covered?

3 That is where the process breaks down.

4 And the two professional Acts for the
5 architects and engineers do not apply to the owner or
6 the client.

7 So you have a problem.

8 You are between a rock and a hard
9 place if you are a public safety official and wondering
10 how is this process going to result in the right
11 answer?

12 **MR. CARR-HARRIS:** So what's the
13 solution?

14 **MR. ACCHIONE:** Again, I hesitate to
15 say this.

16 But I think you have to put the onus
17 and responsibility to make sure that all the work is in
18 the contract on the owner and the client, because they
19 are the ones who set the specifications, they are the
20 ones that set the rules for the contract, and the
21 contract governs everything.

22 **MR. CARR-HARRIS:** Mr. Craig?

23 **MR. CRAIG:** With due respect to that
24 comment, I think the problem is perhaps more insidious.

25 You have owners that wilfully or

1 unknowingly do not know what is required in a building
2 assessment report.

3 They may be looking for an overview
4 that says I am just going to go out and get some
5 financing with this report, don't get into a lot of
6 detail, don't spend a lot of money, give me your best,
7 quickest report.

8 The problem is, other people rely on
9 those reports.

10 There is no clear standard in
11 existence right now that says if you are doing a
12 building condition assessment for the following
13 purposes, you should follow this format, these things
14 should be included and this is the level of detail that
15 you should go into.

16 So you have cases, and these are the
17 ones that usually end up in problems, where owners are
18 just looking for the cheapest solution.

19 If you have a professional who is
20 willing to engage in doing this for a very minor fee or
21 feels that they have the practiced eye that is required
22 to say everything is just fine and not get into a lot
23 of detailed inspection, I think that is where you have
24 the potential for a problem.

25 **MR. CARR-HARRIS:** A response?

1 Yes?

2 **MR. ACCHIONE:** Dale has made some
3 interesting points.

4 But let's not forget that if you are
5 an owner or a client and you don't have the expertise
6 to specify what goes into the specification, you have
7 every right to hire either an architect or an engineer.

8 If it's structural, you would hire an
9 engineer, if it's space issues or other design aspects
10 of the building you would hire an architect.

11 And you give them a contract to write
12 your specification and you go to a firm that does that
13 for a living and knows what they are doing.

14 That means you are spending a small
15 amount of money to get the spec right, and then you
16 allow the professionals to respond to that
17 specification.

18 **MR. CARR-HARRIS:** In language they
19 understand.

20 **MR. ACCHIONE:** And you can even hire
21 that same firm to evaluate the bids, to make sure that
22 somebody technical is actually able to understand what
23 is going on in the bidding process.

24 But again, I think Dale is probably
25 right, people do not do that because they do not want

1 to spend the money.

2 If you want them to stop doing that or
3 you want them to do the right stuff, right now the two
4 professional acts do not have the power to do that.

5 The *Building Code* is the only place
6 right now that would actually apply to the owners and
7 the clients.

8 **MR. CARR-HARRIS:** Well, Mr. Craig has
9 mentioned this.

10 You need a standardized performance
11 for these inspections, and if that is the case and
12 there was such a thing, then every engineer would be
13 bidding on essentially the same specification.

14 Then it is just about who is prepared
15 to do it for less, not that you are getting less
16 service.

17 **MR. ACCHIONE:** That's true, and I
18 think it comes up later in the day, so we could deal
19 with it in more detail at that time if you like.

20 **MR. CARR-HARRIS:** Exactly, thank you.

21 **MR. HUMAR:** Question 3 deals with
22 this standard performance guidelines in the Act that
23 will make things unified and much more detailed there
24 when we deal with Question 3 I think some of the
25 questions that Dale has raised would be answered

1 through that.

2 **MR. CARR-HARRIS:** That's right, yes.

3 **MR. HUMAR:** Once it is in the
4 guideline it becomes a law to a performance standard
5 part of the Act.

6 The owner and the regulators and the
7 bidding professionals all know what is to be expected.

8 So I think if you have such a standard
9 as part of the Act, then Question 2 becomes easier. It
10 has already been addressed there.

11 **MR. CARR-HARRIS:** That's right.

12 And from the PEO's perspective, their
13 solution appears to be, Mr. Roney, just that, they want
14 a proper standard performance and they also are talking
15 about -- this is particularly in the area of structural
16 engineering as I read the material, is their approach
17 to this.

18 Do you have any comments at this
19 point?

20 We are going to get into more details
21 about both those things later on.

22 **MR. RONEY:** Yes, I do have a couple
23 of comments.

24 I think you have to look at the
25 question, what it comes back to as the issue you know,

1 we are talking about an obligation to clarify the scope
2 of an engineer's expertise and also to clarify what
3 they are competent to look at and what they are not
4 competent to look at.

5 Then we are expecting the owner, first
6 of all, to understand what they are asking for and to
7 be able to assess that.

8 I would ask you, wouldn't it be
9 better, in the public interest, if the qualifications
10 of the individuals, the scope of what needs to be
11 looked at when assessing the structural condition of a
12 building, wouldn't that be better if that were assured
13 by the engineering regulator.

14 You can't expect individual owners or
15 members of the public or even chief building officials
16 to necessarily fully understand the scope of expertise
17 that they need, the scope of the report or assessment
18 that they might be asking for.

19 Isn't that something better that the
20 engineering regulator assess ---

21 The problem that we see here is the
22 public does not necessarily -- they need to be able to
23 identify who are the experts.

24 There are other questions about should
25 there be something on the seal that identifies

1 engineers with particular expertise.

2 So PEO's submission, the
3 recommendations we have made, there are two parts to
4 it.

5 First of all, PEO is of the view and
6 is proposing that we certify specialists and we are
7 dealing with structural adequacy of a building, because
8 we are looking at the issues surrounding that gave rise
9 to this particular Inquiry and a very important public
10 safety aspect.

11 So we are looking at establishing a
12 level of individual that will be a specialist that is
13 certified that the public then knows that that is the
14 type of individual that is qualified to then do the
15 second part, which is, as Mr. Craig had mentioned, a
16 fairly well mandated and defined scope of what needs to
17 be looked at, what makes up one of these structural
18 advocacy reports.

19 Those two parts, I think, will really
20 address some of the issues that have arisen through the
21 course of this Inquiry.

22 **MR. CARR-HARRIS:** Yes. No question.

23 Thank you.

24 Yes?

25 **MR. ACCHIONE:** I just wanted to

1 clarify something I forgot to mention a minute ago, and
2 that is that if a client or an owner does not have the
3 technical expertise to write the spec, evaluate the
4 bids and select the appropriate professional involved
5 in the work and hires a firm to do that, then that firm
6 that is hired to do that must be disqualified from the
7 bidding process, otherwise there is a conflict of
8 interest.

9 **MR. CARR-HARRIS:** Any comment?

10 Mr. Birdsell?

11 **MR. BIRDSELL:** Just to clarify, with
12 a building system, a comprehensive building, there are
13 several critical life safety issues that affect the use
14 of the public.

15 For example, egress ability, if there
16 is an emergency instance like a fire.

17 Recognize too, that you could have a
18 building that is entirely adequate and is safe.

19 However, that building has reached its
20 end of life of what it was designed for, so now you are
21 studying the building for adaptive re-use or preparing
22 it for a new life, which is critical to public
23 interest.

24 The study may not focus on the
25 adequacy of the building, it may actually focus on a

1 re-design issue.

2 However, now the architect may
3 demonstrate the expertise as they are able to do, and
4 required to do under the Act.

5 In addition, then they can set out the
6 scope of services that is actually being asked for by
7 the owner.

8 So I would not say that we always are
9 dealing with the prices.

10 We are actually dealing with an
11 ability for owners to effectively use their properties.

12 **MR. CARR-HARRIS:** Alright.

13 I think we have discussed that to the
14 stage where we can move on to Question 3, which is
15 really -- and it has about 15 questions under it as you
16 have seen -- again, some of these will be dealt with
17 more rapidly than others, but the idea, I think here,
18 is to look at these in the context of the initial
19 Question 3.

20 *"Should the PEO, the OAA and OACETT*
21 *provide guidelines with clearer standards for the*
22 *inspection of an existing building, including best*
23 *practices?"*

24 And I take it that the answer to this
25 is yes, unanimously.

1 Does anybody object to that
2 proposition?

3 --(No response)

4 **MR. CARR-HARRIS:** Didn't appear to in
5 the material.

6 So we will take that as a given and I
7 think we should look at these sub-paragraphs throughout
8 as possible entries into this standard of performance.

9 Some will fit, some won't, but I think
10 some of them are worth some conversation.

11 Just to get some clarity on the
12 performance standard, this is something, Mr. Roney, do
13 I understand the performance standard itself, as apart
14 from the rest, is something that would come in under
15 the *Professional Engineer's Act*.

16 Is that correct?

17 **MR. RONEY:** That is correct.

18 **MR. CARR-HARRIS:** And as we have all
19 read, there is a reference to a certified structural
20 specialist who will be designated if the PEO has its
21 way, and that person will be a specialist in the
22 structural and be able to manage all kinds of
23 structural problems.

24 This will give the public confidence
25 that the structural advice they are getting is the best

1 about automatic periodic type of review.

2 **MR. CARR-HARRIS:** Yes.

3 **MR. RONEY:** So the requirement to
4 have such a report prepared would certainly be in the
5 *Building Code Act*.

6 With regards to then the standard for
7 the preparation of that report and the qualifications
8 of individuals, obviously that is in the *Professional*
9 *Engineer's Act*.

10 In terms of where it would appear that
11 only a structural engineering specialist could prepare
12 those, I would want to get back to you on that.

13 I believe that could be in the
14 *Building Code Act* that it shall be prepared, because
15 just as in the *Building Code Act* there are certain
16 things requiring that this activity shall be done by a
17 professional engineer or an architect.

18 So on other instances it is not
19 inappropriate, but I can also see it having a home
20 under the *Professional Engineer's Act* and Regulations
21 as well.

22 **MR. CARR-HARRIS:** Thank you, that is
23 helpful.

24 Any comment from anyone?

25 Mr. Birdsell?

1 **MR. BIRDSELL:** Yes. I would say
2 architects have an established standard of professional
3 practice.

4 However, in relation to this question,
5 any terminology or changes are best incorporated into
6 the *Ontario Building Code Act* and I would say not with
7 the regulatory bodies.

8 **MR. CARR-HARRIS:** Why do you say
9 that?

10 **MR. BIRDSELL:** Well, because again it
11 is about a definition of what the question is, of what
12 you are actually going to look at.

13 If you have a clearly defined
14 question, now the standard of practice already exists
15 within the architects.

16 However, the question is best housed
17 in the *Building Code*.

18 **MR. CARR-HARRIS:** Okay.

19 Any comments?

20 Yes, Mr. Acchione?

21 **MR. ACCHIONE:** Yes. I just wanted to
22 caution the Commission on how the *Professional*
23 *Engineers Act* actually works with respect to
24 engineering work.

25 The Act has a number of exceptions or

1 exemptions.

2 One of them is what we casually call
3 the personal exemption.

4 It allows an engineer to take
5 responsibility for the work of others, work that that
6 engineer delegates and make sure is done properly by
7 people who are not licensed or by people who are
8 licensed but inadequately experienced to operate
9 independently.

10 I think it's important if you put it
11 into the *Building Code* that you defined what "prepare"
12 means, because if it is a large building, there is one
13 human being is not going to be able to do the report in
14 two weeks.

15 He is going to have to delegate the
16 job to other people.

17 There is a very good chance there are
18 not going to be enough designated structural engineers
19 in the firm to do the whole building.

20 They are going to need to subcontract
21 the work or parcel out the work to people of lesser
22 vintage who can be supervised properly under the Act to
23 make sure that the quality of the product is
24 acceptable, but then the designated structural engineer
25 would review and approve the overall report.

1 And I think that is a better model,
2 otherwise you will get bottlenecks.

3 You won't be able to get the work done
4 because you don't have enough bodies with that
5 certification.

6 **MR. CARR-HARRIS:** You are saying that
7 is the reality.

8 This is not going to be a lone wolf
9 doing all this work on the ---

10 **MR. ACCHIONE:** That's the reality.

11 You have to be careful how you define
12 your terms once it goes into the *Building Code* or you
13 will shut down the whole industry.

14 **MR. CARR-HARRIS:** Any comment on
15 that?

16 **MR. RONEY:** I don't think we have a
17 problem.

18 First of all, with regards to
19 engineering work, engineering work is reality that it
20 is done with teams of licensed professional engineers,
21 technologists and others to put together an engineering
22 project.

23 With regards to its -- and there is
24 nothing in the Act that prohibits that, it specifically
25 says that's alright.

1 The important thing is that it must be
2 done under the supervision of a licensed professional
3 engineer who assumes responsibility for the contents of
4 that engineering work.

5 That is how the system works and that
6 is how I would envision this working.

7 Obviously if we had certified
8 structural engineering specialists that are engaged in
9 this sort of work, they would utilize the services of
10 others, other engineers, as well as technologists, as
11 well as testing and inspection companies.

12 But their responsibility would be to
13 review it, put it into context, interpret it, use their
14 judgment, use their experience that would be
15 demonstrable to then prepare a final report and assume
16 professional responsibility for the contents of that
17 report.

18 **THE COMMISSIONER:** Can you give me a
19 practical example, Mr. Roney, in your day-to-day
20 experience of the nature of the supervision of perhaps
21 less qualified or less experienced people?

22 **MR. RONEY:** Well ---

23 **THE COMMISSIONER:** I hear what you
24 are saying.

25 I am just trying to visualize what

1 would happen in relation to that particular aspect of
2 an individual.

3 **MR. RONEY:** Perhaps it would benefit,
4 from my own practice, I employ junior engineers,
5 interns who are graduates as structural technologists.

6 They are engaged in work in support of
7 the activities of my firm, which is structural
8 engineering.

9 And as the engineer that ultimately
10 supervises and takes responsibility for the work, I
11 have a quality assurance program in my office that
12 reviews critical elements and a certain percentage of
13 non-critical elements for conformity, for quality of
14 work.

15 If I find problems then, my quality
16 assurance expands to address that.

17 I am not sure if I am answering your
18 question, but there are similar practices in just about
19 any engineering firm, because when it comes to the end
20 of it, the seal applied to those documents is mine, so
21 I have to be entirely comfortable and confident in the
22 quality and the correctness of the entire contents of
23 that report.

24 It is not an easy task to do and
25 sometimes you can't delegate certain things to more

1 junior people.

2 But then there are elements typically
3 that you can, the more common, the more mundane, the --

4 -

5 **THE COMMISSIONER:** I guess that is
6 what I am asking for, is an example of what you would
7 delegate in a typical project and how you will go about
8 supervising.

9 Can you give me a concrete example?

10 **MR. CRAIG:** A simple building
11 investigation.

12 You are called upon by an owner to say
13 'I would like to know what the condition of the
14 structure of my building is.'

15 Usually a senior engineer, well-
16 qualified engineer, would go out with a junior engineer
17 or a technologist or a drafts person in the older days,
18 and take appropriate visual inspection, find out what
19 existing documentation is there, so a junior might go
20 talk to the owner, assemble all the documentation and
21 previous drawings, specifications.

22 You would go out and you would do a
23 complete site inspection, walk through, measure typical
24 beams and columns and ---

25 **THE COMMISSIONER:** Send somebody out

1 to do loss section measurements, for example?

2 **MR. CRAIG:** Yes, actually, first off
3 you want to make sure that what was built is what was
4 shown on the drawings, or if it's not there, you take
5 measurements to define how the structure is put
6 together.

7 Then you will take visual observations
8 and it may or may not be the senior engineer who is
9 taking responsibility, who does those observations.

10 He needs to be able to depend on the
11 quality of his people through years of experience,
12 perhaps in taking these observations and bringing them
13 back.

14 So they assemble the documentation,
15 put together a drawing, the engineer does not have to
16 do that. He has to check it for reasonableness and
17 accuracy against his own observations.

18 And then it might be a junior
19 structural engineer who does some preliminary analysis
20 and then a senior engineer would check it, spot check
21 it, check certain members, see that the overall
22 conclusions and the analysis was done correctly, and
23 then ultimately take professional responsibility for
24 it.

25 So it is a team effort right from the

1 top to the bottom, but ultimately the engineer who puts
2 his stamp on the drawings takes professional
3 responsibility.

4 **THE COMMISSIONER:** Thank you.

5 **MR. CRAIG:** And the difference that
6 we are talking about here is perhaps that with respect
7 to this seriousness of structural inadequacy, the PEO
8 is talking about having an additional level of
9 certification of quality and experience of certain
10 structural engineers to be designated as specialists.

11 **THE COMMISSIONER:** And can you just
12 elaborate a bit for me, I am sorry, my ignorance shows,
13 but what did you mean by quality assurance?

14 People within your firm?

15 **MR. CRAIG:** What I mean is within
16 certainly my own firm we have a document of procedure
17 or checking a certain percentage of calculations of
18 critical elements, that sort of thing, depending on the
19 experience of the individual carrying out the work.

20 Something documented and rational that
21 we follow as a regular standard procedure, quality
22 assurance procedure.

23 **THE COMMISSIONER:** So quality
24 assurance, when you talk about that you talk about
25 specific procedures?

1 **MR. RONEY:** Yes, documented
2 procedures as ---

3 You are exercising your due diligence
4 in ensuring the quality of the work coming out of your
5 firm being done by others.

6 Similar to, you know, ISO 9000 type of
7 quality assurance certification, that sort of thing.

8 **MR. CARR-HARRIS:** Mr. Acchione?

9 **MR. ACCHIONE:** Yes, just to
10 reiterate, the Society absolutely agrees with what
11 Chris and Dale just mentioned in terms of the roles and
12 responsibilities and how they are currently in the
13 profession doled out.

14 And whatever words you decide to use
15 in the *Building Code*, should not preclude that from
16 happening.

17 So you do not end up putting the
18 entire job on the shoulder of one person with a
19 specific designation and they can't possibly carry it
20 out.

21 **MR. CARR-HARRIS:** Thank you.

22 Any other comments so far?

23 **MR. HUMAR:** If I may ask a question.

24 But you are saying you had a
25 performance standard which attracts the force of law

1 when it is part of the *Building Code Act*.

2 How does that work?

3 Because I found the performance
4 standard that was submitted by PEO to be quite
5 comprehensive and quite adequate, I suppose.

6 **MR. RONEY:** Okay, if I may, through
7 the Chair.

8 A couple of things.

9 I mean, the standards, there are two
10 things that PEO prepares: guidelines and standards.

11 Under the *Professional Engineers Act*
12 regulations can be created and those refer to
13 standards, there are already standards out there to
14 govern such things as general review during
15 construction, that sort of thing.

16 They are different from a guideline,
17 the guideline is documenting best practices, but are
18 not enforceable in any way, shape or form.

19 **MR. CARR-HARRIS:** They are not a
20 regulation.

21 **MR. RONEY:** They are not a
22 regulation.

23 So under the regulation making powers
24 of the Act, standards can be made.

25 Now PEO does not make them in

1 isolation.

2 PEO is a regulator created under the
3 Ministry of the Attorney General and as such requires
4 the concurrence of the government before any
5 regulations can be passed.

6 So we have guidelines which are not
7 enforceable, represent reasonable and practice.

8 We have standards that are enforceable
9 and they have to carry the weight of law under the
10 *Professional Engineers Act*, not under the *Building Code*
11 *Act*.

12 **MR. CARR-HARRIS:** Can I ask you a
13 question too arising out of that, Mr. Roney?

14 You just mentioned that even the
15 regulation, for example, a regulation from the PEO that
16 is regulating in accordance with its Act, if it puts
17 the regulation out, can the government stop it if they
18 don't like it?

19 **MR. RONEY:** Yes, absolutely.

20 The government can stop.

21 It has the ultimate authority on
22 passing the regulations.

23 **MR. CARR-HARRIS:** So they would make
24 an assessment of whether that regulation was necessary
25 or adequate by themselves and then either say yes or

1 no?

2 **MR. RONEY:** Correct. They may modify
3 what Professional Engineers of Ontario has prepared.

4 Germaine to this particular topic,
5 Professional Engineers of Ontario has been in the
6 process of preparing a standard, a proposed standard
7 governing supervision of engineers or -- I am sorry,
8 supervision of non-licensed members carrying out
9 engineering work.

10 That is a process that pre-dates the
11 events at Elliot Lake that gave rise to this Inquiry.

12 But ultimately the goal is ultimately
13 that would become a standard, carrying the force of
14 law.

15 **MR. CARR-HARRIS:** And I mean, just
16 from the standpoint of the Commission, who are
17 considering what recommendations would be made, for
18 example, the ones you have mentioned, what are the odds
19 it is going to get through?

20 In my lifetime, anyway?

21 **MR. RONEY:** As far as the timelines
22 for standards working their way through the government,
23 I mean PEO can deal reasonably efficiently with the
24 creation of standards and the draft standards that
25 would ultimately go to the government.

1 There is obviously some time back and
2 forth as the government then takes it, puts it, works
3 through re-wording it, prepares it with their policy
4 objectives.

5 If it is a matter high on their public
6 policy wish list or if there is say a commission
7 inquiry that is motivating them to act, it may happen
8 more quickly than others.

9 We have had other proposed changes
10 that we have been recommending to the government that
11 wait for quite some time until the government is making
12 some other changes anyway.

13 So it is a matter of practicality in
14 terms of the government.

15 They do not stop what they are doing
16 every time we knock on a door and say we think some
17 changes would be in the public interest and we would
18 like you to make them now.

19 So I can't speak specifically to
20 timing, but I would not be disillusioned in thinking it
21 could not happen in a reasonable amount of time.

22 **MR. CARR-HARRIS:** Thank you, that is
23 helpful.

24 Any other comment?

25 --(No response)

1 **MR. CARR-HARRIS:** We should be able
2 to deal with this one fairly quickly and then we will
3 break for a coffee.

4 We have done Question number 1.
5 Question 2 -- and again, these are
6 being offered for consideration as part of the
7 performance standard that we have been talking about
8 for inspections.

9 One point I should ask you for clarity
10 on, as I understand it the PEO's performance standard
11 is talking about a structural performance standard
12 inspection, not any other kind of inspection.

13 Is that correct?

14 **MR. RONEY:** That's correct. It is
15 quite specific.

16 It is dealing with the structural life
17 safety aspects of reviewing existing building; that is
18 what it focusses on.

19 In terms of when we talk about these
20 mandatory structural adequacy reports, they only exist
21 when triggered, you know, the way the PEO envisions the
22 system working when they trigger under the *Building*
23 *Code Act*, then one of these would create -- they would
24 not be every time that an owner wishes something looked
25 at in his or her building it is automatically one of

1 these formal structural adequacy reports, it is
2 specifically when triggered, be it periodically it
3 becomes legislative periodically.

4 All buildings or certain buildings
5 must have one of these things done.

6 Or if a chief building official
7 becomes aware of a potential item of concern, then he
8 or she may order one of these things -- they have the
9 power to order one of these things done, and it would
10 be only under those circumstances.

11 So it would not necessarily be this
12 huge volume of reports that suddenly show up at the
13 desktop of the chief building official.

14 They would only be under those
15 specific, certain circumstances and dealing with the
16 structural aspects of the building.

17 They would be reports that would be of
18 a -- because they are held to a standard with the force
19 of law, they would have certain contents. It would be
20 in a form that there would be some familiarity.

21 So interpreting these things, I think,
22 would become a little bit easier than reports that are
23 dealing with lots of different things and a lot of
24 times there is difficulty in understanding just what
25 the scope of this report is.

1 So I think it would bring clarity to
2 the industry.

3 And as I said, it is only specific
4 circumstances that would trigger one of these special
5 reports.

6 **MR. CARR-HARRIS:** Well, just to ask
7 the panel.

8 It seems to me that there are probably
9 two things going on here and we should clarify it.

10 One is this is what you want to talk
11 about, PEO, which is what is on the table at the moment
12 in terms of the report, the adequacy report and the
13 specialists and so on in the world of structural
14 engineering.

15 And I guess the question for the
16 others is do we still need performance standards for
17 other areas of engineering or architecture other than
18 structural?

19 In engineering there is electrical,
20 mechanical, there is environmental, there is whatever.

21 But this focus, the PEO focussed on,
22 for reasons you have explained, on structural, you know
23 how much of a bite do we take here in terms of should
24 we be looking for a general inspection guideline that
25 would have force of law that covers all of the elements

1 of engineering?

2 Comment?

3 **MR. BIRDSELL:** I think again we come
4 back to the earlier question that it is up to a
5 professional to identify their area of expertise.

6 And then once that scope of services
7 that they were addressing is the basis of the question,
8 now you are dealing with professional standards that
9 already exist and have been established by the
10 professions.

11 **MR. CARR-HARRIS:** Any other comment?

12 Mr. Craig?

13 **MR. CRAIG:** I think some of the
14 evidence that came out at the Inquiry indicated that
15 there were a various number of building condition
16 assessments done throughout the life of this building.

17 They were not done to any recognized
18 standard, they were not uniform in their methodology,
19 the depth of investigation, the breadth of knowledge
20 brought to it.

21 And it was evident that the results
22 were varied, the conclusions were varied, the
23 interpretations by owners of the findings were not
24 consistent and I think that it begs the question that
25 there is room for a better definition or a

1 standardization as to what should be contained in a
2 building condition assessment.

3 As I mentioned previously, these
4 studies are done by owners, either to address problems
5 that are known or that are suspected in their
6 buildings, or to engage in a financing effort.

7 But there seems to be very little
8 industry-wide acceptance of a performance standard and
9 I think that there is room for the OAA and the PEO to
10 come up with a better standard, not just addressing
11 structural issues but one of a broader nature.

12 Because as Bill mentioned earlier, a
13 life safety, smoke control, exit requirements, other
14 aspects of a building design could affect public
15 safety.

16 So if we are going to have
17 professionals engaging in doing these reports, I think
18 there is room for development of a more uniform
19 standard.

20 There are a couple of examples out
21 there.

22 I think we will probably get into the
23 discussion further down the question list as to what
24 other standards might be there to help inform a
25 professional guideline or practice standard from the

1 OAA and the PEO that is broader than just a
2 structural assessment.

3 **MR. CARR-HARRIS:** So this, from the
4 PEO's perspective, is step one, the performance
5 standard is focussed on the structural, as I understand
6 it.

7 But I take it you have not closed the
8 door on perhaps further inspection performance
9 standards in other areas of engineering that you deal
10 with.

11 **MR. RONEY:** I certainly would not say
12 the door is ever closed to, you know, dealing with
13 elements of public welfare and where additional
14 standards are required, then PEO is certainly
15 interested in pursuing that.

16 Our focus here has been dealing
17 specifically with some of the issues that arose in this
18 particular even that led to this Inquiry and seeing
19 where some improvements could be made to help ensure
20 that the public welfare is better served, moving
21 forward.

22 Just as the events back in 1988 in
23 Burnaby, B.C. at the Station Square where a similar
24 focus was made in establishing certification and
25 additional requirements dealing with structural

1 engineering was applied.

2 Structural engineering is one of those
3 areas of engineering practice that has perhaps one of
4 the higher exposures directly to public safety and
5 public risk.

6 So that is where our focus lies right
7 now.

8 **MR. CARR-HARRIS:** Thank you.

9 Yes, Mr. Acchione?

10 **MR. ACCHIONE:** Bruce, I should just
11 remind everyone that the *Ontario Building Code* is not
12 the only piece of legislation, standard or code, that
13 applies to what is in a building.

14 There is a number of other aspects of
15 the building design that are covered by other acts and
16 codes.

17 For example elevators and escalators
18 are covered by the *TSSA Act*.

19 The fire protection equipment and
20 detection and suppression equipment is covered by the
21 *Fire Protection Code*.

22 Did I mention the *Electrical Code*
23 covers all the electrical wiring in the building.

24 There is heating and ventilating
25 standards codes and practices on the movement of air,

1 fresh air into the building to make sure that the air
2 is not a health issue.

3 So there is a number of other places
4 where public safety is protected in terms of the design
5 of buildings.

6 So I do not want people to think that
7 what is in the *Building Code* is everything, it's not --
8 -

9 **MR. CARR-HARRIS:** Thank you, that is
10 a very good point.

11 Yes, Professor Humar?

12 **MR. HUMAR:** Yes. The *Ontario*
13 *Building Code* as well as the *National Building Code*
14 deals not only with safety but also with health.

15 The minimum standards described for
16 ensuring public health and safety.

17 Now, we are only dealing with the
18 safety part, but as mentioned, there are various other
19 aspects.

20 In all of these standards and codes
21 that are referred to are all referenced in the *Building*
22 *Code*.

23 So by being referenced, they become
24 part of the Code.

25 So if you refer to an Electrical Code

1 or a Plumbing Code or a ventilation air conditioning
2 Code, they all -- elevators, escalators, all of them
3 are enforceable under the *Building Code* itself, the
4 *Building Code* references.

5 Any standard that is referenced in the
6 *Building Code* becomes part of the Code itself.

7 I think in my view we should probably
8 focus ourselves on safety aspect, because this is
9 directly relevant to the events that have happened.

10 And this time to develop performance
11 standards for all aspects of safety and health, it
12 would be a momentous task.

13 And the second thing is some of the
14 aspects are now, of course, controlled by the Ministry
15 of Labour, they have this regular inspection which
16 happened in this particular building as well.

17 So my view is that we should probably
18 focus on the structural adequacy and safety or public
19 safety aspects of it. There is enough there to
20 recommend.

21 **MR. CARR-HARRIS:** And Professor Humar
22 has suggested this.

23 Is that a consensus that we focus our
24 energies on this area of structural engineering at this
25 point?

1 **MR. CRAIG:** I agree.

2 I think that one nuance that we have
3 to keep in mind is that this was not a pure structural
4 failure in terms of an over-stressed member.

5 It has very much to do with the
6 building condition, building envelope, problems and
7 years and years of degradation.

8 So to just look at the pure structural
9 adequacy, if you analyse the building as designed, it
10 might have met the Code at the time.

11 When you are performing a structural
12 adequacy report, you have to be cognizant of the other
13 factors that can affect structural adequacy, corrosion,
14 building envelope problems, all the other service
15 factors that can come into affecting the safety.

16 That is just the one point that I
17 would like to make sure that we don't lose sight of.

18 **MR. CARR-HARRIS:** Thank you.

19 Mr. Craig, hold that thought because I
20 think that is what we should be doing as we go through
21 the rest of these sub-paragraphs of three, is looking
22 at them as to the -- if not the precise wording, which
23 is certainly the case here, but the idea is something
24 that should be reflected in these standards that you
25 would look for, and the corrosion issue is one of them.

1 Perhaps we had better break for the
2 morning coffee?

3 **THE COMMISSIONER:** Twenty minutes.

4 **MR. CARR-HARRIS:** For twenty minutes.

5 And you have worked hard for twenty
6 minutes so you have earned it. Thank you very much.

7 **--- RECESSED AT 10:26 A.M.**

8 **--- RESUMED AT 10:50 A.M.**

9 **MR. CARR-HARRIS:** Welcome back.

10 I just wanted to clarify with Mr.
11 Roney with the PEO, the issue of a point on insurance.

12 I understand, I have now been
13 informed, that the engineers, it is not a mandatory
14 requirement that they carry professional liability
15 insurance.

16 In some respects, people are exempted
17 from it.

18 I would ask in the context of what we
19 are talking about here, the structural specialist and
20 the structural adequacy report in this new
21 configuration, what would the situation be from a
22 standpoint of insurance?

23 Would they be required to have
24 insurance or not?

25 **MR. RONEY:** With regards to the

1 specialist certification specifically, and although PEO
2 has not advanced it obviously to the point that we have
3 worked out all the details, it is still under
4 discussion, but consideration of mandatory provisions
5 for insurance would seem entirely reasonable and in
6 line with our mandate for public protection and
7 welfare.

8 **MR. CARR-HARRIS:** Thank you.

9 I will take that as a "probably."

10 Thank you, Mr. Roney.

11 Can we then go to Question 3(ii)?

12 Again, these are being offered for
13 consideration in the performance standard we have been
14 discussing as things that should be included.

15 I think I can say there is generally
16 some consensus throughout, but there are some points
17 where people differ.

18 So I would like to go through these.

19 Now, 3(ii), the question is: "*Should*
20 *this performance standard clarify which documents*
21 *should be reviewed prior to the inspection?*"

22 Who would like to take a crack at that
23 straight away?

24 **MR. BIRDSELL:** I would say certainly
25 everything that is available should be reviewed,

1 however there are instances where documentation was not
2 complete originally or may no longer be available.

3 I would also say that there is an
4 aspect of professional judgment in reviewing the value
5 of the documentation so that then you can evaluate what
6 is appropriate documentation versus the existing
7 conditions that are discovered.

8 **MR. CARR-HARRIS:** Is there anyone who
9 disagrees with that or wants to make any comment on it?

10 --(No response)

11 **MR. CARR-HARRIS:** So we move on to
12 the next one.

13 3(iii), the question is: "*To clarify*
14 *which questions must be asked of the on-site owner*
15 *representative, including a request for production of*
16 *previous structural engineering reports.*"

17 Mr. Roney?

18 **MR. RONEY:** I will say a couple of
19 things.

20 First of all, with previous structural
21 engineering reports, if we do move to some of our
22 recommendations having these structural adequacy
23 reports, I think that will be of great assistance on a
24 going forward basis in documenting the condition of a
25 building and how it changes over time.

1 The other thing I would like to say,
2 and perhaps picking up from my friend with OAA, and our
3 practice bulletin covers this, we are talking about
4 putting it into a standard, giving it the force of law.

5 The one thing that we do want to keep
6 in mind is that you can never put into a standard good
7 judgment and there is always going to be an element of
8 judgment.

9 We can't have a laundry list of you do
10 this, this and this and you are all done.

11 There is always going to be an element
12 of professional judgment.

13 It is the essence of being a learned
14 profession and the judgment becomes important.

15 What we can do as an engineering
16 regulator is do our best to ensure the qualifications
17 of those people making those judgments and exercising
18 that judgment, and that's the other part of our
19 proposal which deals with the structural engineering
20 specialist.

21 **MR. CARR-HARRIS:** And I take it there
22 is no disagreement with that point for anybody?

23 Am I correct that this performance
24 standard we are talking about are minimum standards,
25 Mr. Roney?

1 **MR. RONEY:** Standards are, you know
2 even the *Building Code* itself is considered a minimum
3 standard and may not always anticipate every different
4 circumstance out there and all the more reason why
5 judgment becomes important to understand when the
6 minimum standards are not enough.

7 **MR. CARR-HARRIS:** Thank you.

8 Then question 3(iv): "*Should the*
9 *performance standard identify the critical areas and*
10 *determine the appropriate number of samples on which to*
11 *draw credible conclusions?"*

12 Comments on this one?

13 Professor?

14 **MR. HUMAR:** I enforce the idea that
15 standards and guidelines are always minimum standards
16 and guidelines and being too specific in a guideline
17 you give the false notion to the person using them as
18 saying 'having satisfied guidelines everything is
19 okay.'

20 It may not be okay to anything.

21 So there is no substitute for
22 engineering experience and judgment.

23 And one thing one should avoid is
24 making very specific statements in the guideline saying
25 'you should inspect four joints or five joints or two

1 joints', that may not be sufficient for that particular
2 case. It depends on the type of building, the
3 circumstances surrounding the distress.

4 So there should be general directions
5 and each one has to go without being too specific and
6 for example, you are saying how many samples.

7 Now, that is a very difficult question
8 to answer for every single case.

9 It can change quite a lot from one to
10 the other.

11 The scope of the project, the extent
12 of the project, the size of the project and what are
13 they looking for.

14 Are you going to say 'okay, you should
15 just measure the corrosion.' That is very specific to
16 that particular type of failure.

17 But there are various other things
18 that can lead to distress or failure.

19 So the guidelines should give you the
20 directions, but then ultimately it is engineering
21 judgment or professional judgement and experience that
22 count.

23 The guidelines should make this clear,
24 that this is the minimum standard that you should
25 prescribe and it should not be too specific.

1 **MR. CARR-HARRIS:** Mr. Birdsell,
2 please.

3 **MR. BIRDSELL:** Yes, I would agree
4 that it varies.

5 It is certainly helpful to set a best
6 solution due to the existing conditions.

7 A couple of instances.

8 A minimum number of samples could
9 actually lead an owner to disregard the professional
10 recommendations.

11 In another instance, a building that
12 has been properly maintained, a minimum number of
13 samples could lead to an unreasonable expense to an
14 owner.

15 I would also just recommend to the
16 Committee that occupancy type and other examples of
17 buildings should come into play.

18 For example, a combustible building
19 versus a non-combustible building may change the
20 instance of how to sample and test the structure.

21 Also, an important aspect, especially
22 valued here in Ontario, is a heritage structure where
23 you may not have documentation to guide you as to where
24 the sample.

25 **THE COMMISSIONER:** I take it you are

1 saying the guidelines could be more specific than the
2 standards.

3 The standard have by their very nature
4 to be general, the guidelines perhaps allow you a bit
5 more discretion in terms of specificity.

6 **MR. RONEY:** Precisely.

7 **MR. CARR-HARRIS:** Does anybody want
8 to comment further on that element?

9 I think we agree that it is a little
10 too specific for the performance standard we are
11 talking about.

12 And does anybody disagree with that?

13 --(No response)

14 **MR. CARR-HARRIS:** Then number 3(v):
15 *"Should the performance standard document the inspected*
16 *areas, including photographs, measurements, samples and*
17 *notes?"*

18 I think we have got complete unanimity
19 on that from my notes.

20 Has anybody had a second thought since
21 you sent them to me?

22 --(No response)

23 **MR. CARR-HARRIS:** So we are on question
24 3(vi): *"Should the performance standard clarify and*
25 *define terms such as "visual inspection", "condition*

1 *assessment", "detailed condition assessment",*
2 *"structural assessment report", et cetera?"*

3 Now the reason this arises is because
4 at the Inquiry there were a lot of inspections carried
5 out throughout the years and they had various names.

6 The question that I have for all of
7 you 1) in terms of the structural analysis or adequacy
8 of the building, will there be any need for any of
9 these terms beyond structural adequacy report?

10 Or will these terms disappear because
11 there is a variety of them and frankly nobody can tell
12 the difference between them?

13 **THE COMMISSIONER:** And depending on
14 who was asking for the evaluation, the lenders were
15 less concerned, bearing in mind the nature of their
16 contractual obligation, the insurer is less concerned
17 than the owners or the building officials and tended to
18 use those expressions like "visual inspection" only.

19 **MR. CARR-HARRIS:** Mr. Roney?

20 **MR. RONEY:** I think a lot of this
21 will be addressed if the recommendations of PEO to
22 create this element called a Structural Adequacy Report
23 are enacted, because that will become a known quantity
24 with known elements within it that are defined in the
25 standards.

1 So there won't be this misconception
2 of is this really a report that deals with this or not.

3 In that, in our bulletin we do not
4 have definitions of defined terms, but we would expect
5 that a standard where clarity is required, such as
6 maybe on a visual inspection or so on, that may find a
7 home within the standard, ultimately, where greater
8 clarity is required.

9 It's not bad public policy to have
10 clarity by any means.

11 So where prudent and necessary, yes.

12 The structural adequacy reports will,
13 as we are recommending at PEO, be triggered and there
14 are, under certain circumstances, there may be many
15 other reports done for many other purposes to the life
16 of a building for the benefit of an owner and insurance
17 company or what have you that are not structural
18 adequacy reports.

19 There could still be confusion in
20 those in the terms that are used, but where it is of
21 greatest public safety concern, we are talking the
22 structural adequacy report and in that there is great
23 clarity.

24 **MR. CARR-HARRIS:** Thank you.

25 And in terms of the others, the point

1 you make is a good one, we are talking structural, you
2 are, there are other of that very same structure when
3 it is not a structural assessment it could be a
4 condition assessment, a detailed condition assessment,
5 a structural assessment.

6 All these names which are confusing,
7 what can be done to standardize those in the
8 engineering world?

9 We have not seen any in an architect
10 report that deals with this, but most of what we dealt
11 with were engineering reports, but we had this list of
12 things which seemed to be a maze to get through in
13 terms of what the expectation was.

14 So do you have any suggestions as to
15 how to manage this so the public knows what they are
16 getting?

17 Yes, Mr. Acchione?

18 **MR. ACCHIONE:** Bruce, I would ask the
19 question: what does it matter, if the structure is
20 safe?

21 What does it matter whether it is a
22 report on the quality of the paint or the quality of
23 the aesthetics or the quality of, you know, what does
24 it matter, as long as the place is safe?

25 So if the safety aspects are covered

1 by the structural integrity report, then the other
2 aspects, whatever owners want to call it when they ask
3 for an assessment, they can call it whatever they like,
4 because that is what has happened.

5 What has happened is every owner has
6 picked a different word to play to a particular
7 audience.

8 **MR. CARR-HARRIS:** Any comment on
9 that, Mr. Craig?

10 **MR. CRAIG:** I think that the problem
11 with that is that certain or a general condition report
12 that was conducted based on a solely visual nature, a
13 walk through, would be written in a manner that
14 depending on who actually composed the report, might
15 lead people to believe that a greater degree of
16 accuracy was entailed in the report and the compilation
17 of it than really is truly there.

18 So I think some definition is useful.

19 If you conducted purely a visual
20 walkthrough of a building and you did no destructive
21 digging, you did not inspect all the various individual
22 elements, you did not look above ceilings, you did not
23 ascertain the location and cover and nature of the
24 reinforcing steel, then it should be at least known
25 that that report was done on a very reduced basis and

1 it would not represent a statement as to the true
2 structural adequacy of the report.

3 It is purely the condition of the
4 structure.

5 And I think we need some definition.
6 I really do.

7 **MR. CARR-HARRIS:** I think it is
8 anticipated in the material that I have read anyway,
9 that the structural adequacy report will require -- I
10 mean, I think there is some things that could be filled
11 in, but they require that where you went, what you saw,
12 why you made the conclusion you did, where is the
13 analysis, kind of thing.

14 But outside the structural adequacy
15 report, we have all these other terms and I guess Mr.
16 Acchione's point is that since public safety is not
17 there they can call it whatever they want and maybe
18 that is the answer.

19 Yes, sir?

20 **MR. ACCHIONE:** I just remind you that
21 there is other acts that have specific names for
22 specific things and only those things that are called
23 that are allowed to be taken for credit.

24 So for example, in the *Occupational*
25 *Health and Safety Act* there is a prestart health and

1 safety review and it must be done by a professional
2 engineer before you turn the power on.

3 If that is not done, they can be
4 charged.

5 The owner can be charged under the
6 *Occupational Health and Safety Act*.

7 So those things already exist.

8 So as Chris says, once they have a
9 requirement for a structural adequacy report that
10 covers off the structural public safety of a building,
11 then it is easy enough to put in words, it says, it can
12 only be used as a structural integrity item if it is
13 called that and it has been produced by, in this case,
14 a specialist with structural designation.

15 So I think that will take care of
16 itself and if the wording in the Act is as clear as the
17 *Occupational Health and Safety Act* is clear for the
18 pre-start health and safety reviews, then it will take
19 care of itself.

20 And anything else is not, and it can't
21 be used as such.

22 **MR. CARR-HARRIS:** Thank you.

23 Mr. Birdsell?

24 **MR. BIRDSELL:** Yes. The definitions
25 may be best established by the province and housed in

1 the *Ontario Building Code Act*.

2 That may assist in getting rid of the
3 inconsistencies and conflicts that you have identified.

4 **MR. CARR-HARRIS:** Thank you.

5 One last question arising out of this.

6 On the adequacy report is it -- and
7 you mentioned this, I believe, Mr. Roney, is it at the
8 moment considered to start with a visual inspection?

9 **MR. RONEY:** It goes well beyond
10 simply a visual inspection.

11 It is anticipated that where necessary
12 testing will take place.

13 Analysis of the implications of what
14 is observed would be included and there would be
15 expectations on that.

16 So it is anticipated it would be more
17 thorough than simply a visual examination.

18 **MR. CARR-HARRIS:** So what we saw in
19 terms of process at the Inquiry was where it worked at
20 all there was initially what appeared to be a visual
21 inspection with recommendations to go the next step in
22 terms of what needs to be done to get the answers.

23 And then there would be a further
24 inspection some time and a further report which would,
25 I understand, is the typical sort of way it is done and

1 would the standard of performance be based on that kind
2 of process, or it may be resolved by the first
3 investigation but there may be subsequent ones that
4 require further reports?

5 **MR. RONEY:** Certainly the fundamental
6 starting point of the actual inspection work always
7 starts with a visual review of the elements and a
8 visual review that is thorough enough that you are
9 seeing a representative sampling of the element in
10 order to be able to draw reasonable conclusions on
11 that.

12 Where the visual assessment identifies
13 areas of potential deterioration or concern, then the
14 next step is certainly to undertake testing or further
15 measurement or further examination as may be deemed
16 necessary.

17 **MR. CARR-HARRIS:** And am I right, from
18 the standpoint of all of you, that a visual inspection
19 today would not permit a sealing, for example, to be
20 uncovered to have a peek inside?

21 The visual inspection would not allow
22 any so-called destructive type of ---

23 **MR. CRAIG:** I don't think it
24 precludes it at all.

25 I think any reasonable structural

1 engineer would be hard pressed to simply walk through a
2 building and never look up above a ceiling to see the
3 structure above there and pass judgment on the adequacy
4 of that structure.

5 I think it would be very inappropriate
6 to be --

7 What I would like to understand a
8 little bit more in terms of the policy is that the
9 structural adequacy report that the PEO is proposing
10 would be triggered by a CBO or a complaint or some
11 formal request that a building owner submit a
12 structural adequacy report.

13 **MR. RONEY:** Yes, there would
14 definitely be triggering mechanisms that would make the
15 generation of one of these reports mandatory.

16 And that is fundamental to our
17 recommendations, typically triggered by a chief
18 building official, or triggered by an event such as a
19 change in the loading or a natural event such as an
20 earthquake.

21 The triggering event and what they may
22 be, we can discuss.

23 But the important concept is that
24 these mandatory specific reports by specific people
25 have to be triggered in legislation as opposed to

1 something just at the discretion of a building owner,
2 or they are not going to happen.

3 **MR. CRAIG:** I agree that you need a
4 mandatory requirement to have one done when there is a
5 concern expressed from a building official, or an event
6 which triggers it.

7 What I am a little worried about is
8 that you have conditions in a building that has been
9 badly maintained, under financed, a lot of deferred
10 maintenance that could lead to some difficulty and no
11 owner that has permitted that to go on is going to
12 voluntarily do a structural adequacy report.

13 So he will be looking for somebody to
14 pat him on the back and say that the building looks
15 pretty good.

16 **MR. RONEY:** So if I may just clarify.

17 The triggering mechanisms that are in
18 our recommendations, and I think they are number 18 in
19 our submission, but they triggered complying with an
20 order issued by a CBO or Ministry of Labour inspector.

21 So that can deal with some workplace
22 issues.

23 Or verifying damage caused by fire,
24 earthquake, vibration, impact, flooding or imposition
25 of live or snow loads, exceeding those originally

1 specified in the *Building Code*, have not compromised
2 the structural integrity of the building.

3 You can run into situations like that
4 when there is a taller larger structure built next to a
5 lower structure, for example, that affects the snow
6 loading.

7 Obviously, if in legislation there is
8 requirements for some kind of ongoing periodic
9 inspection, and that sort of thing already exists for
10 arenas under the *Occupational Health and Safety Act*
11 there is a requirement that arenas be inspected by a
12 professional engineer for structural integrity every
13 five years.

14 **MR. CRAIG:** Not anymore. It has been
15 dropped.

16 **MR. RONEY:** And other things, such as
17 excavation, adjacent excavation could trigger this and
18 that sort of thing, or any other form of legislation
19 that particularly specifically calls for these.

20 Those would be the circumstances that
21 we initially envision as being triggering mechanisms in
22 legislation.

23 **MR. CARR-HARRIS:** Thank you.

24 I think in discussions in the previous
25 Roundtables this issue has been discussed as to what

1 might be triggered on an ultimate basis that every
2 period of whatever, three to five years and so that the
3 status of some of these buildings can be monitored as
4 they go on.

5 We will get to that more though, I
6 think in the recommendations, that there are some
7 recommendations as to what is out there now kind of an
8 issue.

9 The next one is 3(vii): "*The report*
10 *should prohibit the use of statements in reports such*
11 *as 'all beams inspected had little loss of section and*
12 *we would consider the members still structurally*
13 *sound', where location of those beams and structure*
14 *elements on which the opinions was based is not*
15 *identified in the report.*" And in other words, they
16 failed to give the basis for the opinion.

17 Now, perhaps this is too specific
18 again, but from the standpoint of a structural report,
19 would it be a good thing to have in there that what --
20 and I think it may already be proposed; that where an
21 opinion is offered as to whether the building is
22 structurally sound at all, the analysis and the
23 evidence to support it has to also be explained in the
24 report.

25 Comments?

1 Any disagreement?

2 **MR. HUMAR:** Without being too
3 specific, as it is here, what you just stated is much
4 better, I think.

5 **THE COMMISSONER:** Apparently some
6 general statement about proper representative sampling.

7 **MR. HUMAR:** Absolutely.

8 **MR. CARR-HARRIS:** I think, Mr.
9 Birdsell, I think in your note you indicated that
10 structurally sound is not a defined thing in the
11 Province of Ontario and suggest that it should be.

12 Is there anybody who can venture a
13 definition of what "structurally sound" means?

14 Because it does show up in these
15 reports without any apparent support, some reports.

16 Comments?

17 Mr. Craig?

18 Mr. Acchione?

19 **MR. CRAIG:** "Structurally sound" is
20 too generic a term to be truly relied upon, I believe.

21 I think you have to also recognize
22 that you can do two levels of a structural
23 investigation and report.

24 One could determine that the building
25 has not suffered deterioration or been visibly

1 overloaded or show signs of distress for its service
2 conditions.

3 That is one level that you might say,
4 some people would say, therefore I conclude that the
5 building is structurally sound, that does not address
6 whether it was designed according to the codes that it
7 should have been designed to, or that they have done
8 any analysis to determine that there were no mistakes
9 in the original design of the building.

10 So I think all of these factors need
11 to go in to determine what we are calling an
12 engineering adequacy, structural engineering adequacy
13 assessment of a building.

14 You will often find an owner who says
15 I am not worried about whether it meets the code.

16 I just need to know whether your
17 experienced eye indicates that I should have reason for
18 concern.

19 Very dangerous mandate for an engineer
20 to go in and accept, but it's not outside the realm of
21 probability that this type of a mandate is offered to
22 people.

23 So I think "structurally sound" is a
24 really nebulous term.

25 You need to get into whether you are

1 talking about the design, the condition of a building
2 and its members, its service conditions that could lead
3 to deterioration.

4 There are a whole bunch of factors.

5 I harken back to the whole idea of
6 sound engineering judgment from a well-qualified
7 professional. There is no substitute for that.

8 **MR. CARR-HARRIS:** Any further
9 comment?

10 --(No response)

11 **MR. CARR-HARRIS:** Number (vii) under
12 Question 3.

13 Again, we may have touched on this
14 one, but: *"Establish a baseline of what is deemed to be
15 an appropriate representative sample of the structural
16 system and its components, including joints and
17 connections, and structural steel to be inspected
18 before the professional inspecting the building can
19 confidently confirm that it is structurally sound."*

20 Again, this is the sample point, but
21 again as the Commissioner said, there is some way that,
22 without being too specific, that you can encourage an
23 appropriate level of sampling because in some cases, in
24 the evidence that we heard there was, you know, they
25 would say why wouldn't you go and sample some of these

1 things?

2 I mean how many do you want to do?

3 It will cost a fortune.

4 Yet another engineering firm that
5 actually did the sampling on the place went in and said
6 I think they had fixed a number -- I think it was 40 --
7 they did 40 of hundreds and picked their spots and
8 boom, the thing was done in three days or so.

9 So it is in the mind of some of the
10 inspectors, this was a huge task that was overwhelming.

11 So the question is: is this a useful
12 thing to put in in some way in the performance standard
13 that you should consider sampling and you should get
14 some idea of how -- it should be an appropriate one and
15 leave it at that, just in case they forget there is
16 such a thing as sampling.

17 **THE COMMISSIONER:** How do you define
18 a baseline though, with so many potential variables?

19 **MR. CARR-HARRIS:** That is where the
20 engineering judgement would come in.

21 **THE COMMISSIONER:** Yes.

22 **MR. CARR-HARRIS:** Yes?

23 **MR. BIRDSELL:** Let's say that
24 guidelines would not have the same consistent impact as
25 opposed to actually establishing something in

1 legislation.

2 **MR. CARR-HARRIS:** Yes, I think what
3 we are talking about here is this performance standard
4 that will be a regulation under the PEA.

5 And therefore would be something that
6 everybody would have to follow.

7 **THE COMMISSIONER:** I just do not
8 think we have the expertise to start talking about
9 guidelines.

10 That is obviously much beyond our
11 ambit.

12 **MR. CARR-HARRIS:** I think item 9 we
13 have dealt with, and other ones.

14 3(ix).

15 3(x) is the following, defined -- and
16 again, this is defined in this performance.

17 *"What the professional inspecting the*
18 *building must include in their reports in relation to*
19 *which elements they have inspected and those they have*
20 *not inspected. Should the guidelines require that*
21 *review of structural steel must include an inspection*
22 *of and a report on the condition of connections,*
23 *failing which the structural review is not complete?"*

24 So putting aside the two specific
25 aspect of this, is it not fundamental that the

1 inspectors should set out the areas they have inspected
2 and those they did not inspect and if they did not
3 inspect them, the elements of the structure, they have
4 a reason why they did not expect them.

5 Is that something we can all agree is
6 an appropriate one?

7 **THE COMMISSIONER:** You used the
8 expression "guideline", I take it you mean "standard"?

9 **MR. CARR-HARRIS:** Yes, standard.

10 **MR. CRAIG:** I think we would all
11 agree that a structural condition assessment or a
12 structural adequacy review is not complete unless all
13 the various elements that go into comprising a
14 structural system have been at least reviewed to some
15 extent.

16 How many joints or connections you
17 looked at or how many members you looked at might be
18 determined by the conditions in which the building is
19 found to be.

20 If it has had extensive leakage like a
21 building we have all looked at, you might want to
22 inspect a lot of areas because you do not know whether
23 you have seen the worst at any one time.

24 If you see a building that has been
25 well maintained, well-constructed, is dry, is sound,

1 the building envelope is good, you will naturally in
2 your judgement feel the need to do less intrusive
3 inspections and fewer numbers just to determine that in
4 general that building has been built in accordance with
5 the documents you have seen and the standards that were
6 required.

7 So no condition report is complete
8 unless all elements that comprise a system are
9 inspected.

10 **THE COMMISSIONER:** What elements
11 beyond connections?

12 **MR. CRAIG:** The beams, the columns,
13 the connections of the beams to the columns that
14 specific to structural steel frame.

15 If it has floor joists you want to
16 look at the joists, you want to get an indication of
17 the soundness of the floor slab itself, if it's a pre-
18 cast system it could be hollow core.

19 You could be looking at the topping,
20 it could be the tee's, there are timber frame systems.

21 There are a number of structural
22 systems, all of them essentially are elements that are
23 put together to form a complete system to resist the
24 loads, the gravity and the lateral loads to which the
25 building will be subjected over its service life.

1 So a competent structural engineer
2 will know that all these components go to comprising a
3 sound, structural system and you have to rely again on
4 judgment and perhaps some guidelines.

5 **MR. CARR-HARRIS:** Thank you, Mr.
6 Craig.

7 The 3(xi) I think deals with a warning
8 and I think we have covered that.

9 Question 3(xii), the question is: "*Set*
10 *out when it is appropriate to make changes to a draft*
11 *report, and again we are for our purposes talking about*
12 *the adequacy report, based on the client's feedback.*"

13 So when is it proper to do that,
14 Professor?

15 **MR. HUMAR:** Only if it clarifies
16 certain items which have been included, but not at all
17 to change any technical content of the report, because
18 the client wanted them to be removed.

19 If it is a clarification, additional
20 information, that is fine.

21 The client requested I need to know
22 something more, sure.

23 But if he says 'okay, remove this
24 because it is too unflattering', well that is not a
25 good professional conduct.

1 **THE COMMISSIONER:** That was our
2 experience.

3 Take that picture out.

4 **MR. CARR-HARRIS:** Anything to add to
5 that point?

6 That seems to cover it.

7 Yes, Mr. Acchione?

8 **MR. ACCHIONE:** I should mention that
9 sometimes something is discovered during an inspection
10 and everyone agrees it should be fixed right away.

11 I think it is important that you
12 actually record that it was discovered and that the
13 repair was made, not just completely covered up and
14 pretend like there was nothing there.

15 In other words, the fact that the
16 owner has decided to fix something should not preclude
17 the reporting of it.

18 **MR. CARR-HARRIS:** Yes.

19 Anything else?

20 I think we have an agreement on that.

21 And then number (xiii) under Question
22 3: *"Would the performance standard include what reports*
23 *from the buildings inspected, how they should be*
24 *retained either by the engineer or by the municipality*
25 *or both?"*

1 First of all, do you agree the report
2 should be retained by the engineer?

3 **THE COMMISSIONER:** Are there
4 legislative requirements now in existence as to
5 retention of documents?

6 **MR. RONEY:** There is no legislative
7 requirement for retention of documents under the Act,
8 the regulations that govern professional engineering.

9 We do speak to it in our guidelines of
10 professional practice, but there is no legislative
11 requirement.

12 **THE COMMISSIONER:** Should there be?

13 **MR. RONEY:** What our recommendation
14 is specifically dealing with, the issues at hand and
15 the structural adequacy report, one of the reasons that
16 we included in it that they should be mandatory that it
17 submitted to the chief building official is for a
18 number of reasons.

19 One is that is an entity which has
20 much greater longevity than individual firms that come
21 and go and individual owners come and go.

22 Ideally everybody retains the records,
23 but if there is that repository with the municipalities
24 of these records, that seems to be the most pragmatic
25 repository of these.

1 It also serves a number of public
2 safety and public policy sort of advantages and in my
3 own practice, I am called upon by my municipality,
4 local municipality whenever an incident happens when
5 there is a collapse or what have you.

6 I have attended those sites.

7 If the municipality had a repository
8 of all the past structural reports that speak to the
9 nature of the construction, past areas of
10 deterioration, this would be extremely valuable
11 information for the first responders to have when they
12 attended the site.

13 If we were to rely on the engineering
14 firms, then first of all we need to look up and say who
15 are the engineering firms that have had any association
16 with this building?

17 If we were to rely on the owners to
18 produce this, certainly there would be delays and
19 secondly many owners might be concerned if there has
20 just been an incident at their buildings about their
21 exposure, if they are to turn these things over.

22 So with regards to this retention, I
23 am not sure if we would be gaining much by having a
24 mandatory retention by the engineering firms, but I
25 think the retention should be with the municipalities.

1 **THE COMMISSIONER:** But as a failsafe
2 mechanism, particularly in this digital age, what is
3 the harm or what costs are imposed or what
4 responsibilities?

5 **MR. RONEY:** Or say an engineering
6 firm?

7 **THE COMMISSIONER:** On an engineering
8 firm keeping it, in addition.

9 Because I mean we have an instance
10 here where the municipality did not maintain adequate
11 records.

12 In a perfect world.

13 **MR. RONEY:** PEO has not created a
14 policy or taken a position on the cost.

15 As an individual practitioner I can
16 give you, because I am in the business and we actually
17 retain just about everything and our firm goes back to
18 1926, so we have huge amounts of archives.

19 It is much easier in the digital age,
20 everything is digitized now and it becomes a much
21 simpler process because we don't need enough to know
22 where we stored it, you can just search by key words
23 and up it comes.

24 **THE COMMISSIONER:** Sure.

25 I am not saying retroactively do it.

1 But at the very least impose an obligation going
2 forward on. I am sure that 99 percent of it now is all
3 digitized in any event.

4 **MR. RONEY:** If you are talking about
5 public policy, public welfare, I could not find an
6 argument against retention.

7 **THE COMMISSIONER:** Thank you.

8 **MR. CARR-HARRIS:** Yes, Mr. Birdsell?

9 **MR. BIRDSELL:** Just to add that at a
10 minimum perhaps a better term than the word
11 "municipalities" would be authorities having
12 jurisdiction because different buildings may be
13 governed differently.

14 And I would say yes, the owner should
15 retain the documents until the building is demolished.

16 Just on the aspect of digital, having
17 practiced long enough to recognize that due to the
18 technology, things that I have stored in the 80's, you
19 have to re-establish these every time somebody comes
20 in.

21 Then all of a sudden you have to have
22 effective library standards to actually find the
23 documents.

24 **THE COMMISSIONER:** It is not perfect,
25 there is no doubt about that.

1 **MR. CARR-HARRIS:** In some cases, the
2 reports were in the office the previous inspection
3 reports of the building were in the office which
4 revealed arguably useful information, but they were
5 never reviewed by the person who went out the next
6 time, and therefore did not get any of the information.

7 Mr. Acchione?

8 **MR. ACCHIONE:** Yes, just a reminder.

9 With the exception of Chris's firm,
10 engineering firms come and go and hopefully goes
11 another 126 years.

12 But what typically happens to a firm
13 that is shutting down for various reasons, whether the
14 owner is retiring or he sold the firm and they don't
15 care where the records go.

16 To satisfy contractual obligations,
17 because many clients require a retention period in their
18 contracts of the work of their consultants, they would
19 return typically those records to the client if they
20 were going out of business, and then the client may
21 choose to dump them if they don't think they are
22 particularly valuable.

23 So if you are really worried about
24 being able to access archives for public safety
25 reasons, I think Chris is probably right.

1 The place to store them is at the
2 building officials office.

3 And as we have already heard from
4 Chris, these days you don't need an awful lot of space
5 if it's digital.

6 **MR. CARR-HARRIS:** Mr. Miller?

7 **MR. MILLER:** Yes, thank you.

8 We would agree that these reports
9 should be on file with the CBO.

10 We kind of take a different approach
11 and we are saying not every building, but perhaps the
12 higher risk buildings.

13 Parking garage structures or buildings
14 with high assembly.

15 The CBO's, you know, of the larger
16 cities can certainly handle storing those records on
17 file, whereas a smaller CBO and smaller municipalities
18 may not be able to do that.

19 Also, many municipalities now do have
20 retention record by-laws in place.

21 Quite often what we see is these
22 building permit related documents are kept on record
23 for various time frames.

24 For instance, my town all building
25 permit records were kept on file permanently.

1 We have a repository, but that is not
2 across the board.

3 Another example I want to give is the
4 *Ontario Fire Code*.

5 Under the *Ontario Fire Code* the
6 building owner is required to have certain inspections
7 of their life safety systems for a type of building,
8 especially assembly occupancies.

9 Their fire alarm system has to be
10 inspected on a periodic basis.

11 The building owner is required to keep
12 those reports, annual reports or period reports on
13 file.

14 So they have got a good parallel
15 system that would be in place here.

16 **MR. CARR-HARRIS:** In terms of the
17 storage, would it depend on the type of building or
18 type of occupancy in that building; that is what you
19 are suggesting?

20 **MR. MILLER:** That is correct.

21 I mean there are literally thousands
22 of buildings in Ontario and I don't think it would be
23 expected for the municipality to take on such a large
24 volume of that.

25 It is one thing just taking in the

1 reports, but you also have to do something with those
2 reports. You have to, you know, read those reports,
3 file them and what have you.

4 That is quite a burden on a
5 municipality and a chief building official as well.

6 **MR. CARR-HARRIS:** We will move on to
7 Question (xv), which is the last one under Question 3:
8 *"Clarify the procedure to be followed when signing a*
9 *report prepared by a graduate professional in training,*
10 *a C.E.T. or an unlicensed engineer."*

11 Is anybody prepared to address that?

12 First of all, do you think that is a
13 useful thing to have, whether in this standard, the
14 performance standard or generally a clarification of
15 this procedure?

16 First of all, Mr. Roeny, can you sort
17 of outline that procedure?

18 **MR. RONEY::** As I mentioned earlier,
19 PEO was in the process of preparing a standard that
20 more clearly articulates what are the requirements.

21 Fundamentally though, an engineer that
22 is signing a report prepared by someone who is not a
23 licensed member, the *Professional Engineers Act*
24 certainly permits this and make specific reference that
25 any individual engaged in the practice of professional

1 engineering provided that their work is reviewed and
2 then signed off by a licensed professional engineer.

3 With regards to the procedure, we are
4 seeking to clarify that procedure through the use of a
5 standard, which has been in development for some time.

6 So we are certainly, obviously
7 supportive of clarifying such a procedure and we are
8 working towards that aim.

9 **MR. CARR-HARRIS:** We may be able to
10 help.

11 I recognize that in your
12 recommendations 10 and 11 you deal with this, and I
13 gather that is the prospect to go forward.

14 Does anyone have any comment?

15 Mr. Acchione?

16 **MR. ACCHIONE:** Just in the interest
17 of full disclosure.

18 I was on the working group that
19 worked on that standard for PEO.

20 It was submitted as a draft standard
21 for review by the members and it is in that process now
22 of getting finalized.

23 I should just caution you that there
24 is also another category you have not listed in your
25 question.

1 Under the *Professional Engineer's Act*
2 if a person does not have adequate knowledge and skills
3 to operate independently, they are treated by the
4 supervisor as an unlicensed person until that knowledge
5 and skill level is at a level that they can operate
6 independently as if they had a full license, even
7 though they are licensed.

8 So all professional engineers in the
9 Province of Ontario, in fact, have a limited license.

10 Although it is a full license, they
11 can't practice engineering across the board, only in
12 the areas they are competent.

13 So there is an additional category
14 that requires supervision, which is a licensed engineer
15 working in an area that they are not sufficiently
16 knowledgeable to operate independently.

17 **MR. CARR-HARRIS:** And there are at
18 the moment no guidelines or standards for ---

19 **MR. ACCHIONE:** They are not currently
20 effective because they have not been passed as a
21 standard.

22 The original draft included that
23 category, but I am not sure if the final draft still
24 includes that category because I have not seen the
25 final draft yet.

1 And is it at final draft stag yet?

2 **MR. RONEY:** I don't have knowledge of
3 exactly where in the process it is.

4 I do know that certainly at our group
5 dealing with the circumstances of Elliot Lake we wanted
6 to have the benefit of these Roundtable sessions and
7 the Inquiry Recommendations to ensure that we are
8 dealing with some of the public welfare concerns that
9 this process raises in developing it.

10 So I would say that the draft would
11 not necessarily be final because there is a few things
12 we wanted to hear from first.

13 When it does actually get to the stage
14 of getting close to final this is, as I said, nothing
15 happens without the concurrence of government and
16 government regulations and standards then when they
17 become very close to being finalized, fall under
18 certain confidentiality requirements due to Cabinet
19 secrecy and so on as those final details are worked out
20 because it is about to become law, so that kicks in.

21 **MR. CARR-HARRIS:** Yes, Mr. Birdsell?

22 **MR. BIRDSELL:** Just as a starting
23 point or under the architects regulations, a
24 supervising professional is only able to sign off a
25 document that has been prepared in its entirety under

1 the direction and direct entirety under the direct
2 supervision and direction of the professionals.

3 **MR. CARR-HARRIS:** I think that is the
4 sort of language that the PEO is working with as well.

5 Any other comment on that?

6 **THE COMMISSIONER:** Just to go back to
7 storage.

8 It was pointed out to me that on the
9 question of storage there should be off-site storage,
10 whether it is storage with the municipality or with the
11 owner or the engineer or the architect.

12 We have the example here of the
13 records having been completely obliterated by virtue of
14 the collapse.

15 So somewhere in the cloud, I suppose.

16 **MR. CARR-HARRIS:** Then that completes
17 Question number 3.

18 Question number 4 is as follows, and
19 we are no longer working with the contents of the
20 standard of performance, performance standard, but:
21 *"Should there be a requirement on engineers and*
22 *architects to advise clients, past or present, of the*
23 *suspension or the revocation of their license?"*

24 Any comment?

25 Professor?

1 **MR. HUMAR:** Yes.

2 Certainly if it is currently working
3 with a client, it is the responsibility of the
4 professional to advise the client of the revocation or
5 suspension, but not necessarily something that had
6 happened -- he worked for somebody in the past and now
7 his license is suspended.

8 There is no need to require him to
9 tell to this person who he worked ten years ago or
10 fifteen years ago, that his license is currently
11 suspended.

12 **MR. CARR-HARRIS:** I think in the
13 material you will see that the PEO has made in its
14 recommendations to the Commission that there should be
15 public access effectively for virtually everything.

16 **MR. HUMAR:** That was my second point.

17 All records of revocation or
18 suspension should be maintained in a public access site
19 with the PEO or the architects association. So people
20 can search that.

21 But it is not up to the person whose
22 license has been suspended to tell all his previous
23 clients that his license has now been suspended.

24 **MR. CARR-HARRIS:** So they rely on the
25 PEO for that, through a public site?

1 **MR. HUMAR:** Yes.

2 **MR. CARR-HARRIS:** Any other comment?
3 Mr. Birdsell?

4 **MR. BIRDSELL:** Yes. We would agree
5 with the aspect of public accessibility to the
6 information.

7 I think it is worthwhile to point out
8 there are a couple of ways where one could lose their
9 license and not just professional misconduct, but also
10 an administrative reason with their late payment of
11 fees.

12 **MR. CARR-HARRIS:** Is the status of
13 their license, is it published to the public?

14 **MR. BIRDSELL:** Yes.

15 **MR. CARR-HARRIS:** Is it accessible to
16 the public?

17 **MR. BIRDSELL:** Fully accessible.

18 **THE COMMISSIONER:** The same applies
19 to the engineer?

20 **MR. RONEY:** In actual fact, many of
21 the recommendations that we talk about that did not
22 require any changes in acts and regulations, we have
23 already done, so you can go on the PEO website right
24 now and type in an engineer's name and you will find
25 out about their current license status, whether their

1 license is in good standing, whether it has been
2 suspended, revoked, what have you.

3 We are looking to expand that and we
4 are making those changes.

5 We did a fair bit of research on what
6 the other engineering regulators and such are doing.

7 And with our recommended changes, that
8 we are moving ahead with regardless, we are going to
9 have a level of transparency and public accessibility
10 of this information.

11 It is really unrivaled from all the
12 other engineering regulators, certainly.

13 So the technology today allows us to
14 do this and it is not hard and we are moving forward on
15 it already.

16 **THE COMMISSIONER:** Is there a "rate
17 my engineer" website yet, or "rate my architect"?

18 There is a "rate my lawyer".

19 I think they're working on "rate my
20 judge"!

21 **MR. CARR-HARRIS:** Before I get to
22 Professor Humar.

23 The material I read, and perhaps did
24 not read accurately, that there was the element of
25 limitations on licenses for professionals that are

1 sometimes included and had not made it to the public
2 disclosure yet, or am I behind times?

3 **MR. RONEY:** There are some aspects
4 that have not worked into our system on the website
5 yet.

6 But it is in our recommendations, you
7 can see that we are attempting to address that and get
8 that kind of information up and publicly available.

9 The goal is to be entirely transparent
10 and, with the information easily accessible by
11 whomever.

12 **MR. CARR-HARRIS:** Thank you.

13 Professor?

14 **MR. HUMAR:** I have a question for
15 Chris.

16 Does the website give you the current
17 status of the license? Presently if they are revoked or
18 suspended, does it also contain what has happened in
19 the past?

20 He might have paid his dues and become
21 reinstated and still his record is there on the website
22 or not?

23 **MR. RONEY:** Our recommended changes
24 will include a past history of license status,
25 discipline history, going back ten years.

1 The ten-year mark was really more
2 pragmatic, only in the ability of us to retrieve our
3 digital records, you know, really ten years is about
4 the maximum we could really handle.

5 But it seemed like a reasonable period
6 of time.

7 **THE COMMISSIONER:** But is it always
8 to be going back only ten years?

9 Ten years from now you will have
10 access to twenty years worth?

11 **MR. RONEY:** That is our current
12 recommendation, yes.

13 **MR. CARR-HARRIS:** Question 5 is:
14 *"Although architects and engineers currently have a*
15 *duty to report a building which poses a threat to*
16 *safety and security of the public, should a guideline*
17 *standard be issued by the PEO, OAA or OACETT which*
18 *provides: a) a standard of when the professional is to*
19 *report unsafe conditions, degree of risk; 2) that*
20 *public safety should be the primary consideration; 3)*
21 *to whom the professional is to report the unsafe*
22 *condition, professional organization, CBO of the*
23 *municipality in which the unsafe building is located,*
24 *owner, et cetera; 4) whether the professional*
25 *architect, engineer or CET reporting the unsafe*

1 *building should be afforded immunity from liability*
2 *when the building has been reported in good faith."*

3 So the question is of the three
4 organizations, number 1, should they establish a
5 standard when the professional is to report unsafe
6 conditions?

7 Comments?

8 The OAA?

9 **MR. BIRDSELL:** Well, public safety is
10 always the primary issue.

11 The OAA governs the practice of
12 architecture in the public interest.

13 The duty to report exists in the
14 *Building Code Act* where an architect or professional
15 engineer has been retained by a client for general
16 review.

17 However, this is just buildings under
18 construction.

19 Currently there is no specific duty to
20 cover or report on an existing building that may be a
21 threat to public safety, however, this could be
22 changed.

23 **MR. CARR-HARRIS:** It's going to be
24 changed to a duty to do it, where the public welfare is
25 to be affected.

1 **MR. BIRDSELL:** Well, it could be.
2 Right now there is no mechanism to do
3 this.

4 **MR. CARR-HARRIS:** Perhaps this is way
5 ahead of the game.

6 But how would you decide what
7 buildings were at a state of risk that they represent a
8 danger to the public?

9 **MR. BIRDSELL:** Again, I believe what
10 would have to happen would be either a request by a
11 complaint or obvious risk that could be identified by a
12 building official and then direct an owner to
13 investigate.

14 Or an owner may have an instance to
15 retain a professional, however there has got to be some
16 triggering mechanism to establish a relationship.

17 I mean it can't just be an architect
18 walking down the street.

19 **MR. CARR-HARRIS:** So presumably in a
20 situation where you are working on a building as an
21 architect and there is a condition that it is unsafe to
22 the public, that is professional judgment you are
23 talking about.

24 **MR. BIRDSELL:** Well, it currently
25 exists now within our professional standards, and there

1 is a standard for review of a building, general review
2 of a building that is under construction. That exists
3 today and is rigidly adhered to.

4 **THE COMMISSIONER:** How about a
5 building that will become unsafe unless certain
6 remedial action is undertaken now?

7 **MR. BIRDSELL:** Well, again it would
8 be a triggering mechanism that if there is ---

9 **THE COMMISSIONER:** It is okay now,
10 but it is not going to be okay in five years.

11 There is an obligation to report that.

12 **MR. BIRDSELL:** Again, out of a
13 maintenance issue, an issue could arise.

14 However, as I believe is the instance
15 now, any building is considered able to be repaired, so
16 how would you actually identify a potential risk?

17 I would say that if through inspection
18 something is identified, then it becomes an issue where
19 the professional could, through, say this is an eminent
20 danger or give recommendations to repair the building
21 so as to avoid eminent danger.

22 **MR. CARR-HARRIS:** Any comments from
23 the engineers, the CET's?

24 How about the next?

25 I think the next question is the same.

1 "To whom should you report the unsafe condition?"

2 And you have mentioned the owner.

3 And in what circumstances might you
4 report it to the municipal facilities, the CBO of the
5 municipality or professional organization?

6 Who?

7 Any ideas?

8 If a professional identifies what is
9 clearly a danger that will affect the public welfare as
10 far as we understand it, then what do you do about it?
11 Report it to the owner?

12 The owner does not seem terribly
13 concerned and you have the burden of this unsafe
14 building if you do it like that.

15 **THE COMMISSIONER:** Or all of the
16 above.

17 What if there were a standard
18 requiring advising not only the CBO but the owner and
19 professional organization?

20 Is that too onerous a prerequisite?

21 **MR. CRAIG:** I think that you are
22 probably going to need something in the *Building Code*
23 *Act* that --

24 **THE COMMISSIONER:** I am sorry. I did
25 not hear you?

1 **MR. CRAIG:** You would need a provision
2 in the *Building Code Act* that addresses property
3 standards or ongoing maintenance and care of existing
4 buildings.

5 If during an inspection an engineer or
6 an architect see something unsafe, I think their first
7 duty to report is to the owner to advise the owner that
8 they have uncovered something that requires correction
9 and gives them direction with respect to that.

10 If the owner refuses to take action
11 and it is deemed to be something that could endanger
12 public safety, then I think there is a clear duty to
13 report to a higher level.

14 And I think to relieve the
15 professional of that extremely awkward situation where
16 you are reporting against somebody who has retained
17 you, there needs to be some direction in the Act or in
18 some legislation that says you have no choice, you have
19 to report this to a higher level authority and define
20 which authority that is.

21 It would seem reasonable that it is
22 the CBO or the property standards people, depending on
23 the situation itself.

24 But you need to, I think, provide some
25 protection for somebody who is essentially becoming a

1 whistle blower.

2 **MR. CARR-HARRIS:** Sure.

3 **THE COMMISSIONER:** Lawyers have that
4 obligation, despite the professional confidentiality.

5 **MR. CARR-HARRIS:** Mr. Roney and Mr.
6 Miller.

7 **MR. RONEY:** Engineers also do have
8 that obligation.

9 Much of what Craig just described can
10 be found in our duty to report guidelines, which
11 indicate the circumstances and the obligations of an
12 engineer if he or she becomes aware of a situation that
13 could endanger public welfare.

14 And it does typically follow those
15 steps where first of all, inform the owner, that is the
16 first step.

17 But you do have an obligation to take
18 it a little bit further.

19 If action is not happening, you then
20 have an obligation to report to the authority having
21 jurisdiction which, typically, would be a chief
22 building official, maybe Ministry Of Labour, what have
23 you, the authority having jurisdiction.

24 That is in our duty to report and
25 there is actually a level above that if still there is

1 concern you report to the Registrar of Professional
2 Engineers Ontario to consider.

3 So that is a guideline, but it flows
4 from some of the regulations.

5 It is defined in our Act as
6 professional misconduct for an engineer to fail to
7 report a situation.

8 The practitioner may believe or
9 believes may endanger the public welfare or safety.

10 So there is that obligation under law
11 to do so, and the guideline is simply identifying what
12 are the reasonable and proven steps that a practitioner
13 would undertake to discharge that duty.

14 With regards to the circumstances at
15 hand here with the Elliot Lake Inquiry, if you review
16 the testimony of the various witnesses, it can be noted
17 that virtually all the professional engineers involved
18 were aware of their duty, but they have testified that
19 none felt that they were at the situation where they
20 were facing an unsafe condition.

21 So there is a requirement.

22 It seems to be, the evidence suggests
23 that it is understood, but it did not get triggered in
24 this situation.

25 **MR. CARR-HARRIS:** I know there are

1 other questions, but on that Mr. Roney, I looked over
2 that and I saw the ethics and I saw the other reference
3 to the public welfare and so on.

4 It is a bit "loosey-goosey", it seems
5 to me, and forgive my language, but a little "loosey-
6 goosey" on the legislative side because there is a lot
7 of room for judgment there and words like "protect the
8 public welfare" and so on.

9 But if you had it legislated, the
10 engineers legislated that when they see this kind of a
11 condition they have to report it and it has a force of
12 law, it is a whole new assessment process I would
13 think.

14 So I am wondering just why wouldn't
15 you put it into your bullet and into a regulation, and
16 then everybody knows you've got a problem if you don't
17 do it.

18 **MR. RONEY:** I think that one of the
19 problems is in what is an unsafe condition and we have
20 had some discussion about that very matter today in
21 that that requires such a great deal of engineering
22 judgment and expertise that that is the -- to use your
23 term -- the "loosey goosey" end that perhaps is the
24 bigger problem to address as opposed to necessarily
25 further clarifying the duty to report.

1 I am certainly not adverse to it.

2 But I am not really sure that it is
3 solving the problems that have come to light in this
4 particular circumstance.

5 **MR. CARR-HARRIS:** My only point is
6 that the regulation means discipline if you don't
7 follow it, and the others don't necessarily mean that,
8 but it focuses the mind a little bit more on making
9 that decision.

10 But I hear you and I gather it is
11 still something you are considering.

12 **MR. RONEY:** I guess PEO's position is
13 well we do have the tools to deal with that and to
14 discipline, as you said, now.

15 So we are not seeing it as the problem
16 we are trying to solve here.

17 **MR. CARR-HARRIS:** Thank you.

18 Mr. Miller?

19 **MR. MILLER:** Thank you, Mr. Chair.

20 As part of OACETT's submission we
21 certainly support the provincial standardization of
22 those reports and those reports should definitely go to
23 both the owner and the chief building official.

24 Again, we are talking about triggers
25 of the unsafe condition.

1 An unsafe building is currently
2 defined in the *Building Code Act* as essentially -- and
3 don't quote me -- essentially it says it does not
4 function as the original design of that.

5 So for instance if an owner goes for a
6 fire separation, does not put certain fire stopping
7 devices in, that essentially is not being operated as
8 designed for that.

9 Another concern too is that if an
10 unsafe condition has been reported by a design
11 professional and that report is only given to the
12 owner, then we are talking about giving the owner the
13 opportunity to correct that, there may be a risk of
14 that unsafe condition becoming worse at some point in
15 time if it wasn't acted upon, if that makes sense.

16 So I guess what time frame would you
17 give the owner to correct that problem?

18 If it wasn't given to the chief
19 building official, who would have the proper tools
20 under the *Building Code Act*, that that could be an
21 issue.

22 **MR. CARR-HARRIS:** Yes, Mr. Acchione?

23 **MR. ACCHIONE:** I just wanted to
24 remind you that there is some things that are black and
25 white.

1 If the Code requires, for example,
2 half or three quarter inch drywall for fire barrier and
3 it is not that size, then you don't need the
4 requirement and it comes off and the right one goes on.

5 But there are some areas where you can
6 use different analytical tools to get rid of the safety
7 problem.

8 So for example, and I am not a
9 structural engineer like Chris, maybe Chris can give an
10 example from the structural side, but I have some
11 experience on the pressure or vessel and piping and
12 tubing side.

13 There is typically three levels of
14 analytical tools available to a piping engineer.

15 They can field run the piping and the
16 safety margins there are very large because you don't
17 know the field conditions, so you allow for a very
18 large safety margin so that construction crews can run
19 stuff and you can look at it after it is installed and
20 say yes, it looks okay.

21 But the design standards for that are
22 very high in terms of the safety margins.

23 Then there is standard stress analysed
24 piping where the safety margins are reduced because now
25 you know the loading conditions, you know the actual

1 geography of the pipe and you know the -- well, you
2 usually do that for the first case too but the
3 metallurgical properties of the material.

4 The third level is finite element
5 analysis where you actually test the material to find
6 out what its actual strength is.

7 And you put it to a computer
8 simulation of the actual loads, the geometry and you
9 get very precise calculations on the analysis and you
10 can reduce the safety margins again.

11 So if you think you have an
12 installation that has suffered some damage from an
13 incident, like a water hammer or a vibration incident,
14 then you are worried that the material may not have
15 sufficient residual strength to be operational.

16 You would go, for example, from a
17 stress analyse to a finite element stress analysed
18 situation.

19 You would test the material, you would
20 put in fancier computer analysis and you would satisfy
21 yourself that you have met the requirements of the
22 *Pressure Vessels Act* or the *ASME Power Piping Code*.

23 And you would do it that way.

24 In other words, you would get rid of
25 the safety problem by using better analytical tools to

1 make sure you were within the safety envelope.

2 But you could not do that without
3 doing the more detailed analysis.

4 So what needs to be done when somebody
5 says 'I think this is over stressed', is you have to
6 move to the more detailed analysis.

7 If the client refuses, then that is a
8 condition where you would report.

9 But it does not mean that the building
10 is unsafe.

11 I am sorry, in my case the piping is
12 unsafe until somebody does the analysis to confirm that
13 it is unsafe.

14 So in the case of a building, would
15 you evacuate a 50 storey building because there was a
16 fire in the basement near one of the columns and you
17 think the whole building is going to collapse without
18 doing a more detailed analysis first.

19 It would be a judgement call on
20 whether you evacuate first and then do the analysis or
21 you do the analysis and evacuate after you get the
22 analysis results.

23 That would be a judgment call on the
24 professional.

25 But there are tools to put you back

1 into a safe condition when you know more about the
2 properties of the materials and the stress conditions
3 and the actual installation.

4 I don't know if that is a fair
5 assessment of the structural situation, but that is
6 what we often do in the piping field.

7 **MR. CARR-HARRIS:** That is a good
8 example, thank you.

9 Professor, did you have a point?

10 **MR. HUMAR:** No, I don't.

11 **MR. CARR-HARRIS:** Anybody else on
12 this particular point?

13 --(No response)

14 **MR. CARR-HARRIS:** You all agree that
15 if there has been a proper reporting in good faith
16 there should not be any liability?

17 You are the ones that would get the
18 liability, so I guess it's a big nod. That makes good
19 sense.

20 **THE COMMISSIONER:** The immunity
21 should be spelled out, specifically.

22 **MR. CARR-HARRIS:** Yes.

23 I think lunch has arrived, Mr.
24 Commissioner.

25 **THE COMMISSIONER:** Mr. Bindman tells

1 me that we will clearly finish today and that we might
2 perhaps motor on until 12:30, take the regular lunch.

3 It may not be necessary to sit at all
4 tomorrow, and as prudent stewards of the public purse,
5 save a bit of money in the process.

6 **MR. CARR-HARRIS:** I am sure everybody
7 wants to stay the extra day.

8 That is fine with me.

9 It has been a long morning for you
10 all, so it's up to you, but I am certainly prepared to
11 continue on.

12 **THE COMMISSIONER:** Does anybody have
13 a problem with that?

14 We go to 12:30, Stephen that is what
15 you are suggesting.

16 **MR. BINDMAN:** Yes.

17 **THE COMMISSIONER:** We will break now
18 until 1:15.

19 --- LUNCHEON RECESS at 12:07 P.M.

20 --- UPON RESUMING AT 1:15 P.M.

21 **MR. CARR-HARRIS:** Welcome back.

22 Just a couple of points that were
23 discussed after we broke for lunch arising on the
24 question of the duty to report and the other on the
25 question of storage of these reports.

1 With respect to the duty to report,
2 would you consider a recommendation as practical that
3 required that where an engineer files a report or
4 prepares a report that says it requires work that needs
5 to be done, the building is not unsafe at the moment,
6 but if this work is not done then the building will
7 become unsafe.

8 And would you consider adding a duty
9 to report for that circumstance?

10 Anybody like to start?

11 Mr. Roney?

12 **MR. RONEY:** It is something one would
13 have to take a look at because, you know, all buildings
14 require maintenance and all issues of leaks, many of
15 them could ultimately at some point.

16 So it has to have some sort of sense
17 of within a time frame -- you know, there are a few
18 practicalities.

19 The concept though, I don't want to
20 get caught up on those little details, but the concept
21 is certainly something not unreasonable.

22 **MR. CARR-HARRIS:** Any other thoughts?

23 **MR. HUMAR:** Anything that is deemed
24 to be critical in the view of the professional
25 requiring fixing up within a reasonably short period of

1 time should be definitely flagged.

2 **MR. CARR-HARRIS:** Any other comments?

3 Yes, Dale.

4 **MR. CRAIG:** You will get the
5 inevitable comment back, how do you know when it is
6 going to fail and give me your definition of the time
7 frame?

8 You have got to be careful, it has got
9 to be something that is fairly obviously urgent with a
10 short time frame before some serious consequences,
11 otherwise you are getting into semantics and arguments.

12 **THE COMMISSIONER:** That was our
13 experience, that there were reports that said 'you've
14 got to do it', because otherwise -- although they
15 didn't mention time periods, I know that is the
16 problem.

17 But clearly we ran into those ---

18 **MR. CRAIG:** The owner turns around
19 and says 'is it going to fall within five years, and I
20 can't tell you.'

21 That is the unfortunate response.

22 **MR. CARR-HARRIS:** Okay, thank you.

23 The second question left over from
24 yesterday to ask you was this issue of filing these
25 reports, adequacy reports or any condition reports,

1 buildings, whether or not a condition site registry
2 could be set up as it has been for the environmental
3 property where everything is registered there?

4 It would be something that the
5 Province would have to support because they would have
6 to pay for it.

7 But this would allow a registry to be
8 kept of all properties and you would have to isolate
9 what particular properties, but where a place where all
10 these records could be kept and could be searched by
11 the public as they see fit.

12 And for property moving, buying and
13 selling, investing, buyers and sellers and investors
14 and loaners could go out and check the records
15 themselves, just the same way as with a house they are
16 dealing with.

17 What is your reaction to something
18 like that, assuming the Province would be generous?

19 Comments?

20 Mr. Birdsell?

21 **MR. BIRDSELL:** Certainly, from the
22 point of view of all the safety issues, the Province
23 would be best equipped to develop a system like this
24 and enforce it because then they could also set their
25 own instance of what is the level of protection and in

1 terms of the types of occupancies and the types of risk
2 to the public.

3 I think that would be best because
4 then also there would be an instance that by making
5 that registry you would have an ability to monitor the
6 improvements to return a property to a successful
7 operation.

8 **MR. CARR-HARRIS:** MR. Roney?

9 **MR. RONEY:** Two things.

10 Having a central location where all
11 these reports would reside, I think achieves an
12 important goal and might be one mechanism to deal with
13 the concerns that we hear about building departments
14 being inundated with too many reports, although there
15 is not going to be that many reports.

16 But regardless.

17 However, obviously what I would not
18 want is it just to go to this registry.

19 Certainly in cases of reports that
20 have been obviously ordered under some of those
21 triggering mechanisms, such as through the chief
22 building official, that is a no-brainer they would
23 obviously still be filed with the chief building
24 official, but maybe also with this registry.

25 But if the recommendation is to go to

1 a periodic type of reporting and provided -- you know,
2 this may be a reasonable repository to file those
3 things.

4 But again, we are still going to be
5 dealing with the issue of where there are concerns or
6 issues to be addressed, is it important that the
7 building department be aware of them or not?

8 Are they aware just by filing them
9 with this registry?

10 That sort of thing.

11 So there are some open questions
12 still.

13 **MR. CARR-HARRIS:** There may be a
14 category in those reports that should go to the CBO,
15 depending on the nature of them.

16 **MR. RONEY:** The thing that we have
17 been, when we studied this, that we were concerned
18 about the trap of falling into and what we are trying
19 to avoid is the situation -- and the reason we said all
20 of these reports, these are special reports, they are
21 not -- I keep saying they're triggered.

22 But our position was they would all go
23 to the chief building official for the reason that we
24 want to make sure that we remove to the greatest extent
25 possible any kind of negotiations about what should be

1 in the report or can you tone that down a little bit or
2 whatever.

3 They are mandatory reports and there
4 is a mandatory filing of them and it helps to remove
5 that element of pressure, perhaps.

6 **THE COMMISSIONER:** Clearly going to
7 the Province affords you economies of scale, obviously
8 uniformity and then some higher degree of
9 sophistication than might be the case if we are talking
10 about a municipality with a population of 3,000.

11 **MR. CARR-HARRIS:** Any other comments?
12 Yes, Mr. Acchione?

13 **MR. ACCHIONE:** I guess the question I
14 would ask is what is the fundamental thing that went
15 wrong in this particular incident.

16 It is a tragic incident, certainly for
17 the people that got killed and their families and I
18 don't want to diminish the pain and suffering those
19 families are going through.

20 But Ontario does not have a
21 particularly bad record for structural design and
22 safety of its structures and buildings. They don't
23 have buildings falling down every day.

24 So this is an aberration, this
25 particular incident is an aberration where something

1 went wrong in the quality control process that we
2 normally have, as Chris quite eloquently put it at the
3 beginning of the day, on how he and his firm make sure
4 that stuff that is done is done properly and mistakes
5 that are made by junior people are caught and it does
6 not get out to the public.

7 So something went wrong in this
8 process, something broke down in that quality assurance
9 process.

10 So the question is what broke down and
11 what is the best way of making sure it does not break
12 down in the future.

13 I think later on there is some
14 questions relating to a continuing professional
15 development and also some quality assurance issues
16 later in the questions, maybe that is the best place to
17 talk about it.

18 But if those are the things that are
19 broken, like the quality assurance process breaking
20 down, it would be better to deal with that rather than
21 to create another administrative structure to try to
22 prevent something that was not the root cause of the
23 problem.

24 I always worry about when we put in
25 procedural controls on something that was not a

1 procedural problem, it was more either an ethical or a
2 competency problem, right?

3 **THE COMMISSIONER:** One of the
4 problems that worries me, and we raised it yesterday
5 when you talk about the uniqueness of the event, is
6 that we have an aging inventory, I suspect.

7 We could not get an answer because it
8 does not exist. There has been no study on the age of
9 the inventory of publicly available commercial
10 buildings.

11 But the fact remains I think we know
12 instinctively that there were building booms and that
13 we have an aging infrastructure.

14 What we saw here in Elliot Lake may be
15 something that we see more and more frequently in the
16 future. I don't know.

17 **MR. CRAIG:** I would agree, Mr.
18 Commissioner.

19 The situation we have here is one of a
20 fairly unique set of circumstances.

21 But the nature of the building, the
22 risk, the type of construction, the milieu under which
23 it was built, there were many other buildings built at
24 that time.

25 There were some buildings of a similar

1 nature and I think what we are trying to do or what we
2 should be trying to do is to identify and categorize
3 what is the stock of existing buildings that might be
4 at greater risk than others.

5 A standard office building that has
6 been maintained well was built in that era, but has a
7 good building envelope and a sound original design is
8 probably of zero worry.

9 But something that had a similar type
10 of structure or building envelope problem or parking
11 over an occupied area, which is just an obvious issue,
12 those are the things that I think some research needs
13 to be done on to identify the building stock and the
14 probable risk and other higher occupancy types of
15 buildings and work our way through that identification
16 categorization process and then you would perhaps
17 institute a graduated system of mandatory inspections.

18 **MR. CARR-HARRIS:** So the issue is not
19 just so much that it is a rarity thing, there is a
20 clock ticking on some of this old infrastructure in
21 buildings that date back 30 years and we may be just
22 seeing the leading edge of what is going to happen.

23 **MR. CRAIG:** I agree with Paul.

24 I don't think that Ontario and Canada
25 in general has a bad record. I think we have a very

1 good record.

2 But we can't ignore the fact that
3 there are certain types of buildings or the limitations
4 of the standard of building science at the time that
5 some of these were built puts some categories and types
6 of buildings at risk.

7 We need to try and make an effort to
8 identify them.

9 I think going forward our current
10 codes, our levels of education, our quality control
11 processes are much superior to what existed in the
12 early to mid 70's and late 70's.

13 **MR. CARR-HARRIS:** Yes, Mr. Acchione?

14 **MR. ACCHIONE:** Perhaps a good example
15 of what you and Dale are talking about is the bridge
16 system here in Ontario, over our highways.

17 Ontario has been investing
18 considerable sums of money into restoring those bridges
19 after the concrete starts falling and rust comes out,
20 the rebars come sticking out of the structures.

21 I don't know about you, but I am
22 driving by one of these projects every day.

23 So the transportation department has
24 done an outstanding job, in my view, of making sure
25 that the Ontario owned bridges are being looked after

1 as soon as an engineering report comes out that says
2 it's time, it gets done.

3 So with respect to aging
4 infrastructure, the real control over the aging process
5 is the person who owns the facility.

6 As a difference in condition, for
7 example, the bridges over the 401 that are constantly
8 being rebuilt and the Gardner, where they do patches
9 here and there and when they think that it's too
10 expensive they remove a section.

11 So the owner has a lot to do with what
12 happens to an aging infrastructure, and if you want to
13 deal with that issue, you have got to get back to that
14 owner.

15 Because if the owner exercises proper
16 care and attention to the facilities they are
17 responsible for, then the aging process is taken care
18 of.

19 **MR. CARR-HARRIS:** But those are not
20 the people we are looking for.

21 The buildings you are looking for are
22 the ones that are not.

23 And we know, yesterday or the other
24 day I was here, I heard that pieces were falling off
25 buildings in downtown Toronto.

1 That is part of the building envelope,
2 there is structural elements to it as well, and the
3 City has a limitation on being able to get a grip on
4 this because of the current laws, and similarly the
5 other buildings, like the garage that Mr. Craig has
6 been talking about, other very susceptible buildings,
7 they are all over the place and nobody knows whether
8 the owners are fixing them or not.

9 So clearly, the Algo Mall is an
10 example.

11 So really my question was directed at
12 this issue of whether these properties we should be
13 having a look at, in light of the comments here, and
14 Mr. Craig has indicated that we should be looking at an
15 inventory of this and so on.

16 Would you support that, Mr. Acchione,
17 to see what is out there in terms of buildings at risk
18 that are old and ---

19 **MR. ACCHIONE:** Again, you could do it
20 through an inventory which is a very bureaucratic
21 process.

22 Or you could do it through the process
23 we discussed earlier in the day that Chris alluded to
24 where you have a requirement and a Building Code for
25 operating buildings to have them periodically reviewed

1 by an engineer and have a structural adequacy report
2 done.

3 Once that structural adequacy report
4 identifies a problem, then it gets reported to the
5 building official and the building officials take care
6 of the problem if the owner won't.

7 They can shut the place down and force
8 the owner out of business.

9 If the law permits that.

10 So there are various ways of dealing
11 with the problem, I guess is what I am saying, in the
12 some ways are more direct.

13 I think the requirement to inspect by
14 a competent person, the requirement to report to the
15 building authorities a problem is much more direct and
16 immediate than if we had an inventory, first of all it
17 would take years to get the inventory finished.

18 In the meantime things can start
19 collapsing.

20 So there really is a problem, you
21 know, for the people that are not prepared to spend the
22 money to maintain their buildings.

23 So I am not sure I know the right
24 answer, which would be a better process.

25 All I know is that wherever we created

1 bureaucratic processes in the past, there tended to be
2 more barriers than actual help in getting the objective
3 of the policy implemented.

4 **MR. CARR-HARRIS:** Any other comments
5 on that?

6 Yes, Professor.

7 **MR. HUMAR:** Yes, I tend to agree with
8 this periodic inspection.

9 And I would sort of list some
10 buildings which may need such inspection, like parking
11 garages, arenas, commercial institutions, buildings
12 with high human occupancy and the *Building Code Act*
13 could define which kind of buildings these should be
14 covered in this category.

15 These should require periodic
16 inspection.

17 Right now parking garages require a
18 periodic inspection at five-year intervals.

19 Arenas used to require five-year
20 interval inspection.

21 Dale tells me that has been removed.

22 But certainly the *Building Code Act*
23 should specify which kind of buildings do need to be
24 inspected and what the period should be.

25 And all these periodic inspection

1 reports should be filed with CBO or with the central
2 agency, if you please, as long as we define where it
3 should be filed.

4 But I think that is the better way of
5 ensuring that these buildings are not cause for
6 problems for the human safety.

7 **MR. CARR-HARRIS:** Thank you.

8 Any other comments?

9 --- (No response)

10 **MR. CARR-HARRIS:** We could segue
11 right into this question 5(a) because there are two
12 questions.

13 It was an open air parking lot: "Are
14 you aware of any other commercial buildings in Canada
15 of a similar design and construction?"

16 And number two: "Are there problems
17 with this kind of structure that need to be addressed
18 by consultants?"

19 I think you already talked about this,
20 but it is interesting they have identified a number of
21 these garages by Mr. Craig and I think by others.

22 But I think we have already dealt with
23 the inventory issue and we can move onto the next one.

24 Question number 6.

25 This is sort of right out of ---

1 **MR. HUMAR:** Have you finished
2 dealing with 5(a)?

3 **MR. CARR-HARRIS:** Yes.

4 Did you want to make a comment?

5 **MR. HUMAR:** Yes. I wanted to make a
6 comment.

7 There are two parts to that, whether
8 they are buildings of this kind, and I think Dale has
9 discovered through his research that there are many.

10 But the second part of the question is
11 where there is a problem with this kind of structure,
12 and that is definitely a problem with parking garages.

13 All engineers and architects have
14 known that they are vulnerable to the environment be
15 subject of them to the chloride content of the de-icing
16 salts, which are detrimental to the concrete as well as
17 steel.

18 So 1986 the Province of Ontario
19 constituted a special commissioner or inquiry
20 commission or rather a body to examine some 200
21 deteriorating and falling garages over the whole
22 Province of Ontario.

23 As a consequence of that, a report was
24 issued in 1986 and the Canadian Standards was issued in
25 1987.

1 The *Ontario Building Code* specifically
2 requires all new construction of parking garages to
3 follow this code, the 1987 Code, which is called
4 "S413".

5 The Code itself goes beyond new
6 construction.

7 It also lists what kind of maintenance
8 and repairs should be carried out and there are very
9 stringent requirements on both new construction and
10 maintenance, some of them it's like of course, load
11 bearing membrane should be provided, the drainage
12 should be adequate, none of these which were followed
13 in Elliot Lake, for example.

14 Now, the situation is in reverse when
15 you have a parking space above an occupied space.

16 Because in such cases the ceiling is
17 normally covered by some -- and visual inspection is
18 not adequate to find any possible deterioration.

19 So anything which is integrated into a
20 living space, anything which is either on the roof or
21 in-between, because the salt will be tracked in by the
22 vehicles, even if it is not on the roof.

23 They have to be paid special care in
24 both construction and maintenance and in the current
25 situation, it would have been prevented if that was

1 done.

2 1987 Code was not there when the
3 building was first designed, but 1987 Code came up
4 during the life of the building.

5 If the requirements of this Code had
6 been looked at and properly implemented, maybe the
7 results would have been different.

8 But right now it is in the part of the
9 *Ontario Building Code*. There is a specific clause,
10 4.4.1, which says parking structures should be designed
11 according to S413, which has got a new edition in 2007,
12 and it is even more stringent than the previous one.

13 And one of the requirements there is a
14 load bearing membrane, a drainage which is much more
15 than the drainage that we found at Elliot Lake, and of
16 course periodic inspection. And that is where this
17 five-year period inspection is also specified.

18 **MR. CARR-HARRIS:** It arguably also
19 permits the HSP Peterson system to be installed under
20 its definition.

21 **MR. HUMAR:** No, I don't think so.

22 **MR. CRAIG:** Yes, it actually does.

23 **MR. HUMAR:** You know, that was when
24 it was first invented.

25 And then over a period of time they

1 found it does not work.

2 **MR. CARR-HARRIS:** Still in it though,
3 in the latest version.

4 **MR. HUMAR:** The current version also
5 says.

6 **MR. CRAIG:** It actually refers to
7 that, a high-quality concrete overlay over precast and
8 jointed systems.

9 So if you look back at the origin of
10 S413, its predecessor was an ACI Code.

11 And the ACI Code and the committee
12 that would constitute it, coming forward with that,
13 that code or that recommendation or standard, had
14 representatives from various industries, bodies as is
15 normal in the preparation of a standard and industry
16 representatives approved that system.

17 I think the intent, the unfortunate
18 situation is the intent was that it would be suitable
19 for an open-air parking garage where you don't have an
20 occupied space and a moderate amount of leakage would
21 be acceptable or could be dealt with.

22 It did not anticipate this type of a
23 system, but it is still silent in CSA S413.

24 **MR. CARR-HARRIS:** Yes, Mr. Roney?

25 **MR. RONEY:** One other item,

1 specifically dealing with CSA standard S413, that I
2 just want to clarify.

3 But correct me if I am wrong, but the
4 whole sections on testing and inspection and
5 maintenance that talk about appropriate maintenance and
6 so on, I believe they are in Annex D and E and both
7 those annex to the CSA Standard start with the preface
8 that those annexes are informative only. They are non-
9 mandatory parts of the standard.

10 So as far as I was aware, there was
11 not a mandatory requirement triggered by the *Building*
12 *Code* dealing with ongoing inspection of parking
13 garages.

14 **MR. HUMAR:** It's appendix D, I
15 suppose that ---

16 **MR. CRAIG:** D is testing and
17 inspection, it says that all the annexes that are
18 relevant are informative, specifically stating they are
19 not mandatory parts of the standard.

20 **MR. CARR-HARRIS:** So there are no
21 mandatory ongoing inspections.

22 Is that what you said?

23 **MR. RONEY:** To the best of my
24 knowledge.

25 **MR. CRAIG:** They establish a standard

1 of care in the industry as a recommended standard of
2 care, I guess, would be what you are saying.

3 So you would be held against that
4 standard, but you are right, it is not a mandatory ---

5 **MR. HUMAR:** It's not, yes, mandatory.

6 **MR. CARR-HARRIS:** Thank you.

7 Any other comment on this last
8 question?

9 **MR. CRAIG:** I just want to clarify.

10 I was not anticipating or suggesting
11 that we do an inventory of all buildings in the
12 Province.

13 We look at the ones like this that are
14 a high risk and try and ascertain how many of them are
15 out there.

16 They would be subject to the first
17 wave of mandatory inspections.

18 Then you can promulgate that type of a
19 system through the rest of the building inventory based
20 on perceived risk and occupancy, not just a go out and
21 inventory every building in the province.

22 **MR. CARR-HARRIS:** And assuming that
23 means that the thing started tomorrow, five years from
24 now would be the first time anybody would look at these
25 old infrastructure of the garages.

1 That would be the first time in the
2 cycle?

3 **MR. CRAIG:** I would think if you
4 identified a high risk category like the type of
5 situation we had in Elliot Lake, that you would
6 institute an immediate inspection program and
7 evaluation.

8 **MR. CARR-HARRIS:** Do you all agree
9 with that, that if there is a potential for this out
10 there that that is something that should happen?

11 Anybody oppose it?

12 All in favour?

13 Thank you.

14 We move on to the question of the
15 concept of the provincial engineer, I regret keeping
16 you so busy, Mr. Roney here, but since the PEO seems to
17 be the only one that really has a clear favour for it
18 or close to a clear favour for it, I wonder if you
19 could tell us about why we need the provincial
20 engineer?

21 **MR. RONEY:** Strictly speaking, PEO
22 and PEO Council does not actually consider and have a
23 position on whether or not there should be something
24 that we call or are referring to as a "provincial
25 engineer."

1 It was a matter just put forward for
2 discussion, and although I suppose it's a good segue
3 into a provincial repository or maintainer of such a
4 database, perhaps that would be a role if we are
5 looking for a role for such an institution.

6 What I can say, and again this is not
7 a defined PEO position, so I can't speak for PEO
8 Council on this.

9 But as you will see from the
10 information that we did provide you, it could
11 conceivably be something akin to or similar sort of
12 framework as the chief medical officer of health, the
13 idea being it be a body that can perhaps identify
14 systemic problems, identify and perhaps monitor
15 vulnerable structures of the sort that we have talked
16 about, to identify gaps in public policy or provincial
17 regulation, areas of concern, that sort of thing.

18 But that is about as far as I can take
19 it at this point.

20 **MR. CARR-HARRIS:** Valiant effort.

21 Any other comment on the provincial
22 engineer?

23 Yes, Mr. Birdsell?

24 **MR. BIRDSELL:** Well, of course there
25 are the *Architects Act* and the *Professional Engineers*

1 Act that govern the construction, alteration and
2 buildings in Ontario.

3 So this would have to be some form of
4 joint office, an architect and engineers office to
5 effectively cover all the aspects.

6 Now, I think it is worthwhile to
7 recognize that there used to be a provincial oversight
8 that existed previously with the Ministry of Labour and
9 the Fire Marshall, and they used to review drawings
10 prior to issuance of permit.

11 But this was eliminated and the
12 responsibilities were transferred to the *Building Code*
13 and building departments.

14 So I think there was perhaps an
15 opportunity for a bit of historical review as to why
16 the change occurred and what the implementation of a
17 new system would actually entail.

18 However, more enforcement power for
19 municipalities, we are convinced would make a greater
20 difference.

21 **MR. CARR-HARRIS:** In other words,
22 feel more closely enforced than they are today.

23 **MR. BIRDSELL:** Yes.

24 **MR. CARR-HARRIS:** Yes.

25 Any other comment about the provincial

1 engineer and his role?

2 One of the questions was just what
3 would the provincial engineer do.

4 Mr. Roney has given sort of
5 categories, the kinds of things that might be
6 considered.

7 Does anybody think, apart from the
8 possibility of the PEO thinking it's a good idea, do
9 the rest of you think it's a good idea?

10 Mr. Acchione?

11 **MR. HUMAR:** I guess you can define
12 the role of the provincial engineer carefully.

13 I think it's another level of
14 bureaucracy that you will get.

15 I mean the enforcement now with the
16 municipalities and the local governments and that is
17 where all the action takes place.

18 So what does the provincial engineer
19 do?

20 So you are dividing the responsibility
21 and as soon as you divide responsibilities you have
22 problems, of course.

23 So I can't see a real good role for a
24 provincial engineer and unless we can define one, I
25 don't think it adds anything to the system.

1 **MR. CARR-HARRIS:** Thank you.

2 Mr. Acchione?

3 **MR. ACCHIONE:** Yes, I think you saw
4 from the Society's submission that we were concerned
5 that we don't really quite understand what the scope of
6 this provincial engineer would be doing.

7 If it is anything to do with
8 engineering across the entire province.

9 So for example, toxic waste sites,
10 chemical plants, structures, buildings, if it is of
11 that nature where you want somebody with an engineering
12 capability to actually oversee the entire engineering
13 profession in the Province, that is one thing.

14 If you want to deal with just the
15 structural issue, I think Jag is quite right, that we
16 have a system in place right now to deal with
17 structures, particularly with PEO's suggestion for a
18 report on the structural adequacy of the building and
19 periodic inspections that they recommended.

20 Most of the risk factor with the
21 public can be dealt with in that way and then creating
22 -- I think creating a so-called provincial engineer
23 with a very, very limited role that is already embedded
24 within building official responsibilities might, as Jag
25 put it, divide the responsibilities and then you have

1 things falling through the cracks.

2 So if the Commission is thinking much
3 broader than just buildings: that is one discussion.

4 But if it is just thinking buildings,
5 I suspect there is not enough for this person to do.

6 The second concern we had from our
7 submission is let's say you create such a position,
8 that person is going to have to look at every community
9 in Ontario.

10 The size, the bureaucratic size of
11 such an organization would be quite substantial when
12 you have already got building officials in every
13 community anyway and you can impose, if you think that
14 requirement is necessary, you can impose it as a
15 function of the building officials department.

16 **MR. CARR-HARRIS:** Thank you.

17 Any further comment?

18 --(No response)

19 **MR. CARR-HARRIS:** Question number 7,
20 we have basically done.

21 So I am exercising my role to move on
22 to Question 8.

23 *"Should professional engineers in*
24 *Ontario adopt a system of mandatory continuing*
25 *education, similar to other professions in the*

1 *province, like other professional licensing bodies in*
2 *several other provinces?"*

3 And I do not think I saw any
4 disagreement with that concept in any of the material.

5 Am I reading that correctly?

6 Mr. Acchione's I was not clear whether
7 you had some reservation about what shape it would
8 take, but you were on side for ---

9 **MR. ACCHIONE:** We were actually happy
10 with the recommendations from Professional Engineers
11 Ontario.

12 Because the proposal they have on the
13 table now is safety and demand driven, it is not the
14 system that we tried to introduce into the Province 30
15 years or so, where everybody can define their own
16 specialty as a practitioner and then register with the
17 regulator to get a title, and people were using it to
18 distinguish their own little niche area from their
19 colleagues.

20 And the process sort of broke down
21 because we had so many specialties; we had more
22 specialities than we had people.

23 So we do not want to go back to that
24 system is what our concern was.

25 And PEO has made it clear that that is

1 not where they are going and the Society is quite happy
2 with their submission.

3 **MR. CARR-HARRIS:** I don't see Mr.
4 Roney shaking his head, so we are all together on this
5 then.

6 Thank you.

7 **THE COMMISSIONER:** What role do you
8 see the Society exercising in relation to continuing
9 education?

10 For example, just to give you my
11 personal experience as a Judge, it is a joint
12 responsibility between the Ontario Judges Association,
13 the National Judges Association and the individual
14 chief justices across the country and the national
15 judicial institute.

16 **MR. ACCHIONE:** Well, right now as you
17 know the engineering profession has split its
18 organization much like the medical and legal
19 profession, where one group regulates and the other
20 group advocates and provides services.

21 One of those services that the Society
22 provides is professional development courses.

23 So in the interests of full
24 disclosure, yes, we will be selling professional
25 development courses if it becomes mandatory, but we

1 don't set the requirements. The requirements are set
2 by the regulator: PEO.

3 They are currently considering a
4 program that we have put forward, as members, saying
5 that we think we can live with this program, could you
6 have a look at it and then come back and tell us what
7 kind of program you want to put in Ontario.

8 The Society has made it very clear we
9 think that a mandatory professional development program
10 is the right way to go, but the devil is in the detail.

11 One of the problems that we see in
12 some jurisdictions which we don't want in Ontario is
13 where it becomes a number counting exercise and it is
14 not directed at what is important in professional
15 development, which is to make sure your skills for the
16 work you're doing are up to speed and that you are
17 preparing for the next wave of technology that is
18 coming along so that you are on top of the situation.

19 So as long as it is done well and the
20 rules and regulations on how it operates are done well,
21 and as long as the exemptions which are allowed are
22 sensible.

23 For example, the Society does not
24 recommend that every licensed engineer in the province
25 be subjected to mandatory continuing professional

1 development because it is not necessary.

2 I am going to hazard a guess that
3 perhaps 30 percent of our engineers are no longer doing
4 engineering work because they have moved up into
5 management ranks where there is no engineering content
6 at all. Why subject it that they should be allowed to
7 be exempted?

8 Why should retired engineers no longer
9 work should be subjected to it to keep their license
10 and their PN?

11 They should be exempted.

12 Why should individuals who have a
13 license but do not want to practice independently, they
14 are prepared to practice under the direction of the
15 supervisor, why should they be treated any different
16 than an unlicensed person that is supervised by a
17 professional engineer?

18 So we think they should be allowed to
19 exempt themselves should they so choose, but if they
20 exempt themselves, they will not be able to practice
21 independently.

22 **THE COMMISSIONER:** Are models
23 elsewhere in Canada?

24 **MR. ACCHIONE:** Yes, there is 11
25 models and then there is Ontario, which is a voluntary

1 system but no model, no requirements, because we have
2 not come to terms with what we should put in that
3 standard or guideline.

4 But there are eight provinces that
5 have mandatory programs.

6 Two provinces that have voluntary
7 programs, British Columbia and Ontario have voluntary
8 program.

9 Neither provinces have been able to
10 convince their voting members to accept changes that
11 would make it mandatory, at least not yet. Hopefully
12 in the next little while we can do that.

13 I brought a copy along if anyone wants
14 to see it later, I would be happy to share what we have
15 written up for PEO, but they currently are distributing
16 it among all PEO members for comment and we are very
17 pleased that they are doing that.

18 I am sure the professional standards
19 committee at PEO is going to deal with the issue
20 credibly and come back with a recommendation.

21 And the proposal that we put to PEO
22 for consideration is different than all the other
23 provinces, but we cherry picked different features from
24 the different provinces that we think would suit the
25 Ontario work environment better than what we have seen

1 as templates from each of the provinces.

2 We tried to say within the national
3 framework under Engineers Canada in terms of their
4 recommendations, but we think this particular program
5 that has sufficient flexibility and is targeted at the
6 higher risk practitioners who are primarily independent
7 operators or who supervise people and are responsible
8 for their work and we think that is a more cost-
9 effective approach that is sufficiently effective that
10 it protects public safety, but that is still to be
11 determined whether the PSC agrees with us, because they
12 are the regulator.

13 The PEO Is the regulator and they have
14 to make the final decision, not the Society.

15 **THE COMMISSIONER:** What is the
16 engineering or the architectural equivalent of our
17 Canadian Bar Association, for example, which does
18 offer, or the National Judicial Institute in the case
19 of judges, that offers education on a national level?

20 **MR. ACCHIONE:** We do not have a
21 national education provider, we have provincial
22 providers.

23 For example, Alberta runs their own
24 professional development program with the regulator
25 because in Alberta they have not split the advocacy and

1 services organization from the regulator.

2 In Ontario we have.

3 So typically, the Society provides
4 professional development courses, although we don't
5 build them ourselves, we generally get service
6 providers to do them for us and we organize and run
7 them.

8 If this goes through we would
9 typically sit down with Professional Engineers of
10 Ontario and agree on some areas that people should be
11 trained on.

12 For example, as you know, from the
13 hearings in Québec, I believe the Québec engineers, the
14 Order of Engineers of Québec have decided to introduce
15 ethical training as part of their continuing
16 professional development as a result of some of the
17 scandals there in the province.

18 So if the regulator wants some
19 specific areas covered which are currently not covered
20 by our professional development programs, I am sure we
21 would be happy to put something together which
22 hopefully would meet their requirements.

23 But the Society would typically offer
24 and deliver the courses at a fee, obviously, because we
25 do not have a guaranteed funding, it is a voluntary

1 organization as opposed to a regulator that is a
2 mandatory organization.

3 **THE COMMISSIONER:** It is the same for
4 most professions, I expect?

5 **MR. ACCHIONE:** Yes, right.

6 **MR. RONEY:** I was just going to
7 comment that OSP is not the only provider as well.

8 There are a great many providers of
9 continued professional development course work across
10 the country, including Ontario.

11 **MR. ACCHIONE:** That is true.

12 And in fact, we use some of them to do
13 our courses.

14 **MR. CARR-HARRIS:** Mr. Birdsell?

15 **MR. BIRDSELL:** Ontario's architects
16 have had a mandatory program for well over a decade
17 now, and then more recently in recognition that many of
18 Ontario's architects are licensed in several
19 jurisdictions, now we have a comprehensive program that
20 integrates all of that and also allows by Architecture
21 Canada to have a national convention and education,
22 which is then regulated and maintained as a central
23 registry.

24 **THE COMMISSIONER:** Great. Thank you.

25 **MR. CARR-HARRIS:** Anything further on

1 that question?

2 The next question is Question 9.

3 *"Should PEO adopt guidelines for*
4 *structural engineering practice and independent*
5 *structural engineering review similar to those now*
6 *published by the APEGBC, (which is the Association of*
7 *Professional Engineers and Geo-Scientists of British*
8 *Columbia), and which resulted from the inquiry into the*
9 *Station Square Mall collapse in Burnaby in 1988?"*

10 Professor, would you like to start
11 this off?

12 First of all, I have not gotten a lot
13 of information about just what changes are that are
14 relevant to us, although I do notice that they have
15 used different terminology for things that are included
16 in Ontario.

17 But any comments would be well-
18 received.

19 **MR. HUMAR:** You are referring to
20 Question 9 that ---

21 **MR. CARR-HARRIS:** Yes, Question 9.

22 **MR. HUMAR:** Should PEO adopt
23 guidelines for structural engineering practice?

24 Yes, I do agree with that and I think
25 PEO has a proposal on the table somewhere that provides

1 how that can be done and how can a structural
2 engineering qualification be recognized, similar to
3 what has been done in B.C.

4 So I would say I agree with the
5 concept of doing it.

6 **MR. CARR-HARRIS:** What is there about
7 that in B.C. that has been done that was attractive?

8 **MR. RONEY:** Certainly in the
9 recommendations that we have before the Inquiry with
10 regards to the creation of a structural engineering
11 specialist, those deliberations and these
12 recommendations were informed by the events back in
13 1998 Station Square.

14 Of the recommendations, there were a
15 couple of recommendations that came out of that, and
16 remember it was a slightly different situation, this
17 was a problem with, at the design phase, really, of a
18 building as opposed to maintenance.

19 So it is not a direct parallel.

20 And you know, one of the things that I
21 reflect on is the Inquiry wrote in their
22 recommendations that structural engineers -- and I
23 quote from them:

24 *"Structural engineers have academic*
25 *and practical qualifications beyond*

1 That was one of their findings.

2 So we took that to heart as well in
3 forming our recommendations with regards to the
4 mandatory filing of these reports.

5 We are trying to insulate the
6 engineers and remove that if at all possible.

7 So we have taken those lessons from
8 British Columbia very much to heart when we were
9 drafting our recommendations.

10 **MR. CARR-HARRIS:** Dale?

11 **MR. CRAIG:** I believe that one of the
12 other results from the Station Square Inquiry was that
13 a mandatory independent documented structural
14 engineering review of certain classes of structures
15 too, and I think that is something that we definitely
16 need to inform ourselves better on from the people in
17 B.C. to see the imposition of that additional layer of
18 independent scrutiny has affected their experience.

19 Have they felt that it has been well
20 done?

21 Has it cut risks and what has been
22 their actual experience?

23 So I think that is part of what we
24 need to do is to learn from other jurisdictions that
25 have gone through a pretty massive inquest.

1 I agree that the problem in Station
2 Square was truly a design problem as opposed to one
3 here, which was not so much related to the structural
4 design as it was related to the building envelope
5 design and the complete lack of maintenance and
6 correction.

7 But it brought them to a point of a
8 fairly significant deviation from normal practice that
9 had existed prior to it, where a structural engineer
10 designed their building, took responsibility for it and
11 it was built that way.

12 **MR. CARR-HARRIS:** And it collapsed
13 the day it opened practically, didn't it?

14 **MR. CRAIG:** Yes. Lucky nobody was
15 killed.

16 But it is still worthwhile to visit
17 what their experience has been with that additional
18 layer of scrutiny that they have imposed.

19 **MR. CARR-HARRIS:** Thank you.

20 Anybody have anything to add on that
21 point?

22 --- (No response)

23 **MR. CARR-HARRIS:** Sounds like a good
24 idea.

25 Question 10, this is the question

1 about corrosion, and we asked you all what was your
2 take on the general state of knowledge in the
3 engineering profession of corrosion and the conditions
4 and effect and rate of corrosions and so on.

5 Yes, Professor?

6 **MR. HUMAR:** There is no opportunity
7 for a special study of corrosion at the undergraduate
8 level, and the reason is that all of our undergraduate
9 education in engineering is directed to providing
10 problem solving skills and to cover a wide variety of
11 activities that a civil engineer needs.

12 There is just not enough time to deal
13 with many specialized subjects.

14 In that context, therefore, the
15 continuing education is all the more important,
16 especially for people who are engaged in inspection of
17 buildings, structural sufficiency review, they should
18 definitely have the opportunity to study corrosion and
19 its implications at least a basic level and if possible
20 at an advanced level.

21 We have some opportunities for study
22 of corrosion at the graduate levels, post-graduate
23 levels, but that also is not very widely -- it is there
24 in a few cases and you have to specially take that type
25 of program.

1 So continuing education would be the
2 answer for that, especially for people who have engaged
3 in that kind of activity.

4 **MR. CARR-HARRIS:** Mr. Birdsell?

5 **MR. BIRDSELL:** Yes.

6 I would say that complementary to this
7 issue is the issues and principles in respect to
8 environmental controls, isolation of varying materials,
9 control of air, vapour, water, they are important
10 elements in building envelope design.

11 And consideration of building envelope
12 design being the roof, the walls, windows, floors on
13 grade are inherent parts of the architects design
14 process.

15 It is well documented in the
16 Architects and *Building Code* and now some of the
17 mandatory programs of professional education being
18 undertaken and supported both by the OAA and Pro-
19 Indemnity Insurance Company address these issues
20 specifically.

21 **MR. CARR-HARRIS:** Thank you.

22 Mr. Miller, in your world what is the
23 state of knowledge of the corrosion?

24 **MR. MILLER:** We actually had a member
25 of a college faculty on our committee and essentially

1 they introduce a general corrosion theory, but not
2 extensive training.

3 So that is at the college level.

4 Typically we are a three-year and a
5 two-year program, so just a very basic understanding of
6 that.

7 **MR. HUMAR:** The process of corrosion
8 can be quite complex.

9 Of course, the three things you need
10 is a chloride iron presence, the de-icing salts have
11 provided that, you need water or moisture and you need
12 a certain temperature.

13 Those are the three essentials before
14 corrosion begins.

15 The other problem with corrosion can
16 be expected is when you have two different metals in
17 the same environment, the galvanic corrosion as it is
18 called. In the galvanic process one metal acts as the
19 anode and the other as a cathode. The anode metal
20 dissolves and may be completely decimated while the
21 deposit goes to the cathode.

22 So there are complications, depending
23 on the level of severity of the problem. One has to
24 have all of this knowledge, which of course certainly
25 includes knowledge of the possibility moisture ingress

1 and the presence of salt.

2 **MR. CARR-HARRIS:** Yes, Mr. Craig?

3 **MR. CRAIG:** I think as we saw in the
4 case at hand in Elliot Lake, it is a very specialized
5 part of the engineering pantheon of disciplines.

6 I think that we have to always go back
7 to the basic principle that an engineer should
8 discharge his responsibilities and only take
9 responsibility for those areas that he is entirely
10 competent to do so in.

11 So if you are confronted by a
12 corrosion problem, I think it is the wise thing to
13 retain an expert in the corrosion field.

14 They are not plentiful, but there are
15 some around and that is where you would inform yourself
16 as to the extent of corrosion, the relative rapidity of
17 it, and the seriousness.

18 **THE COMMISSIONER:** Is material
19 science evolving in relation to corrosion and corrosive
20 materials?

21 **MR. HUMAR:** There is a lot of
22 knowledge about it and I think any welcome knowledge on
23 the situations that can lead to corrosion or its
24 implications would be, certainly not all engineers know
25 about them, because there is not enough time to impart

1 that kind of knowledge.

2 But yes, there are corrosion experts
3 and you can train them at various levels of expertise,
4 I mean something in the current situation, you do not
5 need large knowledge of corrosion to be able to detect
6 that a connection is failing or is corroded
7 sufficiently to lose its strength.

8 The problem is, of course, you do not
9 see that because it is hidden by the ceiling.

10 So you do not need a whole lot of
11 expertise for every situation, but some situations will
12 call for more expertise and there is a wealth of
13 knowledge on the subject.

14 Material science has developed enough
15 to address all of those ---

16 **THE COMMISSIONER:** It is not evolving
17 in a rapid way.

18 **MR. HUMAR:** No, it sufficiently
19 stabilized and the things are well-known.

20 There are some things which have
21 changed, like epoxy coating of reinforcing bar was good
22 at one time.

23 It has been found by experience that
24 is really not as good, or the stainless steel bars were
25 good, but they are no longer considered as good.

1 So there are a few things that will
2 change, but basically most of the knowledge has
3 stabilized.

4 **MR. CARR-HARRIS:** And what about the
5 CPD?

6 Is it too discreet a subject to be
7 having the CPD?

8 **MR. RONEY:** I was just going to add,
9 and you know, as a regulator I am not proposed to
10 comment on the current state of knowledge or anything
11 because we have ongoing investigations.

12 But what I will say is that the
13 certification process that we are proposing it would be
14 entirely reasonable to include requirements that
15 applicants demonstrate knowledge of the mechanisms of
16 building deterioration, not just corrosion, buildings
17 deteriorate in a lot of different ways, so that seems
18 to be an obvious item to include in the requirements
19 for certification and maintenance of that certification
20 for these structural engineering specialists.

21 **MR. CARR-HARRIS:** That's good.

22 Anything else?

23 --(No response)

24 **MR. CARR-HARRIS:** Thank you.

25 We are now at Question 11, which is,

1 believe it or not, the last question.

2 **THE COMMISSIONER:** I think we will
3 want to break five minutes to get questions from Mr.
4 Cassan?

5 **MR. CARR-HARRIS:** Let's take a five
6 minute break.

7 --(A short pause)

8 --(Upon resuming)

9 **MR. CARR-HARRIS:** Thank you.

10 I think we have some questions.

11 I am going to ask Mr. Longo to come up
12 and put his questions to the panel.

13 Would you like to introduce yourself,
14 Mr. Longo?

15 **MR. LONGO:** Certainly.

16 Mr. Commissioner and moderator, my
17 name is Leo Longo, I am a lawyer from Toronto, the law
18 firm of Aird and Berlis.

19 I represent the Ontario Building
20 Officials Association that has been involved in this
21 Inquiry.

22 First of all, I would like to thank
23 the OAA for its responses and recommendations as they
24 related to the building officials.

25 Gentlemen, the questions that I would

1 like to ask deal with Question number 5 for the panel,
2 as to whom do you report an unsafe condition.

3 For the purposes of my questions,
4 assume that we have a workable definition of an unsafe
5 condition.

6 If it is either the current one that
7 is in the *Building Code* under section 15.9 or another
8 definition that is set by this Inquiry or the
9 Government as a result of recommendations.

10 As I read the OAA submissions and as I
11 read Professor Humar's submissions, there seems to be a
12 feeling that an unsafe condition report should be given
13 to the owner and the CBO at the same time.

14 There seems to be a contemporaneous
15 you give it to the owner, you give it to the CBO.

16 OACETT says they agree that there
17 should be a trigger as to when an unsafe condition
18 needs to be reported, but when it does it should be
19 contemporaneous to both the owner and the chief
20 building official.

21 I have a couple of questions for the
22 PEO representative.

23 You spoke of the structural adequacy
24 report that is in your bulletin which you are
25 indicating should now become a standard of practice.

1 If I have read your submission
2 correctly, it is at page 13 of 30, you speak of a
3 requirement that a copy of the structural adequacy
4 report be forwarded to the CBO.

5 It is silent as to timing, but if I
6 read it, it seems to imply contemporaneously with
7 providing it to the owner.

8 But you said something today orally
9 that said 'well, I would first give it to the owner,
10 allow some time and then perhaps only give it to the
11 CBO.'

12 So I was looking for some clarity as
13 to when you would be recommending that your structural
14 adequacy report be forwarded to the CBO.

15 **MR. RONEY:** That's a very good
16 question. I appreciate the opportunity to clarify.

17 When I was speaking earlier and giving
18 the oral answer, what I was explaining was the current
19 guidelines on an engineer's duty to report, and it is a
20 stepped process similar to what engineer Craig
21 explained, where first you would inform the owner of
22 the situation, then if the owner does not take action,
23 you should inform the authority having jurisdiction.

24 So I think that that may have been the
25 initial confusion.

1 With regards to the structural
2 adequacy report, this particular report that we are
3 envisioning and recommending be created, that would go
4 at the same time to the CBO and the owner.

5 **MR. LONGO:** I appreciate that
6 clarification.

7 The other question I had dealt with
8 the existing requirement to report, and you said that
9 if a failure to report constitutes a professional
10 conduct matter under your ethics and your discipline
11 control, I just wanted to understand that a bit more.

12 The failure to report, I take it, is
13 not a failure to report to the CBO, it's a failure to
14 report to your organization the PEO, is that correct?

15 **MR. RONEY:** That is not quite
16 correct.

17 It is not necessary to report to PEO
18 by any regards.

19 And that is one of the reasons why the
20 guideline was created, where should we be reporting
21 these things?

22 So the answer is the same, under how
23 it has been -- the guidelines of PEO have provided
24 before, you report initially to that entity that
25 retained you to investigate the situation.

1 If that does not seem to be addressing
2 the unsafe condition, then your duty is to inform the
3 authorities having jurisdiction.

4 And then there is a third level.

5 Then if still an action is not being
6 taken, the third thing that an engineer is expected to
7 do under those guidelines is to report to the Registrar
8 of Professional Engineers of Ontario.

9 **MR. LONGO:** And if the Province
10 accepts your recommendation that a structural adequacy
11 report be mandated or be provided contemporaneously to
12 a CBO; if one did not file with the CBO would that be
13 an ethical practice failure that would amount to a
14 professional misconduct?

15 **MR. RONEY:** If the standards are
16 generated as we envision them, it would be a standard
17 what the reporting requirements are.

18 That would be a requirement under law
19 and failure to comply with the applicable statutes
20 would indeed be regarded as professional misconduct.

21 **MR. LONGO:** Thank you. That is
22 helpful.

23 Mr. Commissioner and Mr. Moderator,
24 the other questions I have concern Mr. Acchione's
25 submission.

1 Again, it's dealing with timing.

2 When I read your Society's submission,
3 it was reported first to the owner and allow the owner
4 some time to respond and then provide it to the CBO if
5 there is inaction.

6 Is that correct?

7 **MR. ACCHIONE:** That's correct, and
8 there is a good reason for that.

9 Most owners are diligent and they will
10 fix the problem and there is no reason to trigger a
11 massive response from the building official if the
12 problem would be dealt with immediately and taken care
13 of. Immediately meaning in the appropriate time for
14 the risk factor involved.

15 **MR. LONGO:** If the Commission were to
16 exceed to that proposal of owner first and then CBO
17 later, I guess the questions I had were just some
18 practical questions.

19 How long do you give and what
20 professional requirements are there on an engineer to
21 follow up with an owner to say have you done that
22 report, and would it be a breach of professional
23 conduct if you failed to follow up and things of that
24 nature?

25 So could you elaborate a bit more on

1 that?

2 **MR. ACCHIONE:** There is an ethical
3 requirement under our ethical standards and it's a
4 guideline right now, so it is not mandatory.

5 So there are not provisions to take a
6 person, for example, and remove their license if they
7 do not do it now, because I think it is covered
8 currently under Ethics, which are not enforceable by a
9 license removal.

10 If it became a standard it would be.

11 But it depends on the situation.

12 My experience is in the nuclear
13 industry and there are very clear hurdles that you
14 cannot go over.

15 You must take certain action under
16 certain conditions if you violate certain licensing
17 requirements for that facility.

18 So if the problem does not breach the
19 licensing facility's terms and conditions for the
20 license, then you have time to act.

21 If the condition breaches those
22 licensing requirements, that facility must shut down
23 immediately.

24 And there is an order to shut down
25 given by the engineer.

1 If the facility is not shut down you
2 pick up the phone and call the regulator and they shut
3 the facility down.

4 So again, it depends on the severity
5 of the problem as to what time is reasonable and it is
6 a judgment call, I will grant you, unless there are
7 very specific guidelines like there are in the nuclear
8 industry where there are specific rules and specific
9 values in some cases, and if it exceeds that value,
10 that could be an immediate shut down order.

11 **MR. LONGO:** I think the evidence the
12 Commission has heard, and certainly the position of the
13 OBOA is their goal is obviously to achieve compliance,
14 not to prosecute per se.

15 So even when they come up with an
16 unsafe situation and serve an order, they usually allow
17 time for an owner to rectify the situation before
18 pursuing it further.

19 So the question ---

20 **MR. ACCHIONE:** I would disagree with
21 you if there is an imminent collapse involved. They
22 would clear the building.

23 **MR. LONGO:** And use an emergency
24 order under 15.10.

25 **MR. ACCHIONE:** That's right.

1 **MR. LONGO:** But in the case that we
2 are dealing with, there is evidence that the roof was,
3 or suggestions that the roof was constantly under
4 repair, that the owner was trying to do something to
5 fix it; and it lulled people into thinking it is being
6 addressed.

7 And that turned out to be,
8 unfortunately, something that people were misled on.

9 So the question I ask is do you see a
10 harm?

11 Or what harm do you see in
12 contemporaneously providing a CBO with a report at the
13 same time as an owner, recognizing the owner will be
14 given time to fix it, what is the perceived harm of
15 advising the CBO contemporaneously?

16 **MR. ACCHIONE:** Well, it certainly has
17 not been the practice in the profession and unless we
18 believe that the current practice is creating serious
19 public safety issues, it would seem to me that
20 providing the owner of any facility an opportunity to
21 repair and correct the deficiency before someone gets
22 hurt is a better and more humane way of dealing with
23 the problem.

24 At the same time, I will grant you
25 that the greater the safety factors that are built in a

1 particular engineering product, let's take a building
2 for example, the safety factors are substantial, the
3 safety factors by the way, for those of you who are
4 flying, are much lower for an airplane and the testing
5 requirements for airplanes are much more stringent
6 because the thing has to fly.

7 So you cannot over-build an airplane
8 or it won't get off the ground.

9 So the safety factors on an airplane
10 are rather thin, and that is why there is so much
11 inspection of an aircraft when it comes in for overhaul
12 to make sure that none of those safety factors have
13 been violated.

14 We do not have that situation in a
15 building because there is generous safety factors built
16 in, and Chris can give you more details than I can
17 since he is the structural engineer.

18 But I know in the piping design area
19 there is some substantial safety factors depending on
20 the type of design.

21 The problem is that if you put in a
22 lot of safety margin, over a period of time there
23 becomes a body of understanding that you have time.

24 So if something is rusting you say I
25 have time, because there is lots of safety margins and

1 it can rust a while before I fix it.

2 The difficulty, of course, is that
3 what if the member that is critical to a function,
4 whether it is an aircraft or a building, does not have
5 an awful lot of margin in terms of, let's say in this
6 particular case wall thickness, and the corrosion that
7 is taking place is removing that wall thickness a
8 little bit quicker than you would like and certainly
9 much quicker than the rest of the building; how do you
10 know when that critical member is going to fail that it
11 is not going to fail much sooner than what you see in
12 the rest of the building?

13 And that is why it is so important to
14 make sure that you have actually had a look at enough
15 of what I call the "weak points" in any engineering
16 structure to make sure that you have not missed
17 something that is deteriorating rather rapidly that
18 does not have enough margin for a long period of time.

19 That is always a risk in any
20 engineering system, whether it is a building or an
21 aircraft or what have you, and it's a matter of
22 engineering judgment, typically, that the difficulty as
23 we have talked about earlier in the meeting is that if
24 the owner does not want something done, like the roof
25 panels removed or does not want that part of the

1 building inspected, it won't get inspected because the
2 engineer does not have the right to go into another
3 part of the building and look and see if it is in worse
4 shape than where he has been asked to inspect.

5 **MR. LONGO:** A final question that I
6 have for you, sir.

7 I thought earlier today, and I hope I
8 heard you correctly where you said even if something is
9 fixed, it is important to have made a record of the
10 fact that the condition existed and that it has been
11 repaired.

12 **MR. ACCHIONE:** That's right.

13 **MR. LONGO:** And consistent with that
14 position, if an unsafe condition is identified by an
15 engineer, if they were to contemporaneously give it to
16 the CBO, but the owner then fixes it, wouldn't it still
17 be consistent with that theory that you have of having
18 a record that something existed and it has been
19 corrected and maybe it did not need the CBO to even do
20 an order, but at least creates that benchmark of
21 knowledge that would be useful in the future.

22 **MR. ACCHIONE:** That is true.

23 But I am also suggesting that the
24 report that the engineer is producing will state, in
25 fact, that this was found, it was fixed by the owner,

1 everything is fine, and the report goes to the CBO to
2 say that, but that record that there has been a
3 deterioration in that particular aspect of the building
4 is on record, if it happens again and again and again,
5 then the CBO says 'we have a problem, we need to make a
6 permanent fix because we can't keep taking a chance
7 every five years.'

8 **MR. LONGO:** That is a helpful
9 clarification.

10 So if it goes to the owner and it is
11 fixed, you still expect it to be reported to the CBO?

12 **MR. ACCHIONE:** In the report, which
13 eventually would get to the CBO, right?

14 **MR. LONGO:** Okay, so that at least is
15 a helpful clarification for me to understand.

16 **MR. ACCHIONE:** The operating
17 experience of any engineering system is important, and
18 that is how we learned from looking at what has been
19 happening over the last 20 to 30 years, is it getting
20 better or worse?

21 **MR. LONGO:** Thank you all for your
22 input.

23 **MR. CARR-HARRIS:** Ms. Borooah?

24 **MS. BOROOAH:** I would like to thank
25 the Commission for giving us the opportunity to raise

1 questions from the design and professional community
2 overall, because I think it is the view of the City of
3 Toronto, and I share this view I think with my other
4 building regulatory colleagues, that these are all
5 things that have to be considered together, that we do
6 not act in isolation from each other and therefore,
7 even though we were in different tables answering
8 slightly different questions, that at the end of the
9 day I think we will all be working together on the
10 solutions.

11 So I have two questions, some of which
12 were touched on, but I do not know whether we had a
13 clear position enunciated from each of you.

14 Particularly this question would
15 likely rest with the engineers and the architects
16 specifically.

17 If you could both answer whether you
18 are familiar -- this is related to Question 2 in the
19 materials -- whether you are familiar with the
20 Vancouver model which establishes the role of a
21 planning consultant, which I understand also has
22 responsibility for confirming which parts of the
23 *Building Code* are addressed by sub-consultants and
24 obtaining also their sign off for conformity with those
25 pieces or areas of the work as an overview where that

1 work is delegated beyond the prime consultant?

2 And with that sort of description of a
3 system with a prime consultant, whether you would be
4 supportive of that sort of role in the Ontario context?

5 **MR. BIRDSELL:** I will speak to that
6 issue first.

7 Yes.

8 It comes back to the issue that we
9 identified as to each of the professionals involved in
10 the design and general review of the project being
11 clear about their area of expertise.

12 And then the aspect that a prime
13 professional be identified as the coordination person
14 for that project so as then to coordinate, first the
15 design process and then coordinate the general review
16 aspect of the project so as to confirm that all of the
17 pertinent aspects of the building are reported upon and
18 then as the project is brought to substantial
19 completion, confirmed by those professionals and
20 coordinated by the coordinating professional that the
21 work has been brought to completion and is within the
22 agreed documents and the *Building Code Act* as approved
23 for that building.

24 **MS. BOROOAH:** Okay, and perhaps it is
25 Chris that answers on behalf of PEO on this point?

1 **MR. RONEY:** I will do my best.

2 I am in a difficult position because I
3 do not really speak for PEO because PEO has not
4 actually come up with a position on this particular
5 question.

6 I do have some familiarity with the
7 model used in Vancouver and as I have articulated
8 before PEO is on the question of the prime consultant
9 that we dealt with earlier, is that PEO is very
10 supportive of any measures that help to improve
11 communication, eliminate gaps, and we certainly see
12 that as a concern in the building industry,
13 particularly when we have components that are designed
14 by folks that are other than the, say the structural
15 engineers and so on.

16 So that system used in Vancouver helps
17 to address some of those concerns.

18 So in general, it is certainly in the
19 spirit of what we consider a positive approach in terms
20 of dealing with the public welfare aspects regarding
21 the buildings.

22 **MS. BOROOAH:** So maybe, Chris, I
23 could follow up with you on that.

24 I am not sure whether you are familiar
25 with this.

1 But an organization known as EABO
2 (Engineers, Architects and Building Officials) have
3 been discussing this matter for a considerable length
4 of years.

5 Over those years my understanding is
6 that PEO members have expressed some level of support.

7 Is there no discussion taking place at
8 PEO to further those discussions at EABO that you are
9 aware of or the organization was aware of?

10 **MR. RONEY:** There have not been
11 discussions that have reached the council level in
12 terms of making policy with regards to such changes,
13 none that I am aware of.

14 Interestingly, I am a sitting member
15 of EABO as well.

16 **MS. BOROOAH:** Of EABO.

17 **MR. RONEY:** Yes, EABO.

18 And we have not been discussing that
19 at EABO in a little while.

20 **MR. BOROOAH:** Well, it's getting
21 dusty, if I may say.

22 Is there anybody else that has been
23 involved on this panel with this question who might
24 want to say anything?

25 No?

1 Okay.

2 I have been advised I should clarify
3 who I am for the questions.

4 I am Anne Borooah and I am the Chief
5 Building Official for the City of Toronto and I have
6 been asked to come here to represent the City of
7 Toronto.

8 I have actually also worked with the
9 Large Municipalities Chief Building Officials on their
10 submission, so there as a lot of collaboration and
11 discussion between both the City of Toronto's position
12 and LMCBO where I sit as an executive member.

13 So some of our directions, I guess,
14 benefited from that discussion and we did also share
15 our positions on these questions with our colleagues
16 and the Ontario Building Officials Association.

17 I have one more question, if I may?

18 **MR. CARR-HARRIS:** Of course.

19 **MS. BOROAH:** This struck me I think
20 largely in the context of the members responses to
21 questions 7 and 10, where you were discussing both the
22 level of expertise around corrosion and ongoing
23 education and its role.

24 We had some earlier discussions in the
25 context of the previous two days about the capacity of

1 the industry, the regulatory and the design community
2 to actually respond to and support possible recommended
3 changes.

4 So I wonder if you could comment, any
5 member, but I would like to hear from the architects
6 and the engineers on whether it would be correct to say
7 in the engineering and architectural practices the
8 focus more placed -- and we heard it described in our
9 Roundtables as on the beginning and the end of the
10 process that the construction process a lot of
11 attention is paid to and at the end if there is a
12 failure, there is a fair amount of attention paid, but
13 not much in the middle when you are talking about the
14 maintenance process.

15 So I am wondering if it would be fair
16 to say that within the design professions, whether more
17 emphasis and more capacity building would be necessary
18 for the industry to respond to an increased emphasis on
19 building maintenance matters, as opposed to either
20 construction or responding to building failures.

21 I know certainly in our experience
22 again when we are called in at the end, as they say, in
23 their building failures, we see quite a different group
24 and it is quite a narrow group of firms and individuals
25 in the City of Toronto context that tend to respond to

1 those sorts of emergencies.

2 So I wonder if you could comment on
3 the capacity of your professions to be able to support
4 and whether you would need more training and/or
5 education or ongoing education to be able to
6 participate in such a regulatory environment where more
7 emphasis was placed on maintenance?

8 **MR. CARR-HARRIS:** Mr. Craig, could
9 you?

10 **MR. CRAIG:** I think that the design
11 industry is remarkably adaptable.

12 I think that if there is a
13 demonstrated need for more support in the maintenance
14 and inspection of the building stock and qualifications
15 to do so, I think you would see people hiring, training
16 and adapting to that type of a workload.

17 So I think if you launched an
18 immediate program to inspect every building in the
19 Province, nobody could even begin to think about that.

20 But if you launched a greater emphasis
21 on inspecting high risk building stock and coming up
22 with methodologies to do so in an efficient and
23 comprehensive and reputable manner, I think you would
24 find that the industry could react to it.

25 **MS. BOROAH:** Anyone else?

1 **MR. BIRDSELL:** I will focus more on
2 Question 10.

3 And if Question 10 is principally
4 directed to the PEO, however the issues and principles
5 with respect to environmental control, isolation of
6 varying materials control of air, vapour, water, these
7 elements as relates to building envelope are, of
8 course, critical concern in the initial design
9 submissions.

10 And because of the concern related to
11 energy savings and quality of interior environment, I
12 would say that those particular aspects are subjected
13 to a continuous batter of tests to maintain their
14 effectiveness and materials have been routinely
15 replaced, their greatest example would be caulking
16 systems in relation to windows.

17 And then, of course, if there is an
18 instance of failure because it is such a critical
19 system, then those issues are taken very seriously and
20 dealt with very quickly.

21 In relation to the actual question of
22 corrosion aspect, of course if the opportunity for
23 corrosion by properly isolating materials or properly
24 maintaining protection of the interior system are
25 maintained, I would expect that opportunities for

1 corrosion would be reduced.

2 **MR. CARR-HARRIS:** Anybody else?

3 **MS. BOROOAH:** So you would say from
4 the architectural point of view you would think the
5 architectural community would respond in the areas
6 where they have discipline and additional training or
7 educational focus would not be required?

8 **MR. BIRDSELL:** No.

9 It is an area that through continuous
10 investigation of existing materials as well as new
11 materials that are being introduced into the industry,
12 it is an area of continued focus by the architectural
13 profession to have the best knowledge in this area and
14 be upgraded consistently and on a continuous basis.

15 **MS. BOROOAH:** Nothing from you,
16 Chris?

17 **MR. RONEY:** Yes, I would concur with
18 what engineer Craig said.

19 There are opportunities now to obtain
20 the training in mechanisms and building deterioration.

21 I get flyers in all the time on
22 courses and training that is available.

23 So I believe that where demand exists,
24 the industry has the ability to fill that demand.

25 **MS. BOROOAH:** Okay.

1 **MR. CRAIG:** Can I add one other
2 thing?

3 There seems to be, I think, a popular
4 conception that engineers and architects only design
5 new buildings and they are done when that is done.

6 I know in our practice we have a large
7 proportion of work that is assisting owners in the
8 maintenance and renovation and upgrading of their
9 existing facilities.

10 So there is already, I think, quite a
11 decent capacity in the industry to address problems
12 like that.

13 **MS. BOROOAH:** Okay, thank you.

14 **MR. CARR-HARRIS:** Thank you, Ms.
15 Borooh.

16 Mr. MacRae?

17 **MR. MACRAE:** Good afternoon, panel.

18 I have a question.

19 There seems to be a gap, and I have a
20 very specific question.

21 My name is Rob McRae and I am counsel
22 for Mr. Bob Wood who had Standing at the Commission and
23 was the author to reports that were reviewed and he was
24 formerly a principle with M.R. Wright Engineering.

25 My question is that it appears to me

1 that the PEO supports the suggestion that all previous
2 reports be made available from the building owner, but
3 as it stands from the evidence that I heard at the
4 Commission, that a professional engineer or architect
5 can only request that information from an owner.

6 And to use a term that I have heard
7 previously over the last couple of days.

8 One view of the evidence may be that
9 that information was not provided by an owner.

10 So my question is: would you support
11 the requirement that the owner be required, pursuant to
12 the OBC, from a mandatory perspective, to provide any
13 previous engineering reports or pertinent reports to an
14 engineer who is going to be completing -- or an
15 architect -- who will be completing, I think the term
16 is a structural adequacy report?

17 That is my question.

18 **MR. CARR-HARRIS:** Any takers?

19 **MR. RONEY:** I will only clarify that
20 the recommendations that the PEO has with regards to
21 this creation of the structural adequacy report, that
22 that not rest solely with the owner, it could go to the
23 municipality or the authority having jurisdiction,
24 whatever the final decision is, so that it is not left
25 up to owners to disclose its readily available by the

1 public by engineers conducting reviews, it not be left
2 to the owner.

3 And that was the recommendation that
4 we had made.

5 **MR. MACRAE:** Thank you for that, Mr.
6 Roney.

7 I guess I could clarify that in that
8 one of the issues at the Commission of Inquiry in
9 Elliot Lake was the historical information.

10 So if there is a modification that is
11 accepted as a result of either a recommendation from
12 the Commission or a procedural step by the government,
13 there still is going to be a number of reports that
14 will proceed that, proceed the date when that
15 modification would be required.

16 So the historical reports, on a going
17 forward basis, I can understand that the reports would
18 be available to the OBC, they would be filed probably
19 with the chief building official.

20 But looking back, there were reports
21 at the Elliot Lake Commission in the 80's and in the
22 90's and in the 2000's.

23 Would you support a provision that
24 there is a mandatory requirement to provide historical
25 data until we have, moving forward, a current database?

1 Like, it may be a question I have to
2 leave with the Commission, but there is a lot of
3 information that is dated that is very pertinent to
4 buildings at this time.

5 **MR. RONEY:** Beyond our practice
6 bulletin and the standard that we are recommending that
7 speaks to obtaining past information, PEO does not have
8 any specific policy or recommended changes that it is
9 proposing at this time, to answer your question.

10 **MR. MACRAE:** Thank you very much, Mr.
11 Roney.

12 Thank you.

13 **MR. CARR-HARRIS:** Thank you, Mr.
14 McRae.

15 Darell Kloeze?

16 **MR. KLOEZE:** Good afternoon, panel.

17 My name is Darell Kloeze, I am counsel
18 for the Province of Ontario at the Inquiry and I
19 represent, for the purposes of the Inquiry, several
20 ministries, including the Ministry of Labour and the
21 Ministry of Municipal Affairs and Housing.

22 For the purpose of my questions today,
23 they are more on behalf of the Ministry of Municipal
24 Affairs and Housing, which administers the *Building*
25 Code.

1 The first question I have echoes one
2 that Ms. Borooah mentioned as well.

3 Over the course of the past two days
4 we have heard certainly the perspective of regulators
5 and the Ministry in terms of considerations they have
6 to take into account when developing policy, including
7 consulting all stakeholders and interest groups.

8 My question is to the professions, and
9 particularly the PEO, is it the practice of the PEO
10 when you are developing performance standards and
11 guidelines that you engage other actors and
12 stakeholders that are affected, for example, for the
13 purpose of the discussion today, have you engaged
14 building officials who will be receiving or relying on
15 the kinds of reports that are going to be prepared
16 using the standards?

17 **MR. RONEY:** In our standards or
18 guidelines developing process we do have a rigorous
19 peer review process involved to engage other
20 stakeholders.

21 Also, with regards specifically to
22 chief building officials, many of whom are members of
23 Professional Engineers of Ontario, so we do have a fair
24 bit of representation there as well.

25 The best policies are those that do

1 involve wide stakeholder involvement, so it is
2 definitely something that we endeavour to engage in as
3 we develop these standards and we have in the past,
4 most definitely.

5 **MR. KLOEZE:** The Ontario Association
6 of Architects, I am not sure if you want to comment on
7 this as well in terms of guidelines from your
8 professional organization?

9 **MR. BIRDSELL:** We don't strictly have
10 guidelines per se, but I will say that we reach out to
11 all professions, including the building officials as we
12 are developing policy and as we comment on issues that
13 are identified within the industry that may affect the
14 use of buildings, and more importantly, public safety.

15 **MR. KLOEZE:** My second question
16 follows up on the question today about continuing
17 professional development.

18 And again, to the PEO, you have
19 touched on qualifications and talked today about
20 qualifications for structural engineering specialists
21 and your performance standard that you discussed today
22 deals with provision of structural adequacy reports and
23 a reference to such reports in the *Building Code*.

24 The question is whether there would be
25 consideration within the PEO for a requirement for

1 training related to the role of engineers under the
2 *Building Code Act* and also training related to any
3 minimum maintenance standards that may be included in
4 the *Building Code*.

5 **MR. RONEY:** In the creation of the
6 structural engineering specialist, that will afford us
7 the opportunity to include training and ongoing
8 professional development requirements that are relevant
9 to individuals engaged in the practice of structural
10 engineering.

11 And it allows us to do it in a very
12 focussed manner.

13 So we envision it as being an ideal
14 medium to be able to ensure that we are addressing
15 areas where other stakeholders, such as building
16 departments or the Ministry of Municipal Affairs and
17 Housing for that matter, see importance in ensuring
18 that practitioners engaged in services in those fields
19 are well aware of.

20 So it would be an ideal vehicle to be
21 able to deliver specific training to meet the needs of
22 stakeholders such as the Ontario Government.

23 **MR. KLOEZE:** The question is
24 specifically whether or not there would be
25 consideration to provide training to engineers about

1 requirements in the *Building Code* and those matters?

2 **MR. RONEY:** Since the requirements in
3 the *Building Code* relate directly or the requirements
4 relating to structures are certainly found in the
5 *Building Code*, it relates directly to what a structural
6 engineering specialist would be involved in, then it is
7 entirely consistent that we would be expecting our
8 practitioners to be fully conversed with the
9 requirements and those responsibilities that are found
10 in the *Building Code* and *Building Code Act*.

11 **MR. KLOEZE:** Thank you.

12 The third question I have, and I think
13 this is again following up on a lot of discussion today
14 and over the last three days, there has been a lot of
15 discussion about creating a repository for reports and
16 what reports should be included in their -- sort of the
17 requirements when a report is included in this
18 repository or when a report is necessarily sent to the
19 chief building official; and some discussion as to who
20 should actually create the repository, whether it is
21 the Province, there is some suggestion about
22 municipality and today even you talked that that could
23 be a role, the office of the provincial engineer as
24 such is created.

25 For those reports that do not identify

1 an imminent structural problem, could the PEO itself
2 provide a central database or registry where engineers,
3 your members, could upload their reports?

4 **MR. RONEY:** I believe that would be
5 outside of the role and mandate of the Professional
6 Engineers of Ontario.

7 Our role and mandate is dictated by
8 the *Professional Engineers Act* and the regulations that
9 flow from that and where we set standards for the
10 practice of the professional engineering and for the
11 qualification of license holders, and obviously for the
12 discipline and complaints process.

13 The repository of building information
14 I think would not be a good fit with the Professional
15 Engineers of Ontario, would not fit within that
16 mandate.

17 **MR. KLOEZE:** Okay, and perhaps I
18 could ask the same question then of the Ontario Society
19 for Professional Engineers.

20 **MR. ACCHIONE:** You're fishing, are
21 you?

22 **MR. KLOEZE:** I am indeed.

23 **MR. ACCHIONE:** I think I stated
24 earlier in the meeting, I am not a big fan of big
25 bureaucratic lists because there is a tendency

1 sometimes to spend all your effort feeding the machine
2 and not looking at what is actually there and what it
3 is telling you.

4 That is always a problem.

5 This is one of the reasons why the
6 Society has suggested that if we are to report problems
7 to a building official, that it be accompanied with a
8 standard provincial cover sheet so that the problem is
9 immediately identified on the first page so that
10 building officials know whether it is serious or not
11 serious rather than have to go through a 300 page
12 report looking for page 68 that says this is a serious
13 problem.

14 So I am a big fan of "keeping it
15 simple, stupid", the "KISS" principle, rather than put
16 bureaucracy around the problem, a technical problem, in
17 the past I have seen these things sort of take on a
18 life of their own and you don't get what you thought
19 you were going to get out of it except for a big
20 machine that takes a lot of money to run and nothing
21 comes out of it.

22 So I am more in support of the PEO
23 recommendation to make certain -- I think Dale alluded
24 to take the high risk buildings, force them through a
25 periodic inspection, produce a proper report on its

1 condition and if there is a serious problem there,
2 report that serious problem in an easy to report way to
3 the building official with a standard form saying 'hey,
4 this is a real problem and the owner is doing nothing
5 about it.'

6 I think that will lead to much better
7 public safety results than producing a big monster
8 bureaucratic machine.

9 But I know how governments work and
10 they prefer to have one place to look and people do
11 like to go to one place to get information and somebody
12 has to fill that spot with information. But it is not
13 cheap, typically.

14 If the results are not there, then you
15 have an embedded cost in the system that somebody has
16 to pay for, whether it is a government budget that pays
17 for it or submission fees to the building officials in
18 terms of fees to pay for it, and the owners get upset
19 that their costs are going up and nothing is coming out
20 of the machine of any value.

21 But I am doing a speech now, so I had
22 better shut up.

23 **MR. KLOEZE:** I appreciate the
24 comments and a lot of the concerns you have expressed
25 echo some of the things that were said over the past

1 three days as well.

2 So thank you for those comments, and
3 thank you gentlemen.

4 Mr. Birdsell?

5 **MR. BIRDSELL:** Yes, I think it is
6 worthwhile to point out that because the large majority
7 of reports are generated in relation to new
8 construction and general review of new construction,
9 that those documents are filed with the municipalities,
10 the authorities having jurisdiction.

11 And I think it is also reasonable to
12 point out that because the majority of building owners
13 will identify an issue to call in an appropriate
14 professional to review that as a result of that review
15 there will be a material change or a system change
16 which again would trigger a building submission,
17 building permit submission, and that once that has been
18 created then there would also be a reporting associated
19 with the completion of that work, and again would
20 reside with the municipality.

21 I think in terms of perhaps
22 extraordinary issues, those may not be being captured
23 right now, but the majority of reports are being
24 captured.

25 **MR. KLOEZE:** Thank you.

1 Thank you, Mr. Commissioner.

2 **MR. CARR-HARRIS:** Thank you, Mr.
3 Kloeze.

4 Stuart Huxley?

5 **MR. HUXLEY:** Thank you Mr. Carr-
6 Harris, Mr. Commissioner.

7 I represent the Association of
8 Municipalities of Ontario (AMO), and my question
9 relates to, just dovetailing to the last comment about
10 costs, and certainly understandable that owners would
11 have an issue with costs.

12 I am looking to the various bodies and
13 organizations around the table.

14 If you could comment on the current
15 state of affairs with respect to your organization and
16 the access to qualified professionals, whether it be
17 engineers, architects or technicians, in smaller
18 municipalities and in particular in Northern Ontario,
19 and whether that is an issue for your particular body,
20 recognizing that one of the recommendations may be more
21 of a periodic inspection relying upon qualified
22 professionals and does that present any difficulties
23 for owners from a cost perspective and more importantly
24 from an access perspective from your particular
25 organization?

1 **MR. BIRDSELL:** Yes, I would say that
2 in terms of numbers of qualified architects in the
3 Province of Ontario over the past five years the number
4 of architects has grown by approximately 25 percent in
5 terms of licensed members.

6 So it seems to be following a
7 reasonable path of the requirements for architects in
8 the Province and requirements in use and construction.

9 One aspect that addresses your related
10 question of design professionals in the North, the
11 creation of the new School of Architecture at
12 Laurentian University in Sudbury, I believe one of
13 their mandates particularly by training architects in
14 Northern Ontario, it is felt that those professionals
15 will continue to reside and service the north and
16 perhaps that may address some perceived lack right now.

17 **MR. CARR-HARRIS:** Any other comments?

18 **MR. RONEY:** Just a couple.

19 I recognize the question and the
20 potential concern.

21 I believe that Ontario is fairly well
22 served by the engineering profession.

23 There are some 80,000 licensed
24 engineers, obviously only a small subset of that are
25 involved in the building industry.

1 We can see in the case of the
2 particular situation in Elliot Lake, there were a great
3 many engineering firms -- there did not seem to be a
4 shortage of engineering firms involved in and active on
5 that particular project, so clearly they were available
6 there.

7 And the other thing is that we have a
8 reasonable capacity in Ontario to generate new
9 engineers for every engineering position available at
10 an Ontario university there are some ten qualified
11 applicants lined up for it.

12 So I would not get too terribly
13 concerned about questions of capacity.

14 I would not have it hold back doing
15 the right thing because I believe that as engineer
16 Craig mentioned, many firms are set to do this and many
17 firms will retrain if and where demand dictates.

18 So I believe that the Province has the
19 capacity in terms of providing trained, qualified
20 professional engineers to deal with this in all regions
21 of the Province.

22 **MR. CRAIG:** I think the practical
23 issue with that is that the smaller, more remote
24 municipalities will definitely have to get some of the
25 expertise necessary from other larger towns, cities.

1 There is no avoiding it.

2 It seems to be the groceries cost
3 more, the gas costs more, everything costs more to live
4 in a more remote municipality.

5 I think the capacity is there to
6 service it, but it may not always be local. That is the
7 only caveat on that.

8 **MR. HUXLEY:** Thank you.

9 **THE COMMISSIONER:** We discussed
10 yesterday the potential grouping of smaller
11 municipalities in discreet remote regions jointly have
12 available qualified professionals and the pooling of
13 resources.

14 That is certainly something that the
15 smaller municipalities may have to engage in.

16 **MR. CARR-HARRIS:** So those are the
17 last of the questioners I think.

18 Back to the schedule, Question number
19 11.

20 Is everybody prepared to hang in for a
21 little bit longer?

22 We have one question left.

23 Question 11.

24 And the question is: of your
25 recommendations can you tell us your favourite two, one

1 or two?

2 And this time we will start on the
3 right instead of the left we have been working you to
4 death, Mr. Birdsell.

5 So let's get Mr. Craig going.

6 **MR. CRAIG:** Okay.

7 I would say that my top two arising
8 out of the situation in Elliot Lake would be two insist
9 upon mandatory municipal and provincial property
10 standards and regulations to ensure that they address
11 ongoing building envelope and structural problems.

12 I think getting something in the
13 *Building Code Act* that clearly addresses the need to
14 take care of a property and a mechanism to ensure that
15 proper reporting is done on a regular interval would be
16 very high on my list.

17 And secondly as kind of an outgrowth
18 of that, it is this whole idea of the mandatory
19 inspections on a regular interval.

20 My thinking on this is that at the end
21 of a building construction process, certainly under
22 current regulations, you have got a building which has
23 been ostensibly designed and constructed in accordance
24 with the *Building Code* and you have a sign off by the
25 professionals who were involved in the design and the

1 general review of it, so you have a pretty clean slate
2 at the end of that.

3 If you identified those types of
4 buildings or occupancies that are of a higher risk and
5 instituted an initial program that said every five
6 years, I would favour a building condition report or a
7 building assessment that addresses at least structure,
8 building envelope and any other issues of life safety
9 that could degrade over time, that would be a big step
10 forward.

11 **MR. CARR-HARRIS:** Thank you.

12 Mr. Acchione?

13 **MR. ACCHIONE:** Yes.

14 I guess my two favourite ones are two,
15 but not actually the way they are written as separate
16 recommendations.

17 I come from the nuclear industry and
18 there we have a continuing professional development
19 program and an engineering quality assurance program
20 that are integrated.

21 Individuals are required to be
22 certified before they are allowed to work
23 independently, and that means they have to meet certain
24 criteria and go through certain training to become
25 qualified.

1 Until they are qualified, they are
2 supervised and they are not allowed to do work
3 independently so that they don't make silly mistakes.

4 But the more important component, in
5 my view, of that system is the quality assurance
6 process.

7 Now, Chris alluded to that earlier
8 this morning by describing how work is done in his
9 office and I think it was a good description of the
10 kind of stuff you would like to see in an engineering
11 operation that is working on structural design or
12 remediation or maintenance.

13 I would really like to see guidelines
14 and standards developed eventually by PEO that requires
15 a quality assurance process to be embedded as part of
16 your license to offer services to the public.

17 And I should clarify for those outside
18 the room that don't understand how the *Professional*
19 *Engineer's Act* works.

20 The Professional Engineers of Ontario
21 actually issues two licenses, one is to the individual
22 to be an engineer, the other one is to the company that
23 provides the services of engineering and it is called
24 the Certificate of Authorization.

25 The Certificate of Authorization

1 essentially holds the company responsible for making
2 sure that the engineering done within their company is
3 done properly.

4 But if you look at the details of the
5 Certificate of Authorization regulations or rules or
6 what have you, whatever you want to call them, it does
7 not actually specify what needs to be done to make sure
8 the engineering is done right.

9 It is left with the professional that
10 holds the certificate to determine that.

11 So if you have a very capable
12 professional running the shop, you get a very robust
13 quality assurance program, and I think Chris, the
14 description of the operation in his company I think
15 attests to the fact that he knows what that means.

16 But there are practitioners that do
17 not quite understand how quality assurance works, and
18 let me tell you the bad news.

19 The bad news is even the best trained,
20 the most experienced and the most competent engineer
21 sooner or later will make a mistake.

22 The quality assurance process is there
23 to make sure that thing does not kill somebody by
24 having either peer reviews, supervisory reviews,
25 independent analysis or testing of what it is they have

1 designed to make sure that all of the assumptions that
2 were made in the design of that engineering product is
3 in fact correct.

4 And that is that quality engineering
5 process that I am talking about.

6 So I would love to see eventually in
7 the Certificate of Authorization rules an integrated
8 CPD and quality assurance process as part of how we do
9 business in the profession so the people who do not
10 understand how it works get up to speed and people like
11 Chris that do know how it works, the value of their
12 services and the reason you pay a little more sometimes
13 to hire someone like Chris's operation is well worth
14 the money.

15 **MR. CARR-HARRIS:** Thank you. That's
16 very good.

17 Professor?

18 **MR. HUMAR:** I have got the top two on
19 my list.

20 The first one would be that a
21 performance standard for the inspection of buildings,
22 something similar to the one described in the
23 submission of PEO should be formally elected under the
24 provisions of the *Building Code Act* so that it becomes
25 mandatory.

1 And number 2, as Dale mentioned, we
2 should have buildings constructed to serve, for
3 example, as parking garages, arenas, commercial and
4 institutional and educational buildings and other
5 buildings with high occupancy.

6 Those could be specified in the
7 *Building Code Act* in greater detail, should require
8 periodic inspections to determine structural
9 sufficiency and public safety.

10 The inspection should be the
11 responsibility of the owner and should be carried out
12 by professionals which are qualified to carry out such
13 inspection.

14 A part of that, of course, is that
15 this mandatory or any voluntary inspection of such
16 structural sufficiency, if it reveals existing or
17 potential structural weaknesses, the professional
18 should be obliged to report it to the owner as well as
19 to the CBO simultaneously.

20 The periodic inspection are part of
21 some of these existing standards, even if they are not
22 in the main standard, if they are in the appendix,
23 there are lots of examples where things that are in the
24 appendix or in a commentary are all beneficial to the
25 engineer and then judgment comes in play there.

1 For example, if you are to design for
2 snow load, it is not in the code. The snow loads it
3 all in commentary to the Code, but there is no
4 structural engineer who is not following that
5 commentary. That is a sound principle initiative
6 there.

7 Or another example, if you have a
8 racks like in the Walmart or Costco you have these
9 large racks which stand inside, you have to design
10 them, there is nothing in the code, but there is an
11 annex to the standards for steel design.

12 If you do not follow them, you are not
13 doing your job properly.

14 So even if the mandatory requirement
15 for the inspection of parking garages is in the
16 appendix D, any competent engineer will certainly still
17 like to follow that.

18 So as part of this periodic inspection
19 they should be either mandatory or at least there
20 should be sufficient strength in the guidelines for
21 engineers to follow those or the inspectors to follow
22 those.

23 So those are two of my main
24 recommendations.

25 **MR. CARR-HARRIS:** Thank you.

1 Mr. Roney?

2 **MR. RONEY:** In PEO's submission we
3 actually have 11 recommendations and we are kind of
4 attached to all of them.

5 So narrowing it down to five was a
6 little bit problematic, we managed to get it down to
7 about seven, but if you forgive me, they are inter-
8 related. There are two main themes, so perhaps you'll
9 forgive me.

10 And they are not new themes.

11 You have heard me say them many times
12 here during the course of today's proceedings.

13 The themes are, first of all, the
14 mandatory to develop and to implement and to enact a
15 mandatory standard for structural adequacy reports and
16 the key points that are found in our recommendations
17 are that they have a defined scope, you don't leave the
18 scope up to an owner to try to develop, or the
19 engineers themselves, it has a defined scope.

20 It has triggering mechanisms as to
21 when it becomes a report that must be prepared and it
22 has a mandatory submission to the chief building
23 official, and these are all inter-related.

24 There are recommendations 1 through 5,
25 but they are all inter-related and we would not want to

1 see one or two without the others because it all works
2 together and it is those three concepts in those
3 structural advocacy reports.

4 The second, which is also entirely
5 related to that first concept, is the establishment
6 under the *Professional Engineers Act* of structural
7 engineering specialists.

8 These are the individuals that I have
9 described that would be responsible for the preparation
10 of the reports.

11 They are the individuals who would be
12 qualified through Professional Engineers of Ontario so
13 that owners and building officials understand what
14 qualifications these people are and that they would
15 have the best likelihood of being able to exercise a
16 huge amount of judgment that is always going to be an
17 everyday part of practice in the building industry with
18 so much variation.

19 And so that takes into account our
20 recommendations number 8 and 9.

21 So if I was to narrow it down, that is
22 about as narrow as I could possibly hope to do.

23 Now, if I may just while I have the
24 floor.

25 I just wanted to clarify an answer

1 that I gave earlier, and I know it is fairly important
2 because it came directly from Commissioner Bélanger,
3 and it is doubly important because he was writing down
4 what I said, so I want to make it entirely clear.

5 What it was is it related to that the
6 transparency for the public to be able to search and
7 find out information about engineering practitioners
8 and their past license history.

9 And just to clarify entirely, what we
10 are recommending, you will find it in recommendation
11 number 6 in what we had submitted to you, is that we
12 would put on the registry a note of every revocation,
13 suspension, cancellation or termination of a license or
14 certificate of authorization, which is the other
15 element that Mr. Acchione had mentioned.

16 That would stay on the record
17 permanently. It would not expire, it would not ever
18 come off, it would always be there.

19 And that we have the authority, under
20 the *Professional Engineers Act* and regulations to do it
21 now.

22 The second part is to provide
23 information concerning any findings of professional
24 misconduct or incompetence, and that information would
25 appear on the website for a period of ten years from

1 the date of the findings, so long as the discipline
2 committee had ordered publication with names.

3 So that is just a little clarification
4 of the answer I gave to you earlier.

5 **THE COMMISSIONER:** Thank you.

6 **MR. RONEY:** Thank you.

7 And I also thank you, Mr. Acchione for
8 the wonderful endorsement of the services my firm
9 offers, I appreciate that.

10 **MR. ACCHIONE:** You can buy me a beer!

11 **MR. CARR-HARRIS:** Thank you.

12 Mr. Miller?

13 **MR. MILLER:** Thank you.

14 My top two recommendations basically
15 there was a lot of comments around the table and
16 certainly keeping the theme of our common goal and
17 protecting the health and safety of the public.

18 The two recommendations, the one being
19 that the minimum maintenance standards for existing
20 buildings be made into regulation.

21 It does not necessarily have to be the
22 internal *Building Code*, it certainly makes sense from
23 what we hear, but as long as it makes it into
24 regulation, that in part and parcel, the PEO has
25 proposed structural practical to which we would also

1 support for being enacted by regulation as well.

2 The second one would be for
3 legislations to be introduced to enforce, at a minimum
4 once every five years, a thorough structural inspection
5 of high-risk buildings.

6 High-risk buildings that we had
7 mentioned earlier today, those being rooftop parking
8 structures and highly occupied building types.

9 So those would be the two main ones
10 that we would have.

11 **MR. CARR-HARRIS:** Thank you.

12 Mr. Birdsell?

13 **MR. BIRDSELL:** Yes.

14 The first of the two recommendations
15 that I will speak to this afternoon is a request to
16 strengthen the requirements that owners must maintain
17 their buildings in a safe condition, to meet the
18 minimum code requirements, *Ontario Building Code*, to
19 define if only to the code in place when built, to
20 correct critical life safety items identified by
21 architects, professional engineers, municipal
22 inspectors and other agency reporting.

23 Requiring permits and involvement of
24 architects and professional engineers for renovations,
25 repairs or maintenance of life safety or code items.

1 Strengthen legislative and regulatory
2 tools under the *Ontario Building Code Act* and *Building*
3 *Code* that require necessary upkeep to ensure that the
4 minimum requirements inherent in the *Ontario Building*
5 *Code* are maintained throughout the occupancy of the
6 building, supported by explicit obligations, tools to
7 promote enforcement and action by the enforcement
8 agency in municipality when the owner does not comply
9 with these obligations.

10 Comprehensive reports on the status of
11 the critical building elements and life safety measures
12 be required to be commissioned by existing owners and
13 provided to perspective new owners at the time of every
14 contemplated change in property ownership; and in no
15 event less than ten year intervals.

16 The required content of such reports
17 respecting ongoing status of the existing building
18 should be defined within the *Ontario Building Code Act*.

19 The second item is public safety and
20 legislative authority and clarity for building
21 officials.

22 The *Architects Act* and the
23 *Professional Engineers Act* define the profession is
24 required for what type of building.

25 There used to be a table in the

1 *Building Code 2006*, that clearly set out when an
2 architect or an architect and professional engineer
3 were required for easy reference by building officials.

4 The table was an accessible tool,
5 brought all the legislation together for professionals
6 and non-professionals alike.

7 It made it possible for every building
8 official from large or small jurisdictions to have an
9 easy tool to use that conveyed the impact of multiple
10 pieces of legislation within their work.

11 The table was removed by court order
12 when PEO litigated against then proposed additional
13 requirements in the *Building Code Act* protesting.

14 The OAA were interveners.

15 While the requirement for testing was
16 removed and professional status of architects and
17 professional engineers reinforced, the table was
18 removed.

19 Since that time the PEO and the OAA
20 have released a joint statement to chief building
21 officials that contains the same information, however
22 reintroducing the table in the code with the necessary
23 enforcement language would facilitate the building
24 officials work.

25 We feel that that would be an

1 excellent tool to get the appropriate professionals
2 involved when issues of existing buildings arise.

3 **MR. CARR-HARRIS:** Thank you.

4 I believe that concludes my schedule.

5 I think the Commissioner would like to
6 make a few remarks before we end the day.

7 **THE COMMISSIONER:** I can't tell you,
8 ladies and gentlemen, how we are appreciative for the
9 very generous gift of your time, your expertise, your
10 experience and your advice.

11 I repeat what I said to other groups
12 in the last two days, that we are acutely aware of
13 number one, our responsibility to make meaningful
14 representations and recommendations to the government.

15 But we are acutely aware, as well,
16 that they have to be affective and they have to be
17 relevant and the have to be practical.

18 We were warned and we will be
19 sensitive to the law of unintended consequences and we
20 will arrive to the KISS principle that you have
21 referred to, Mr. Acchione.

22 I repeat that your presence, everybody
23 here today, constitutes an important public service and
24 I thank you on behalf of the people of the Province of
25 Ontario.

