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Gazette

THE DEPARTMENT OF THE REGISTRAR, PEO

Discipline Committee of the Association of Professional Engineers of Ontario

In the matter of a hearing under the Professional Engineers Act, R.S.O. 1990, Chapter P28. And in the matter of a complaint regarding the conduct of

Nunzio J. Pinelli, P.Eng.

A member of the Association of Professional Engineers of Ontario

And Pinelli Engineering Services Part Colborne Ltd., the holder .of a Certificate of Authorization.

Decisions and Reasons

A panel of the Discipline Committee of the association met in the offices of the association on December 16, 17 and 18, 1997, to hear allegations of professional misconduct and incompetence against Nunzio J. Pinelli, P.Eng., and Pinelli Engineering Services Part Colborne Ltd., hereinafter referred to as "Pinelli" and "Pinelli Engineering," respectively.

The panel deliberated on the issue of penalty an December 20, 1997.

The hearing was scheduled to commence at 9:30 a.m. on December 16, 1997, a time and date agreed upon by all parties. The hearing did not commence until 1 :00 p.m. an December 16, 1997, because Pinelli failed to appear in the morning, but did communicate to the committee on the morning of the hearing that he would be able to attend at 1 :00 p.m.

Michael E. Royce of Lenczner Slaght Royce Smith Griffin appeared as legal counsel far the association. Pinelli was not represented by counsel.

The hearing arose as a result of Pinelli's involvement in a commercial plaza in Niagara Falls, Ontario, a greenhouse solarium added to the side of an existing single-storey dwelling in the Town of Pelham, and alteration plans for a restaurant at the Lock Three Museum in the City of St. Catharines.

At the beginning .of the hearing, counsel far the association filed as an exhibit a Notice .of Hearing with appendices A, B and C, which are summarized as follows:

APPENDIX" A"
(Niagara Falls Plaza Project)

It is alleged that Nunzio J. Pinelli, P. Eng., (hereinafter referred to as "Pinelli") is guilty .of incompetence, and Pinelli and Pinelli Engineering Services Part Colborne Ltd. (hereinafter referred to as "PESL") are guilty of professional misconduct, the particulars .of which are as follows:

1. Pinelli was at all material times a member of the *Associ*ation of Professional Engineers of Ontario.
2. PESL was at all material times the holder of a Certificate of Authorization to offer or provide to the public services within the practice of professional engineering, and was responsible for supervising the conduct of its employees and taking all reasonable steps to ensure that its employees, including Pinelli, carried an the practice of professional engineering in a proper and lawful manner. With respect to all or most of the services relevant to these proceedings, PESL carried on business under the name and style "Pinelli Engineering Services Ltd."
3. Thorowest Plaza Ltd. and its owner Ralph Biamonte engaged Pinelli and PESL to provide architectural, structural, mechanical and electrical design services with respect to a new commercial plaza they intended to erect on their property at 7637 Lundy's Lane in the City of Niagara Falls, Ontario. Already located on the property were foundations for a five-storey hotel, whose construction had been abandoned.
4. The proposed plaza was a multi-unit single-storey L-shaped structure, with approximate out to out dimensions of 58 m x 35 m x 6.6 m in height, and approximately 1400 sq.

m in area. The plaza's layout utilized part of the existing foundations, as well as new foundations. The ground floor was framed with a 200-mm thick prestressed concrete core slab. Perimeter wall sections were reinforced masonry construction, with some metal facia siding above glazing set between masonry piers. The basic roof framing system was comprised of steel deck on steel joists. The joists were supported by the reinforced masonry walls and wall piers. The roof cantilevered two m over the walls and wall piers on three sides.

5. On or about November 4, 1993, Pinelli initialed and sealed eight drawings-RBA1A (A1), RBA2A (A2), RBA3A (A3), RBA4 (A4), RBA5 (A5), RBA6 (A6), RBA7 (A7) and RBA8 (A8)-under the PESL title block (hereinafter referred to as the "first set of drawings"). This first set of drawings, together with the confirmation of commitment and building analysis form sealed by Pinelli, were received by the City of Niagara Falls (hereinafter referred to as the "city") on November 5, 1993, with the application for a part one (foundations and ground floor slab) and part two (above grade structure) permit. The city had concerns with the quality and content of the drawings, and subsequently changed the permit application to part one only. The city advised PESL of its concerns, which included the condition of the existing soil and foundations, the drainage system, ASHRAE building design requirements and the failure to retain an architect at the original submission in accordance with the Ontario Building Code (OBC).

6. On or about November 15, 1993, Pinelli and PESL represented to the city that:

a) the soil conditions and the foundations as installed at the site had been inspected and were suitable for use as the main foundation of the one-storey plaza;

b) the weeping tiles presently installed for the existing foundations were working properly and would be connected to the new weeping tiles for the new foundation. Drainage would be to a sump pit located in the basement as shown on the plans;

c) the building shell would be designed in accordance with ASHRAE section 90.1. Information regarding mechanical and electrical details would be forwarded when tenants were found; and

d) Peter J. Lesdow, architect (hereinafter referred to as "Lesdow"), had been retained as the project architect and would provide all architectural designs and reviews for the project.

7. On or about November 22, 1993, the city received a second set of eight drawings apparently provided in response to the concerns expressed by the city. These drawings were similar in overall content to the first set, but had been generally rearranged and revised. This set now included six drawings (A2 to A7) under the title block of, and sealed by, Lesdow, and two drawings (RBA1A and RBA8) under the title block of PESL. Pinelli initialed and sealed all but drawings A3 and A4 in this second set. Drawing RBA8 contained a different Pinelli title block and was not noted as being revised.

8. The city reviewed this second set of drawings (hereinafter referred to as the "second set of drawings") and, on or about November 24,1993, requested from Pinelli all design loads used in the design of the structural components, including locations of snow build-up where applicable and calculations for the size of the centre pier in the crawl space. Pinelli and PESL responded by submitting on or about November 30, 1993, sealed footing design sketches and calculations, which raised additional concerns from the point of view of the city.

9. On or about November 25, 1993, the city issued a Part One Plan Examination Report to Biamonte, Pinelli and Lesdow. The report stated that a part one permit was being issued on the condition that the application, plans and other information submitted, the stipulations listed in the report, the notations on the plans and other imposed conditions were complied with. A part one permit was issued on November 26, 1993, and construction of the new footings and foundations began shortly thereafter.

10. On or about December 2, 1993, the city requested specific clarification and confirmation of such items as soil bearing capacity, design loadings, type of roof membrane, fire separation details and resistance ratings, and mechanical and electrical details. In the absence of an adequate response, the city sent a registered letter to Pinelli and PESL requesting additional information and expressing its concern about the quality of the information provided to date by Pinelli and PESL.

11. A meeting to review design loadings was subsequently convened by the city on December 20, 1993, with Biamonte, Pinelli and the project manager to PESL, Martyn Perrin. Design loadings were not resolved at the meeting.

12. On or about January 6, 1994, the city provided Biamonte with a building permit application. On February 9, 1994, the city informed Pinelli and PESL that a response to their letter of December 2, 1993 had not been received. The city also advised Biamonte that drawings of the steel joists would have to be stamped as reviewed by Pinelli. On or about March 8, 1994, Pinelli advised the city that he orally instructed the structural steel joists fabricator of what loading would be used and did not want to stamp the joist drawings as having been reviewed.

13. On or about February 21, 1994, Pinelli and PESL submitted to the city computer printouts of the ASHRAE standards. By letter dated March 2, 1994, the cit reminded Pinelli and PESL that an application and relevant drawings required for the part two permit had not yet been received.

12. That letter referred to the checklist given to Biamonte on January 6, 1994, which had not been completed; items in the letter of December 2, 1993, which still required clarification; incomplete ASHRAE design information; and discussions with Perrin during the month of February 1994 requesting revisions and complete information. Pinelli and PESL responded to the city on March 9, 1994, with a revised ASHRAE computer printout.

15. On or about April 12, 1994, the city received a part two permit application and a drawing for joists J1, initialed and sealed by G.L. Hodgson, P.Eng., with no indication that the drawing had been reviewed by Pinelli.

16. On or about June 2, 1994, the city advised Biamonte that the load instructions given to the joist fabricator by Pinelli were to be confirmed, and the shop drawings were to be stamped as reviewed. On or about June 9, 1994, the city advised Pinelli and PESL that design loads were required as requested in their letter of November 24, 1993.

17. On or about June 28, 1994, the city received 12 revised drawings for steel joists numbered J1, J1A, J2, J2A, J3 to J 10, initialed and sealed by Pinelli, and also by Hodgson. The dead loads had been changed on all the drawings from 1.575 kN/m to 2.244 kN/m, a 42 per cent increase. On or about June 29, 1994, the city requested a summary of all design loads used, because conflicting information regarding the value of the snow load and composite load on the roof had been received from PESL. In a letter from Perrin dated July 28, 1994, which was initialed and sealed by Pinelli, PESL advised the city regarding design loads, soil bearing capacity and foundation details. This submission was incomplete.

18. On or about August 10, 1994, the city sent to Pinelli and PESL a typical loading summary sheet, which indicated the type of information required for wind, earthquake and gravity loads. By letter dated August 22, 1994 from Perrin, which was initialed and sealed by Pinelli, PESL and Pinelli stated design loads, soil bearing capacities and reinforcing in the masonry walls.

19. By letter dated August 31, 1994, the city advised Pinelli and PESL of an error in the August 22, 1994 letter in that the letter stated that the seismic data and the composite loads indicated were for Part Nine buildings under the Ontario Building Code (OBC). The city pointed out to Pinelli and PESL that the structure in question was a Part Three building in accordance with clause 2.1.1.2(1) (b) of the OBC, and should be designed in accordance with Part Four.

20. On or about August 23, 1994, the city issued a part two permit, which was accompanied by a May 20, 1994 Part Two Plan Examination Report. This report listed 27 items to be addressed, which included a requirement that shop drawings were to be reviewed before any tenant permits would be issued, and that a single ply ballasted roof membrane, which has a dead load of 10 psf (0.48 kPa) for the stone alone, as specified on drawing A5, would not be permitted since the open web steel joists were only designed for a total dead load of approximately 18 psf (0.86 kPa). The total dead load for the components indicated by Pinelli was about 25 psf (1.20 kPa). The permit issued on or about August 23, 1994 was conditional on confirming loading in accordance with item number seven of the said Plan Examination Report.

21. Construction of the structure commenced shortly thereafter.

22. Pinelli and PESL submitted to the city an unsealed progress inspection report dated September 1,1994, claiming that the seismic data notation in the aforementioned August 22, 1994 letter was a typing mistake that did not affect the design of the building and representing that the building was designed to Part Four, rather than Part Nine, and did not therefore require any design changes.

23. On or about November 3, 1994, the city received revised the as-built drawings RBA1A, A2, A3, RBA8 and RBA9 (hereinafter referred to as the "final drawings"), all of which were initialed and sealed by Pinelli.

24. Construction of the structure was substantially completed in early 1995, and the first tenant occupancy occurred in February 1995. At that time, Pinelli submitted to the city a progress inspection report bearing his seal and initials dated February 13,1995.

25. The aforementioned drawings prepared by Pinelli and PESL and, in most cases, bearing the seal and initials of Pinelli were deficient, unacceptable and contrary to reasonable professional engineering practice generally and as defined in the *Guideline for Structural Engineering Work in Buildings*, prepared by the Association of Professional Engineers of Ontario, in that:

a) inadequate attention was paid to the design of the foundations. The structural notes indicated an allowable soil bearing pressure of 150 kPa (3000 psf). This was in line with the findings of Peter McGlone, P.Eng., who provided geotechnical information to the previous owner. The isolated footings, however, were initially designed for 400 kPa

(8000 psf). When challenged by the city, Pinelli redesigned the footings and increased their size to meet Code requirements. The original size of the footing detail D7 on drawing A6 was 900 mm x 900 mm x 300 mm and was overstressed by about 8O per cent. Following the city's expression of concern, Pinelli and PESL changed the size of the footing to 1200 mm x 1200 mm x 350 mm. As well, the indicated elevation of the bearing of certain new footings would place them in the backfill resulting from the construction of the original footings. The relationship between soil bearing elevations of the old and new parallel walls was not considered;

b) no details of the sections for the prestressed concrete core slabs were given. The live load was not specified, and there was no reference to the standards to which the slabs were to be designed and manufactured, nor was it stated who was to design the slabs;

c) the magnitude of the design snow load was incorrectly shown on the initial submission of drawing A8 and also in the calculations received by the city on November 30, 1993. The snow load on drawing A8 was indicated as "29 PFS." In the calculations, the snow load was given as 30.9 psf (1.48 kPa), but the snow load actually used was 50 psf (2.40 kPa), together with a dead load of 10 psf (0.48 kPa). While the snow load of 50 psf is acceptable, the dead load is not acceptable and is about 50% less than the Code requirement. The specified snow load for a roof of this type in Niagara Falls is 38 psf or 1.82 kPa. The snow load was removed from the second submission of the drawing and replaced by a note requiring the manufacturer of the steel roof joists to undertake the design, but without stating the applicable design loads and standards;

d) the composite load on the roof was calculated by combining its snow and rain components. The ground snow load was incorrectly modified by the basic roof snow load factor, Cb, applicable to Part Nine construction (Housing and Small Buildings), and not by the factor for Part Four construction. Pinelli indicates values of 0.6 and 0.5, without stating which was actually used. The correct factor for Cb is 0.8;

e) on the initial submission of drawing A3, double angle lintels 100 mm x 150 mm x 10 mm, with a 175 mm x 10 mm bottom plate, spanned 2800 mm in load-bearing walls that supported the roof. The same sized lintel spanned 3400 mm where it did not support the roof. The use of angle lintels for spans of this magnitude was questionable. On the later version of drawingA3, the lintels were changed from angles to a wide flange section, W250 x 49, which more than doubled the capacity and made them meet Code requirements;

f) on the initial submission of drawing A7, a steel beam was introduced into the length of the firewall and cantilevered beyond the building face to support the cantilevered top of the firewall. The beam had no fire protection. Section EE/A7/A3 showed the beam cutting through the wall reinforcing, which was 2-15M vertical @ 1.2 m, thus rendering the reinforcing ineffective. The bars welded to the flanges of the beam would not satisfactorily splice the wall verticals;

g) Pinelli and PESL initially failed to review the joist shop drawings prepared and sealed by G.L. Hodgson, P.Eng. After being pressed by the city, Pinelli eventually initialed and sealed the drawings. Engineers usually apply a shop drawing review stamp for this purpose. As well, the shop drawings indicated that the joist depth was greater by 100 mm than the depth allowed on the drawing sections. Further, the shop drawing package did not include the shop drawings for non-standard joists, nor were there shop drawings for steel beams and columns;

h) no anchor bolts were shown to anchor the joists to the masonry supports;

i) tie joists were needed but not shown;

j) the steel roof deck must act as a roof diaphragm, but this aspect of the design was not addressed;

k) on the second submission of drawing A3, the perimeter walls on the west, south and east consisted of 1200-mm wide type WI masonry wall sections alternating with glazing. The masonry reinforcing was shown as 2-15M @ 1200 mm c/ c in the wall and one 15M bar in each end core. Steel lintels were shown in the perimeter wall bearing on each end of the masonry. The lintels sat on base plates that were 1000 mm below the top of the wall. Either the reinforcement would have been stopped at the bottom of the lintel, hence not reaching the support point at the top of the wall, or it would have been pulled back at least 300 mm from the end of the masonry section.

Since both situations were questionable, details should have been provided to clarify the condition. When the pier width was reduced from 1200 mm to 1000 mm on the as-built drawing, the problem was exacerbated;

l) on the final submission of drawing A3, tubular HSS steel columns 203 x 203, were shown in the perimeter wall at the southwest corner of the building. There was no information as to the height of the columns, nor the manner in which their tops were stabilized;

m) the perimeter wall sections were reinforced masonry construction and must be considered engineered masonry under CAN3-S304-M48, the applicable standard. There was no reference to the standard or its requirements for material

testing. The tops of the wall sections must be braced by the cantilevered roof joists that they support, but no positive anchorage of the joists to the masonry was shown;

n) on the initial submission of drawing A3, three two-hour rated firewalls were shown. When the need for these walls was questioned by the city, all of the ratings and two of the walls were removed on the later version of the drawing. However, as initially submitted, the walls were used as bearing walls for the roof structure, and no provision was made for the prevention of their collapse during a fire as is required by clause 3.1.10.1 of the OBC, nor was provision made for a parapet as required by clause 3.1.10.4;

o) some exit doors were incorrectly shown as swinging inwards, contrary to the Code;

p) the first set of drawings indicated site drainage with catch basins, storm drain lines and a sanitary connection. Drawing A2 indicated a sanitary line for future connections, but there was no invert indicated on these lines. There was no heating information indicated. While drawing A8 indicated the roof drains with the storm lines sized, the total package of drainage information was diagrammatic and incomplete without specifications. While drawing A1 indicated a pad mount transformer, the only electrical content was found on drawing A8, where a proposed electrical schematic indicated the incoming service lines, but this was inadequate for either building permit or construction purposes;

q) drawing A1 in the second set of drawings indicated a revision to the sanitary leaving point, and a 600 amp note was added to the pad mount transformer, with no additional information. While the mechanical plan from drawing A2 had been moved to drawing A8, and a leaving sanitary invert from the building was added, the electrical information remained virtually unchanged and inadequate; and

r) while a manhole was added at the property line for the sanitary system in the final set of drawings, there were no changes to drawing A8. The final set of drawings included an additional drawing A9 indicating lighting. While this drawing indicated fixtures, no fixture selection was indicated, nor was there any indication of circuiting or installation standards or sizing on the electrical distribution system. And, while two notes were added indicating the capacity of a gas furnace, there was no indication of heating within the building proper, nor was there any indication of water distribution. Furthermore, the final set of drawings were extremely schematic in nature and were inadequate for construction purposes and for most building permit purposes.

26. Furthermore, the two submissions of ASHRAE 90.1 calculations dated December 9, 1993, and March 3, 1994 were deficient, unacceptable and contrary to reasonable professional engineering practice in that:

a) the December 9, 1993 calculations contained a large number of errors, inconsistencies and omissions, and were generally unacceptable; and

b) the March 3, 1994 calculations were based on drawings that were no longer applicable to the project, and with respect to which the glass factor was assumed to be Double Low 'E' glass, whereas there was no indication that this type of glass was installed, and the projection factor was incorrect.

27. In summary, Pinelli and PESL:

a) stamped drawings that contained Building Code violations, design deficiencies, omissions and conflicting information;

b) stamped drawings that were inadequate for the purpose of building permit review or for construction;

c) stamped drawings that contained incorrect architectural information and that may have affected public safety;

d) did not retain an architect prior to issuing drawings for permit application, contrary to the Building Code;

e) did not respond in a timely fashion when asked by the city to correct the deficiencies that the city had identified on the building permit drawings;

f) relied on the city to advise how to correct deficiencies that were identified by the city;

g) declined to review the structural shop drawings, contrary to the ***Guideline for Professional Engineers Providing Structural Engineering Work in Buildings***, or did not ensure that this responsibility was undertaken by another engineer; and

h) did not address the design of engineered masonry that was used on the project, nor specify the onsite inspection and testing that would have been needed.

28. Furthermore, PESL failed to supervise properly and adequately Pinelli's conduct with respect to the said project.

29. By reason of the facts aforesaid, it is alleged that Pinelli is guilty of incompetence as defined in Section 29(3)(a) and Pinelli and PESL are guilty of professional misconduct as defined in Section 20(2)(b) of the Professional Engineers Act, R.S.O. 1990, Chapter P.28.

30. "Incompetence" is defined in Section 28(3)(a) as:

"The member or holder has displayed in his or her professional responsibilities a lack of knowledge, skill or judgment or disregard for the welfare of the public of a nature or to an extent that demonstrates the member or holder is unfit to carry out the responsibilities of a professional engineer."

31. The sections of Regulation 941 made under the said Act and relevant to this mis-

conduct are:

Section 72(2)(a): Negligence as defined at Section 72(1): "In this section, 'negligence' means an act or an omission in the carrying out of the work of a practitioner that constitutes a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances";

Section 72(2)(b): "failure to make reasonable provision for the safeguarding of life, health or property of a person who may be affected by the work for which the practitioner is responsible";

Section 72(2)(d): "failure to make reasonable provision for complying with applicable statutes, regulations, standards, codes, by-laws and rules in connection with work being undertaken by or under the responsibility of the practitioner";

Section 72(2)(e): "signing or sealing a final drawing, specification, plan, report or other document not actually prepared or checked by the practitioner";

Section 72(2)(g): "breach of the Act or Regulations, other than an action that is solely a breach of the Code of Ethics"; Section 72(2)(h): "undertaking work the practitioner is not competent to perform by virtue of the practitioner's training and experience";

Section 72(2)(j): "conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as disgraceful, dishonourable or unprofessional. "

APPENDIX "B" (Pelham Project)

It is alleged that Nunzio J. Pinelli, P. Eng., (hereinafter referred to as "Pinelli") is guilty of incompetence, and Pinelli and Pinelli Engineering Services Port Colborne Ltd. (hereinafter referred to as the "PESL") are guilty of professional misconduct, the particulars of which are as follows:

1. Pinelli was at all material times a member of the Association of Professional Engineers of Ontario.

2. PESL was at all material times the holder of a Certificate of Authorization to offer or provide to the public services within the practice of professional engineering. PESL was responsible for supervising the conduct of its employees and taking all reasonable steps to ensure that its employees, including Pinelli, carried on the practice of professional engineering in a proper and lawful manner. With respect to all or most of the services relevant to these proceedings, PESL carried on business under the name and style "Pinelli Engineering Services Ltd."

3. In or about September 1995, Chris Newson ("Newson"), the occupant of a single family dwelling located at 3 Parkdale Crescent in the Town of Pelham, Ontario, decided to add to the side of the existing single-storey dwelling a greenhouse solarium manufactured by Paul Boers, Greenhouses, which carried on business in St. Davids, Ontario.

4. The proposed greenhouse addition was eight ft. wide, 16 ft. long and about 10ft. high, and was to be attached to the rear of the dwelling. The structure of the greenhouse consisted of two-in. diameter frames set at four ft. centres and tied together by six 1.5-in. square purlins. The framing was to be clad with six-mm lexan on the roof and gable ends, and the frames, braced with one-in. tubing, were to be set into the ground with two-in. anchor posts three ft. long.

5. An Application for Permit, together with an unnumbered drawing of the dwelling and proposed greenhouse, was submitted to the Building Department of the Town of Pelham (the "town") on or about September 26, 1995.

6. Upon reviewing the drawing, Ernie Cronier ("Cronier"), director of building and enforcement services for the town, became concerned that the design appeared to be for an agricultural building,

notwithstanding the fact that it was being proposed for residential use, and about the fact that the design made no provision for footings or a foundation. Cronier therefore requested that certification from a professional engineer or architect be obtained to demonstrate compliance with the Ontario Building Code ("OBC") because:

a) the addition was proposed for residential use, with the result that the Canadian Farm Building Code did not apply; and

b) it was not readily apparent that the design conformed to the requirements of Part Nine, Housing and Small Buildings, of the OBC, with the result that the greenhouse addition would have to be designed in accordance with Part Four, Structural Design, of the OBC.

7. Cronier advised Newson of this requirement for certification, and Newson on or about November 3, 1995 submitted to the city's Building Department six pages of drawings, three of which were double--sided and three of which were single-sided. The six pages bore the seal and initials of N.J. Pinelli, P.Eng., dated October 31, 1995, and indicated sections and details under the title block of Paul Boers, Greenhouses.

8. The six pages of drawings bearing Pinelli's seal and initial were deficient, unacceptable, contrary to reasonable professional engineering practice and contrary to the requirements of the OBC, in that:

a) the drawings made no reference to the minimum snow load that is stipulated by Section 9.4.2.2(1) and Table 2.5.1A, column 12, of the

OBC as 1.66 kPa or 35 psf unfactored load in the Town of Pelham;
b) no foundations were shown, other than two-in. diameter pipes three ft. long, whereas accepted engineering practice, Sections 4.2.4.6, 9.12.2.1, 9.12.2.2(1) and Table 9.12.2.A of the OBC, required that footings be borne on undisturbed soil four ft. below the finished grade;
c) the minimum size (width) of footings was not shown, contrary to Section 9.15.3.3 of the OBC, nor was there any reference to Section 9.15.3.1 of the OBC, which permit the omission of footings under piers or monolithic concrete walls if the safe load bearing capacity of the soil or rock is not exceeded;
d) no specifications were provided for the structural material, nor for the cladding;
e) no details of the structural connections to the adjacent structure were provided;
f) the drawings did not comply with the OBC, and no explanation was provided for any deviation from the minimum requirements of the OBC.
9. In summary, Pinelli and PESL:
a) sealed drawings that were not in accordance with the requirements of the OBC;
b) sealed drawings that were not in accordance with general]y accepted engineering design practice;
c) sealed drawings without properly preparing or checking all of the details;
d) sealed drawings that were not suitable for building permit application purposes.
10. Furthermore, PESL failed to supervise properly and adequately Pinelli's conduct with respect to the said project.
11. By reason of the facts aforesaid, it is alleged that Pinelli is guilty of incompetence as defined in Section 28(3)(a) and Pinelli and PESL are guilty of professional misconduct as defined in Section 28(2)(b) of the Professional Engineers Act, R.S.O. 1990, Chapter P.28.
12. "Incompetence" is defined in Section 28(3)(a) as:
"The member or holder has displayed in his or her professional responsibilities a lack of knowledge, skill or judgment or disregard for the welfare of the public of a nature or to an extent that demonstrates the member or holder is unfit to carry out the responsibilities of a professional engineer."
13. The sections of Regulation 941 made under the said Act and relevant to this misconduct are:
Section 72(2)(a): negligence as defined at Section 72(1): "In this section, 'negligence' means an act or an omission in the carrying out of the work of a practitioner that constitutes a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances";
Section 72(2)(b): "failure to make reasonable provision for the safeguarding of life, health or property of a person who may be affected by the work for which the practitioner is responsible";
Section 72(2)(d): "failure to make reasonable provision for complying with applicable statutes, regulations, standards, codes, by-laws and rules in connection with work being undertaken by or under the responsibility of the practitioner";
Section 72(2)(e): "signing or sealing a final drawing, specification, plan, report or other document not actually prepared or checked by the practitioner";
Section 72(2)(g): "breach of the Act or regulations, other than an action that is solely a breach of the Code of Ethics"; Section 72(2)(h): "undertaking work the practitioner is not competent to perform by virtue of the practitioner's training and experience";
Section 72(2)(j): "conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as disgraceful, dishonourable or unprofessional. "

APPENDIX "C"
(Lock Three Museum Project)
It is alleged that Nuzio J. Pinelli, P. Eng., (hereinafter referred to as "Pinelli") is guilty of incompetence, and Pinelli and Pinelli Engineering Services Port Colborne Ltd. (hereinafter referred to as the "PESL") are guilty of professional misconduct, the particulars of which are as follows:
1. Pinelli was at all material times a member of the Association of Professional Engineers of Ontario.
2. PESL was at all material times the holder of a Certificate of Authorization to offer or provide to the public services within the practice of professional engineering. PESL was responsible for supervising the conduct of its employees and taking all reasonable steps to ensure that its employees, including Pinelli, carried on the practice of professional engineering in a proper and lawful manner. With respect to all or most of the services relevant to these proceedings, PESL carried on business under the name and style "Pinelli Engineering Services Ltd."
3. In or about September 1992, plans were under way to use for the operation of a restaurant available space in a building known as the Lock Three Museum, which was owned by the City of St. Catharines (the "city") and was on land owned by the St. Lawrence Seaway Authority. The restaurant was to be located on the second floor of this building, which was located at 1932 Government Road in St.

Catharines, Ontario.

4. The alteration plans for the restaurant included breaking out part of the existing exterior concrete block wall construction and installing steel lintels for new windows and steel railing window guards for the new and existing windows.

The existing exterior wall of the building was about 18 in. thick and consisted of double block with a 3.5-in. cavity.

5. On or about December 10, 1992, an application was made to the city for a building permit to make alterations to the building in question. This application was accompanied by drawing P1 dated September 16,1992, under the title block of PESL and bearing the seal and initials of Pinelli dated December 2, 1992.

6. The drawing contained general and structural steel notes, a railing detail for window guards for the new and existing windows and a building plan that called for the replacement of the existing glass panels, with four ft. wide insulated glass to match the existing glass height, and the rework of the masonry using type "S" mortar to accommodate the new window sizes. The plan also indicated three single steel lintel beams sized as W12 x 35 (W310 x 52), with a flange width of 6.5 in. and spans varying from nine ft., two in. to 13 ft., two in. A separate Detail "A" indicated the bearing condition of the steel lintel beams.

7. Upon reviewing the drawings, the city's Building Department had concerns about the design of the steel lintel beams and steel window guards. As a result, John Fisher ("Fisher"), the chief building official of the city, and Brian Morris, a representative of the city's Business Development department, met with Pinelli on the site on December 15, 1992. At that time, Fisher reviewed the location and design loading of the window guards with Pinelli, and requested that revised drawings of the guards be provided and that revised drawings of the guards be designed in accordance with Sections 4.1.10.1(f) and (2) of the Ontario Building Code ("OBC"). Fisher also reviewed the proposed new windows with Pinelli and requested that more details of the new window lintels be provided. In particular, Fisher expressed concern that the existing wall was about 18 in. thick and curved, whereas the lintels indicated by Pinelli were single beams 6.5 in. wide, straight and not wide enough to support an 18 in. thick wall. Fisher questioned whether a steel plate was required on the lintels and advised Pinelli that the permit application would not be processed until a revised drawing was received.

8. The city received no further communication from Pinelli concerning this project but did, on or about January 12, 1993, receive drawings with respect to the window alterations for the proposed restaurant. These drawings included drawings A-2 and A-3 dated December 16 and 22, 1992, respectively, bearing the seal and signature of J.T.K. Ha, P.Eng., dated January 11, 1993. These drawings correctly indicated the thickness of the existing wall and provided details of the window guards complying with the OBC. These drawings also indicated lintel details that comprised double steel W8 x 24 (W200 x 36) beams spanning about 13 ft., two in., as well as two pairs of double angles spanning about three ft., three in., all complete with a steel plate and curved as required, to support the existing wall.

9. Because the aforementioned drawing P1 sealed by Pinelli was used for the building permit application, Pinelli became the Engineer of Record for the project, but he did not at any time thereafter advise the city that this was no longer the case.

10. The aforementioned drawing P1 prepared by Pinelli and PESL and bearing the seal and initials of Pinelli was deficient, unacceptable, contrary to reasonable engineering practice and contrary to the requirements of the OBC, in that:

a) there was no reference for the design and construction to comply with the OBC;

b) no structural loads were shown for the steel window guards;

c) there was no indication of the wall thickness to be supported by the new lintels;

d) there was no detail of the existing wall conditions where the new windows were to be installed;

e) more generally, drawing P1 was misleading; inaccurate and incomplete and could not be relied upon for permit application nor for construction purposes.

11. In summary, Pinelli and PESL:

a) sealed a drawing that was misleading, inaccurate and incomplete;

b) sealed a drawing that was not in accordance with the requirements of the OBC;

c) sealed a drawing without properly checking all of the details onsite;

d) sealed a drawing that was not suitable for building permit application, nor for construction purposes;

e) failed to notify the city of the change in their status on the project.

12. Furthermore, PESL failed to supervise properly and adequately Pinelli's conduct with respect to the said project.

13. By reason of the facts aforesaid, it is alleged that Pinelli is guilty of incompetence as defined in Section 28(3)(a) and Pinelli and PESL are guilty of professional misconduct as defined in Section 28(2)(b) of the Professional Engineers Act, R.S.O. 1990, Chapter P.28.

14. "Incompetence" is defined in Section 28(3)(a) as:

"The member or holder has displayed in his or her professional responsibilities a lack of knowledge, skill or judgment or disregard for the welfare of the public of a nature or to an extent that demonstrates the member or holder is unfit to carry out the responsibilities of a professional engineer".

15. The sections of Regulation 941 made under the said Act and relevant to this misconduct are:

Section 72(2)(a): "negligence as defined at Section 72(1): In this section, 'negligence' means an act or an omission in the carrying out of the work of a practitioner that constitutes a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances";

Section 72(2)(b): "failure to make reasonable provision for the safeguarding of life, health or property of a person who may be affected by the work for which the practitioner is responsible";

Section 72(2)(d): "failure to make reasonable provision for complying with applicable statutes, regulations, standards, codes, bylaws and rules in connection with work being undertaken by or under the responsibility of the practitioner";

Section 72(2)(e): "signing or sealing a final drawing, specification, plan, report or other document not actually prepared or checked by the practitioner";

Section 72(2)(g): "breach of the Act or regulations, other than an action that is solely a breach of the Code of Ethics"; Section 72(2)(h): "undertaking work the practitioner is not competent to perform by virtue of the practitioner's training and experience";

Section 72(2)(j): "conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as disgraceful, dishonourable or unprofessional. "

Mr. Royce called Roger Pigeon as the association's first witness with respect to the Niagara Falls project. Mr. Pigeon is a senior plan examiner with the Niagara Falls Building Department and has been employed by the city since 1989. The committee found Mr. Pigeon to be a credible witness.

The drawings submitted with the Building Permit Application, the Permit Application and a brief containing communications between the city and Pinelli, and the subsequent drawings submitted by Pinelli were entered as exhibits through this witness.

Mr. Pigeon testified that he was involved in the administration of the project. His evidence was that the drawings submitted with the permit application were for construction purposes and were not marked preliminary in any way.

He testified that these drawings and the subsequent submissions were deficient to what he normally receives from a professional engineer, and that it was unusual for a project of this nature to undergo so many submission iterations.

He testified that the City of Niagara Falls had no engineers on staff who examine building permit applications, and the city relies heavily on a professional engineer's seal to attest to compliance with the Building Code.

He testified that Pinelli initially refused to review shop drawings.

He testified that the initial and second set of drawings submitted by Pinelli did not provide the design loading required. He testified that his major concerns were that the design loads for the buildings were not specified, and that the requirements of the Ontario Building Code were not met.

Joseph L. Merber, P.Eng., testified with respect to the mechanical and electrical drawings, after he was qualified by the panel as an expert in mechanical and electrical engineering. The panel found Mr. Merber to be a credible expert witness.

He testified that the electrical and mechanical drawings were inadequate for a Building Department submission. He further testified that the subsequent drawings submitted did not remedy the deficiencies in the original submission.

With respect to the ASHRAE calculation 90.1, he testified that the data Pinelli entered into the computer program did not correspond with the information shown on the plans, and if that information had been entered, the analysis would have failed.

His evidence supported findings of facts by the committee on paragraphs 24 (p), (q) and (r) and paragraph 25 of Appendix A.

He testified that the drawings were submitted for building permit purposes, and, that in his opinion, they were deficient and failed to meet a reasonable standard of practice of a professional engineer.

Merber testified that the impact of failing ASHRAE was both economic and environmental.

Edward Langford Mercer, P.Eng., was called by the association as an expert structural engineer and was so qualified by the panel, after considering his curriculum vitae. Mr. Mercer testified that Pinelli's work contained engineering errors, errors in professional judgment, and that the drawings submitted to the Niagara Falls Building Department lacked sufficient details for the purpose intended.

Based on the evidence of Mr. Mercer, the committee found that the facts in paragraphs 24 (a)-(o) and paragraph 26 (a, b, c, d, g and h) were

made out. Arising from the evidence of this expert, the committee had concerns with respect to the design loads, the footing design and the design of the lintel.

With respect to paragraph 26 (d) of Appendix A. he testified that Pinelli failed to recognize the need for an architect pursuant to the requirements of the Ontario Building Code.

A key theme of Mr. Mercer's evidence was that where an engineer is unable to determine the specific needs of a client, the engineer should err on the side of conservative design and/or identify these assumptions on the plans. Mercer testified in his examination in chief that Pinelli failed to meet reasonable engineering standards.

In summary, he stated that there were engineering errors and errors in engineering judgment. The errors included lack of detail in the roof beams, columns and the walls. He testified that the standard of care remains the same whether the building is small or large.

On cross-examination by Pinelli, Mercer admitted that he didn't do a calculation with respect to the steel lintel. However, he testified that, in his judgment, a reasonable engineer would not use angles in the specified conditions. He testified that good engineering judgment dictates that steel angles are not suitable for the spans and loading conditions found on this project.

He testified that Pinelli accepted responsibility for the open web steel joist shop drawings when he applied his seal to them without providing qualifying notes.

Mercer testified that design engineers review shop drawings for general compliance with the contract documents and intent of the design, rather than to take responsibility for the design.

He testified that it is standard practice to contact the geotechnical engineer of record when questions within his scope of work arise, rather than undertake work outside of ones area of expertise.

With respect to the Pelham project referred to in Appendix B to the Notice of Hearing, the association called Ernest Raymond Cronier, the chief building official for the Town of Pelham. Mr. Cronier has been a chief building official with the Town of Pelham since 1992.

The application for the permit for the greenhouse structure, the drawing for the greenhouse addition, the plan of survey, eight drawings stamped by Pinelli and the building permit subsequently issued were introduced through Mr. Cronier.

The panel found Mr. Cronier to be a credible witness. Mr. Cronier testified that he is not an engineer. While the structure did not need to be designed by an engineer, he testified that Pinelli sealed the drawings without limitation, and that he relied completely on the engineer's seal.

William Filer, P.Eng., was called as an expert by the association and gave evidence with respect to Pinelli's involvement in the Pelham project. The panel found Mr. Filer to be qualified as a structural engineering expert. He was also found to be a credible expert witness by the panel.

Mr. Filer gave evidence that the connections of the greenhouse to the existing structure were not provided in the drawings provided by Pinelli. He testified that:

- the drawings made no reference to the minimum snow load stipulated by the Ontario Building Code;
- no foundations were shown other than two-in. diameter pipes three ft. long, whereas accepted engineering practice and the Ontario Building Code required that footings be borne on undisturbed soil four ft. below the finished grade;
- the minimum size of footings was not shown contrary to the Ontario Building Code, nor was there any reference to Section 9.15.3.1 of the Ontario Building Code that would permit the omission of footings if the safe load bearing capacity of the soil or rock was not exceeded;
- no specifications were provided for the structural material, nor for the cladding;
- no details of the structural connections to the adjacent structure were provided, and the drawings did not comply with the Ontario Building Code; and
- no explanation was provided for any deviation from the minimum requirements of the Ontario Building Code.

Based on this evidence, the committee found that the summary of allegations made against Pinelli and PESL in paragraphs 9 (a) to (d) of Appendix B to the Notice of Hearing were made out. Mr. Filer testified that the drawings sealed by Pinelli did not meet the standard of a professional engineer.

With respect to the Lock Three Museum project referred to in Appendix C to the Notice of Hearing, the association called John Fisher, the chief building official for the City of St. Catharines since 1987. Mr. Fisher is a certified engineering technologist. The panel found Mr. Fisher to be a credible witness.

The building permit application for the Lock Three Museum, a set of drawings submitted with the permit application and a note to file were entered as exhibits through him. The scope of the drawings were two-fold: (1) to punch a hole to put windows in; and (2) window guards.

The evidence of Fisher and the drawings

establish that Pinelli applied his seal without limitation to a deficient drawing, which Fisher considered to be deficient.

William Filer reviewed the drawings and testified that they were deficient, unacceptable and contrary to reasonable engineering practice and contrary to the requirements of the Ontario Building Code in that:

(a) there was no reference for the design and construction to comply with the Ontario Building Code;

(b) no structural loads were shown for the steel window guards;

(c) there was no indication of the wall thickness, nor two-wall construction to be supported by the new lintels;

(d) there was no detail of the existing wall conditions where the new windows were to be installed;

(e) more generally, drawing P1 was misleading, inaccurate and incomplete, and could not be relied upon for permit application, nor for construction purposes.

Based on this evidence, the committee found that the summary of allegations made against Pinelli and PESL in paragraphs 11 (a, b, c and d) of Appendix C to the Notice of Hearing were made out. Filer testified that the drawings sealed by Pinelli did not meet the standard of a professional engineer.

Following the evidence of the witnesses called on behalf of the association with respect to the three projects referred to in Appendices A, B and C, Pinelli chose not to call witnesses in his defence. Pinelli gave evidence in his own defence with respect to his involvement in the Niagara Falls, Pelham and Lock Three projects. The committee generally did not find Pinelli's evidence to be credible.

With respect to the Niagara Falls project, Pinelli testified that he was not engaged for mechanical and electrical design, but he submitted unqualified mechanical and electrical drawings bearing his seal. He admitted that the drawings submitted were incomplete. The committee found that sealing the drawings suggested to the building officials that they were complete.

In his testimony, Pinelli indicated that he lacked the knowledge, skill and judgment required of an engineer undertaking geotechnical, structural and mechanical analysis and design.

Pinelli's evidence with respect to his load analysis was not sound. His evidence did nor explain or substantiate his choice of a soil bearing capacity for the foundation in excess of the geotechnical consultant's recommendation. His testimony attempted to explain that an architect was not required, which the committee found to demonstrate a lack of understanding of the requirements of the Ontario Building Code.

With respect to the ASHRAE/IES 90.1 calculations, he was unable to explain the errors in executing the software program, nor demonstrate an understanding of the impact this would have on the economics of the building and the environment. He testified that he did not refuse to review the joist design. The committee did not accept this evidence, as there were contemporaneous notes made by the building official recorded in the Building Department log.

Pinelli was unable to explain his contradictory testimony that there was insufficient information to design the masonry piers, yet he provided detailed construction information and sealed drawings of them.

With respect to the Lock Three Museum Project, Pinelli was unable to justify his selection of the lintel members and did not produce calculations that he advised the panel he had prepared.

On cross-examination, he demonstrated a lack of understanding of basic structural concepts. He made several references to additional drawings and calculations, but over the three-day hearing, did not produce them or satisfy the committee with respect to their existence.

In his examination in chief, he admitted that the ASHRAE/IES 90.1 calculation was premature. He testified with respect to the deficiencies in the drawings that it was unusual to show all loads on the drawings. He admitted to leaving out the anchor bolt on the trusses, which were important to provide lateral support. He admitted that while the roof was designed as a diaphragm, he failed to show on the drawings how it was manifested. He demonstrated on cross-examination that he failed to appreciate the significance of designing and detailing the roof as a diaphragm.

With respect to the Pelham project referred to in Appendix B, he testified that he didn't know that the greenhouse was going to be attached to the structure when the plans clearly indicated otherwise. He introduced specification sheet for the greenhouse and then admitted that they had no relationship to this project. This exhibit was entered as a specification.

In his evidence, Pinelli failed to adequately explain the design deficiencies, and state that he would provide his specifications but never did.

With respect to the Lock Three Museum project, Pinelli testified that he was engaged to prepare preliminary drawings, and when it became apparent to him that the scope of work was beyond his capabilities, he recommended that the owner retain an architect and another engineer. Nonetheless, he prepared an stamped the drawing that was, submitted with the permit application without applying notes to qualify or limit it. He further testified that he prepared this drawing for

cost estimation purposes. He further testified that his plans did not call for a two-wall system, which he admitted on cross-examination existed.

He also admitted that he didn't examine the file plans available at the city's Building Department or thoroughly inspect the building to ascertain its condition. He agreed under cross-examination that when a seal is applied to a drawing, the building is assumed to be ready for construction, unless otherwise indicated on the drawing. He admitted that it was proper practice to mark drawings as to their intended use.

During cross-examination, Pinelli gave evidence about his background and experience.

Pinelli testified in cross-examination that he qualified for licensure as a mechanical engineer, and that he acquired his structural and geotechnical knowledge through self-study. In cross-examination, Pinelli was unable to provide any explanation of how he verified his structural and geotechnical expertise.

He testified that he had done calculations for all beams in the Niagara Falls Plaza, but did not produce the calculations. In response to questioning by the committee, he stated that he had not taken structural courses related to this design, and he did not take steps to verify his self-study. When questioned about limit states design and, specifically, resistance and performance factors, the defendant could not relate to these terms.

On questioning by the committee, he demonstrated a lack of understanding of the ASHRAE/IES 90.1 standard in general and the program in particular and their significance.

In response to questions, he was unable to explain soil bearing capacity and basic geotechnical principles. He advised that he would do a nuclear test to determine soil bearing capacity, then later recanted, admitting that he did not know how to perform a nuclear test. He testified that he did very little electrical and mechanical work; however, he undertook the energy calculations and prepared and sealed the mechanical and electrical drawings for the Niagara Falls Plaza.

He testified that the Niagara Falls project was difficult because he did not know who the tenants were and, as a result, was trying to "hit a running target." He acknowledged that an engineer's seal is applied when safety aspects are complete. He admitted that he applied a seal on the Niagara Falls project, and that it was his practice to apply his seal to preliminary drawings without indicating on the drawings that they were preliminary.

He conceded that the drawing did not meet Ontario Building Code requirements, and testified that he used a rigid inspection system to rectify design errors uncovered in the field.

The committee did not accept this method of insuring the efficacy of the drawings. He agreed that engineers have final responsibility, and it is not the role of the building official to determine whether the drawings are deficient.

He was unable to explain how his long span steel angle lintel design on the Niagara Falls project ensured that fundamental strength and stability would be provided.

With respect to the Ontario Building Code, on questioning by the committee, Pinelli demonstrated a lack of understanding and an inability to interpret the Ontario Building Code as it relates to the requirements for an architect.

He also demonstrated a lack of understanding on soil bearing capacity, limit states design, snow loads and field review.

On the basis of the evidence given by the association's experts, the omissions made by Pinelli, and the responses given by him under cross examination and by questioning of the committee, the committee considered that with respect to the Niagara Falls and Lock Three projects, Pinelli demonstrated in his professional responsibilities a lack of knowledge, skill or judgment and, with respect to the three projects, that he carried out work that failed to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances.

Although the committee found that Pinelli's conduct was unprofessional, as a result of his lack of understanding of his shortcomings, they did not consider his conduct in the three projects to be disgraceful or dishonourable.

In summation, Mr. Royce stated that after three days of evidence, he believed that the committee understood the issues. He drew to the committee's attention that no independent experts had been called by Pinelli and submitted that the independent experts called by the association should be accepted over the defendant.

With respect to the commercial plaza (Niagara Falls project), he submitted that based on the evidence, the facts in paragraph 26, Appendix A were made out. He submitted further that all of the facts in paragraph 9 of Appendix B and paragraph 11 of Appendix C were made out.

With respect to the charge of incompetence, he stated that there were cumulative acts and omissions on the Niagara Falls project, and the additional charges set out in Appendices B and C demonstrated a pattern of substandard conduct.

In his summation, Mr. Pinelli stated that he had been practicing for 20 years. He admitted that there were some errors in the drawings, but vehemently denied the allegation of incompetence. He submitted that he had not taken on work beyond his

abilities. With respect to the commercial plaza (Niagara Falls project), he stated that this was a very difficult project. If there were three other projects similar to that, he stated that he would hang his head in shame.

He stated that he had appeared before the Discipline Committee and answered the questions put to him to the best of his ability.

After considering the evidence and exhibits filed, the committee found Pinelli and PESL guilty of professional misconduct as defined in Section 28(2)(b) and Pinelli guilty of incompetence as defined in Section 28(3)(a) of the Professional Engineers Act, R.S.O. 1990, Chapter P. 28, the particulars of which are as follows:

APPENDIX "A"
(Niagara Falls Project)

Section 28(3)(a): "The member or holder has displayed in his or her professional responsibilities a lack of knowledge, skill or judgment or disregard for the welfare of the public of a nature or to an extent that demonstrates the member or holder is unfit to carry out the responsibilities of a professional engineer. "
Finding: Guilty

Section 72(2) (a): Negligence as defined in Section 72(1): "In this section, 'negligence' means an act or an omission in the carrying out the work of a practitioner that constitutes a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances."
Finding: Guilty

Section 72(2)(b): "failure to make reasonable provision for the safeguarding of life, health or property of a person who may be affected by the work for which the practitioner is responsible: "
Finding: Guilty

Section 72(2)(d): "failure to make reasonable provisions for complying with applicable statutes, regulations, standards, codes, by-laws and rules in connection with work being undertaken by or under the responsibility of the practitioner. "
Finding: Guilty

Section 72(2)(e): "signing or sealing a final drawing, specification, plan, report, or other document not actually prepared or checked by the practitioner. "
Finding: Not guilty

Section 72(2)(g): "breach of the Act or Regulations, other than an action that is solely a breach of the Code of Ethics." Finding: Not guilty,

Section 72(2)(h): "undertaking work the practitioner is not competent to perform by virtue of the practitioner's training and experience."
Finding: Guilty

Section 72(2)(j): "conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as disgraceful, dishonourable or unprofessional. "
Finding: Not guilty of disgraceful or dishonourable conduct, but guilty of unprofessional conduct

APPENDIX "B"
(Pelham Greenhouse Project)

Section 28(3)(a): "The member or holder has displayed in his or her professional responsibilities a lack of knowledge, skill or judgment or disregard for the welfare of the public of a nature or to an extent that demonstrates the member or holder is unfit to carry out the responsibilities of a professional engineer. "
Finding: Not guilty

Section 72(2)(a): Negligence as defined in Section 72(1): "In this section, 'negligence' means an act or an omission in the carrying out the work of a practitioner that constitutes a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances."
Finding: Guilty

Section 72(2)(b): "failure to make reasonable provision for the safeguarding of life, health or property of a person who may be affected by the work for which the practitioner is responsible. "
Finding: Guilty

Section 72(2)(d): "failure to make reasonable provisions for complying with applicable statutes, regulations, standards, codes, by-laws and rules in connection with work being undertaken by or under the responsibility of the practitioner. "
Finding: Guilty

Section 72(2)(e): "signing or sealing a final drawing, specification, plan, report, or other document not actually prepared or checked by the practitioner. "
Finding: Not guilty

Section 72(2)(g): "breach of the Act or Regulations, other than an action that is solely a breach of the Code of Ethics." Finding: Not guilty

Section 72(2)(h): "undertaking work the practitioner is not competent to perform by virtue of the practitioner's training and experience."
Finding: Not guilty

Section 72(2)(j): "conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as disgraceful, dishonourable or unprofessional. "
Finding: Not guilty of disgraceful or dishonourable conduct, but guilty of unprofessional conduct

APPENDIX "C"
(Lock Three Project – St. Catherines)

Section 28(3)(a): "The member or holder has displayed in his or her professional responsibilities a lack of knowledge, skill or judgment or disregard for the welfare of the public of a nature or to an extent that demonstrates the member or holder is unfit to carry out the responsibilities of a professional engineer. "
Finding: Guilty

Section 72(2)(a):

Negligence as defined in Section 72(1): "In this section, 'negligence' means an act or an omission in the carrying out the work of a practitioner that constitutes a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances."
Finding: Guilty
Section 72(2)(b): "failure to make reasonable provision for the safeguarding of life, health or property of a person who may be affected by the work for which the practitioner is responsible."
Finding: Guilty
Section 72(2)(d): "failure to make reasonable provisions for complying with applicable statutes, regulations, standards, codes, by-laws and rules in connection with work being undertaken by or under the responsibility of the practitioner. "
Finding: Guilty
Section 72(2)(e): "signing or sealing a final drawing, specification, plan, report, or other document not actually prepared or checked by the practitioner."
Finding: Not guilty
Section 72(2)(g): "breach of the Act or Regulations, other than an action that is solely a breach of the Code of Ethics." Finding: Not guilty
Section 72(2)(h): "undertaking work the practitioner is not competent to perform by virtue of the practitioner's training and experience."
Finding: Guilty
Section 72(2)(j): "conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as disgraceful, dishonourable or unprofessional. "
Finding: Not guilty of disgraceful or dishonourable conduct, but guilty of unprofessional conduct
The committee heard submissions with respect to penalty from Mr. Royce and Mr. Pinelli. Mr. Royce advised the panel that having found Pinelli guilty of incompetence, they must have considered that his knowledge in his area of practice was deficient.
He submitted that the association was seeking revocation and costs of $10,000 toward the cost of the hearing. As an alternative, he advised that the association was seeking:
1. A lengthy suspension of one year to 18 months.
2. Costs of $2,000 for the half-day delay occasioned by Mr. Pinelli at the commencement of the hearing.
3. Pinelli is to cooperate fully in a practice review of representative projects to be carried out at the expense of Pinelli and Pinelli Engineering. Pinelli and Pinelli Engineering are to remain suspended until the practice review has been completed in a manner satisfactory to the Registrar and paid for by Pinelli and Pinelli Engineering,
notwithstanding the prior completion of any other suspension imposed upon them. The results of the practice review may initiate additional investigation(s) by the association for the purpose of additional complaints. Further, any unsafe situations that are found will be reported to the appropriate municipal officials.
4. Pinelli is to attend and pass courses found in the CCPE Syllabus as ordered by the Discipline Committee.
5. Pinelli is to write and pass the Professional Practice Examination (PPE) by January 1, 1999, otherwise suspended until passed.
6. Prior to the end of this suspension and before reinstatement, Pinelli is to prepare and submit a quality control program satisfactory to the Registrar by June 1, 1998.
Mr. Pinelli submitted that the penalty proposed was too severe. He admitted that there were obviously deficiencies in his drawings. He stated that his practice is largely confined to Part Nine buildings. He submitted that a three-to-five-month suspension would be more appropriate and that he would: be content for his Certificate of Authorization to be withdrawn; commit not to undertake work that requires his stamp; and write any examinations required by the association. He was agreeable to the practice review of representative projects, and stated to the committee that he would be content to submit a quality control program. He apologized for the half-day delay at the commencement of the hearing, and submitted that any costs imposed should be at the lower end of the range submitted by the association.
By virtue of the power vested in it by Section 28 of the Professional Engineers Act, the committee ordered that:
1. Pinelli's licence to practise engineering be suspended pending completion of the following within 24 months:
a) three Part B (elective) examinations from the CCPE syllabus for each area of practice of Pinelli's choice and the association's Professional Practice Examination (PPE), and that Pinelli's licence subsequently be limited to the area(s) deemed qualified by the Registrar;
b) a practice review of representative projects designed by Pinelli, at Pinelli's expense, to the satisfaction of this committee; and
c) pay costs to the association in the sum of $2,000 within 12 months.
2. That upon satisfactory completion of the terms set out above, the licence be reinstated subject to any limitations and conditions imposed.
3. Suspend the Certificate of Authorization of PESL, pending completion of the following within 24 months:
a) practice review of representative projects to be carried out at the expense of PESL to the satisfaction of this committee; and
b) submit a quality assurance plan satisfactory to the Regis-

trar.
4. That upon satisfactory completion of the terms set out above, the Certificate of Authorization be reinstated subject to any limitations and conditions imposed.
5. Pinelli return his seal to the association within 10 days.
6. That in the event that these terms are not completed within 24 months, the Certificate of Authorization and licence be revoked.
7. The Decision and Reasons be published with names in the *Gazette*, in PEO's official publication.

Dated at Toronto this 3rd day of February 1998

David Brezer, PEng. (Chair)
For and on behalf of the committee:
Boris Boyko, PEng.
Cameran Mirza, PEng.
Nick Volf, PEng. John Wilkes, PEng.

Discipline Committee of the Association of Professional Engineers of Ontario In the matter of a complaint regarding the conduct of

A member of the Association of Professional Engineers of Ontario and a holder of a Certificate Of Authorization.

Decisions and Reasons-Stipulated Order

The Complaints Committee, in accordance with section 24 of the Professional Engineers Act, referred the above noted matter to the Discipline Committee by way of a Stipulated Order.

Mr. Tom G. Smith, PEng., a member of the Discipline Committee of the Association of Professional Engineers of Ontario (APEO), met on March 16, 1998 with the complainants, the independent structural engineering expert that APEO engaged on this matter, and the member and the member's legal counsel, at the offices of the APEO located at 25 Sheppard Avenue West, Toronto, Ontario, to consider allegations of professional misconduct in the above noted matter.

The complaint alleged that in July 1993, the complainants signed a conditional offer to purchase a house located on Russell Road, Hammond, Ontario. The offer was conditional on a satisfactory house inspection report by a professional engineer. They engaged the member and the holder to inspect the house and advise them of the existing condition of the house. In a one-page August 1993 report sealed and signed by the member, the member advised that the foundation was stable and structurally sound, that hairline cracks should be filled with an epoxy sealant, and that the house was structurally adequate. The complainants purchased the house and, after several months, it was found that water was leaking into the basement through a large crack in the foundation wall, which the member did not identify in the one-page report.

The complainants obtained another inspection report by another professional engineer. His report identified major foundation and framing deficiencies not identified in the member's report. The complainants initiated legal proceedings against the member for repair costs, and a settlement was reached with the member's insurer.

The complaint alleged that the member and the holder:

(1) prepared and sealed a report that contained errors, omissions and deficiencies;

(2) prepared and sealed a report that failed to adequately protect the safety, welfare and property of the complainants;

(3) demonstrated an inadequate level of knowledge with respect to conducting home inspections;

(4) provided a report that was not in accordance with standards published by the Ontario Association of Home Inspectors;

(5) on this matter, failed to provide the appropriate level of supervision for the services being offered by the holder;

(6) failed to respond in a proper and timely manner to the complainants' concerns; and,

(7) failed to demonstrate an understanding of his professional responsibilities and obligations as a professional engineer offering professional engineering services to the public.

An independent structural engineer's review of the documents noted that:

(1) the member's report expressed an opinion on the structural adequacy of the building, and was sealed and signed by the member. In addition, the member's invoice described the work as "professional services rendered." The services performed by the member constituted the practice of professional engineering;

(2) the report was quite brief and rather broad in its conclusion. It was not surprising that the complainants assumed that the report indicated no serious problems with the building. The report was probably misleading in that it gave a favourable impression of the building, when serious deficiencies appeared to exist;

(3) the member's brief report was inadequate and did not properly describe the existing conditions at the time of the inspection. This type of report should be treated with more care than the member appeared to have shown, as it was obvious that the complainants relied on the report's conclusions in arriving at a buying decision;

(4) reports on work of

this nature should describe not only the results of the investigation, but also what the investigation was expected to accomplish. It was also important to describe what was seen and what was not seen;
(5) the report made no mention of the intent of the work and was confusing in that the report reference was to "foundation inspection," whereas numbered paragraph 2 of the report referred to "the house";
(6) one could reasonably infer that all foundation walls were inspected, yet it appeared that at least some walls were covered with insulation at the time of the member's inspection;

(7) the member's time, listed as 2.5 hours, seemed excessive for the preparation of a brief one-page report; and
(8) the second engineer's report described very different conditions than reported by the member. The member's report did not mention any of the deficiencies reported in the second engineer's report.

The complainants, in the meeting with the Discipline Committee member, noted that:

(1) their real estate agent had recommended the member to them as a professional engineer who would conduct a house inspection. They contacted the member and understood that the member was to inspect the foundation and carry out a visual inspection of the house structure. A meeting date and time was arranged. There was no written and signed agreement for the member's services;
(2) on the day of the meeting, one of the complainants arrived 20 minutes late because of traffic, to find that the inspection had been completed by another person from the holder, not the member. This person advised the complainant that the foundation seemed to be in good condition, and that he had taken some photographs. The complainant believed that the person was a professional engineer, and it was not until the member sent his report and invoice that the person was identified as a senior technologist with the holder;
(3) the complainants contacted the member, who confirmed that the foundation was in good condition, that there were some hairline cracks that needed to be filled with epoxy, and that the member would provide a written report in a couple of days. The member's report was received a month later. There were no photographs included with the report;
(4) after moving into the house, they noticed that the main floor support beam beneath the kitchen sagged about five inches, and that the side of the garage was starting to buckle and the foundation appeared to be sinking. In the basement area around the sump pump, the foundation blocks were cracked and easily removable, and the foundation footing was collapsing. They contacted the member, who stated that he was not liable as he had used the terms "seems" and "appear" in the report;
(5) the following spring, water leaked into the basement during a spring thaw. They attempted to speak with the member, but he did not return any of their telephone calls or respond to their messages. They had never met the member and would not recognize the member;
(6) they contacted legal counsel regarding their situation, and were advised to obtain a second house inspection report. They arranged for another professional engineer to conduct an inspection of the house. His four-page report identified major foundation and framing deficiencies, which were not identified in the member's report;
(7) the Styrofoam insulation on the basement wall was not glued in place, but was fitted between horizontal strapping and held in place by a single piece of vertical strapping, which was nailed to the other strapping. The Styrofoam insulation could easily have been removed by the holder's senior technologist to inspect the block foundation;
(8) repairs to the house have been made and included installation of weeping tiles, crushed stone and replacement of some blocks in the foundation. In addition, a jack post has been installed to support the central support beam;
(9) they believe that the member never visited the house site before they moved into the house, nor has any one from the holder returned following the initial visit to carry our further inspection. The vendor has advised them that no one had returned to the house following the initial holder's visit before the complainants moved into the house. They also believe that neither the member nor any personnel from the holder have visited the house site since they moved into the house and identified their concerns to the holder;
(10) they were not able to carry out any decoration to the house for about 18 months, while their legal counsel attempted to settle this matter with the member's legal counsel. They finally agreed to a settlement, which was less than the cost to totally repair the house as a matter of getting on with their life. For example, a carport has now been substituted for the two-car garage; and
(11) they would not

have purchased the house if the quality of the member's report was similar to that of the second engineer's report.

The independent structural engineering expert, in the meeting with the Discipline Committee member, noted that:

(1) The member sealed his report and signed the report with the designation "P.Eng." The member also provided an opinion on the structural adequacy of the house. As a result, the member was providing professional engineering services;

(2) a report with an engineer's seal and signed with the designation "P.Eng." would suggest that the work carried out is of a higher standard;

(3) there appeared to be a lack of clarity as to whether the scope of the member's inspection extended to include an inspection of the garage foundation and the house structure. Notwithstanding this, the member's report stated that the house was structurally adequate;

(4) the report was quite brief and could lead one to believe that there were no serious problems with the building, when it appeared that serious deficiencies existed;

(5) the member's report was deficient in that it did not state the purpose of the report, did not describe the existing conditions and did not identify the scope of the work, what work was carried out, what work was not carried out, what was inspected, how the work was carried out and any limitation in the work carried out;

(6) in addition to the above, a typical inspection report should include photographs of the site and any deficiencies. The exterior photographs of the house in the second engineer's report clearly showed the garage foundation leaning outward, and a dip/rise in the roofline, which would indicate potential structural problems. These should have been easily seen during a site visit to the house;

(7) an engineer should certainly inform the client if he/she uses a technologist to carry out a structural inspection instead of carrying out the inspection personally;

(8) if an engineer sees inspection photographs showing cracks in the foundation wall or floor, he should visit the site to assess the situation further. Presumably, the member did see the photographs taken by the senior technologist; however, it appears that the member did not visit the house to carry out further inspection;

(9) once foundation problems were identified to the member, it would have been in the member's best interest (reputation, professional liability) to work with the clients to resolve the problems, and hence avoid litigation;

(10) if exposure of the foundation wall during an inspection cannot easily be done, an engineer should request that the client expose the foundation and return to carry out the inspection at that time.

An alternative would be to identify in the report that the foundation could not be exposed for inspection;

(11) the foundation area around the sump pump should be a priority area requiring inspection, as this area has a greater potential for water accumulation and damages;

(12) clarification was required of the invoiced hours for the senior technologist and the member, as the report was brief and did not include any photographs, sketches, explanation; and,

(13) there are no written standards for house inspections, only guidelines. In this context, the second engineer's report should be what the independent structural engineering expert would expect to see in a house inspection report.

The member, in providing an explanation, stated that:

(1) his engineering experience and practice were related to municipal, residential land development, environmental, structural, soils (engineered fill) and transportation. House inspection was not a large part of his business, although the member is called upon to check concrete foundations that may be affected by a localized concrete problem;

(2) he uses other third-party engineering firms in those situations that are outside his area of expertise;

(3) he and the senior technologist had previously completed a house foundation inspection for the complainants' real estate agent, and he was nor aware of any problems with that report;

(4) he agreed to carry out the house inspection for the complainants. Because of an important meeting with another client, he could not attend the house site to carry out the inspection. Instead, he asked the senior technologist to do so;

(5) at the same time, he had a telephone call from the complainants' real estate agent about the structural adequacy of the house. He stated that he knew the area well, regularly driving by the house on the way to a nearby restaurant. He believed that there were no cracks in the foundation and that the roof line was satisfactory;

(6) he reviewed the senior technologist's inspection notes, and wrote the inspection report based on these

notes and his knowledge of the area and the house. In retrospect, the member placed too much trust in the senior technologist and his notes, and should have personally visited the house to carry out an inspection;

(7) his August 1993 report was not a typical inspection report issued from the holder, but reflected the real estate agent's request for a "rush" inspection report. He stated that the member believed at that time that the report was for the use of the real estate agent only;

(8) when he saw the photographs that the senior technologist had taken, he immediately realized that there were some problems. The photographs indicated that: the foundation cracks were more than hairline cracks; concrete blocks in the area of the garage foundation were recessed or pushed-out; and there were cracks in the concrete basement floor. It would also appear from the photographs that only one section of Styrofoam was removed during the senior technologist's inspection;

(9) he acknowledged that, knowing the nature of the cracks in the foundation, the recommendation to fill the foundation cracks with epoxy was inappropriate. However, that recommendation was based on the senior technologist's notes;

cracks in the foundation, the recommendation to fill the foundation cracks with epoxy was inappropriate. However, that recommendation was based on the senior technologist's notes;

(10) despite his realizing that there were foundation problems, he did not contact either the real estate agent or the complainants, and offered no explanation for his inaction. In addition, he acknowledged that he did not attempt to address the situation even after the complainants contacted him regarding the February 1994 leak into the basement;

(11) when the complainants commenced legal proceedings against him, his professional liability insurance carrier advised him not to comment or interact with the complainants as any comments that he made may prejudice the case, resulting in voiding his insurance. They also advised that they would handle the matter. This contributed to the 18 months before a settlement was reached with the complainants;

(12) he expressed regrets for not being fully aware of the extent of the complainants' house problems;

(13) since this incident, he has revised the holder's inspection reports to now include: the scope of work; the work included/ excluded; substantiation of report findings (photographs, documents, etc.); sealing of the report by two professional engineers, where appropriate; and third-party engineering reports for areas outside of the holder's expertise;

(14) he will reschedule meetings, if there is a conflict and he cannot attend a site to carry out an inspection. He no longer sends replacement personnel;

(15) the two hours charged by the senior technologist may have included his travel time to and from the house, and his time included his discussions with the real estate agent; and

(16) the senior technologist left the employ of the holder in 1995.

The Discipline Committee member considered the available information and the explanations of all parries, and found the following information to be significant:

(1) The member's August 1993 inspection report was inadequate in that it did not identify the scope of work or provide supporting documents for the findings;

(2) the member did not have complete and documented information for writing his inspection report, as he did not visit the house site;

(3) the member did not visit the house site or contact the clients even after having seen the photographs taken by the senior technologist that indicated some problems;

(4) the member was cooperative and forthcoming in providing an explanation; and

(5) the member acknowledged the inappropriateness of his actions on this matter and the inadequacy of the inspection reporting. As a result, he has initiated a number of improvements in the holder's inspection reporting, including: identifying the scope of work and work included/ excluded; substantiation of report findings; sealing of the report by two professional engineers, where appropriate; and third-parry engineering reports for areas outside of the holder's expertise.

Based upon the foregoing, the parties have agreed that there was a basis for concluding that there was professional misconduct, and have agreed to the following:

That the member is guilty of professional misconduct, in that the member breached sections of Ontario Regulation 941, specifically:

Section 72 (2)(a): Negligence, in that the member acted in a manner and made omissions in the carrying out of work that constructed a fail-

ure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances. The member prepared, sealed and signed an engineering report on the subject foundation without ensuring that an adequate investigation had been carried out and documented. In addition, the member provided comments on the structural adequacy of the subject house based on inadequate factual information. Furthermore, the member failed to take corrective action with the clients when it became evident that his engineering report was inaccurate.

Section 72 (2)(j): Conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as unprofessional. The member's conduct in this matter was not deemed to be disgraceful or dishonourable.

That the holder is guilty of professional misconduct, in that the holder breached sections of Ontario Regulation 941, specifically:

Section 72 (2)(a): Negligence, in that the holder acted in a manner and made omissions in the carrying out of work that constituted a failure to maintain the standards that a reasonable and prudent practitioner would maintain in the circumstances. The holder failed to have in place, appropriate policies, standards and procedures to ensure that their engineering report was based on an adequate and documented investigation, and factual information.

Section 72 (2)(j): Conduct or an act relevant to the practice of professional engineering that, having regard to all the circumstances, would reasonably be regarded by the engineering profession as unprofessional. The holder's conduct in this matter was not deemed to be disgraceful or dishonourable.

The following Order has been offered by the Discipline Committee member and has been agreed to by the parties:

1. That the licence of the member and the Certificate of Authorization for the holder be suspended for a period of three months.

2. That the imposition of the suspension be suspended provided that the following terms and conditions are complied with within a period of 12 months of this order:

(a) the member attend and pass the Professional Practice Examination (PPE);

(b) the member file copies of three residential foundation reports on subjects similar to this matter that are acceptable to the Registrar;

3. that the matter be published in full in the official journal of the association without reference to names, but with dates and location.

Dated this 28th day of March 1998

Tom Smith, P.Eng. (Chair)