IN THE MATTER OF THE *PROFESSIONAL GOVERNANCE ACT*
S.B.C. 2018, CHAPTER 47

and

IN THE MATTER OF KENNETH PAUL KAPUSNIAK, P.ENG.

ENGINEERS AND GEOSCIENTISTS BC FILE NO. T18-010

CONSENT ORDER

Background

1. On February 28, 2022, the Association of Professional Engineers and Geoscientists of the Province of British Columbia, doing business as Engineers and Geoscientists BC, issued a Citation to Kenneth Paul Kapusniak, P.Eng., pursuant to section 66(1) of the *Professional Governance Act*, S.B.C. 2018, c. 47 (the "*PGA*").

2. In 2014 and 2015, Mr. Kapusniak was an engineer at an engineering firm specializing in precast concrete engineering (the "Design Firm"). A principal engineer and Vice President of the Design Firm (the "Principal Engineer") won a bid to design two precast concrete parking structures located at the [redacted], Campbell River, BC ("Project I") and [redacted], Courtenay BC ("Project II", collectively with Project I, the "Projects").

3. The Principal Engineer was the lead designer and the lead liaison with the contractor building the Projects. Mr. Kapusniak was involved in preparing aspects of the Project I and Project II precast concrete designs. As the only registered professional engineer in British Columbia at the Design Firm at the time, Mr. Kapusniak was asked to and did sign and seal the precast concrete design for Project I (the "Project I Drawings") as well as the precast concrete design for Project II (the "Project II Drawings", collectively with the Project I Drawings, the "Project Drawings").

4. Engineers and Geoscientists BC and Mr. Kapusniak now wish to resolve this matter by way of a Consent Order pursuant to section 73(2) of the *PGA* in order to avoid the need for a disciplinary hearing.

Legislation

5. On February 5, 2021, the *Engineers and Geoscientists Act*, R.S.B.C. 1996, c. 116 (the "*EGA*") was repealed and replaced by the *PGA.*

6. The conduct in question occurred when the *EGA* was in force. As a result, Engineers and Geoscientists BC has considered Mr. Kapusniak's conduct pursuant to the *EGA* and the Bylaws and Code of Ethics under the *EGA.* While Mr. Kapusniak's conduct is considered under the *EGA*, pursuant to sections 35(2) and 36(1)(c) of the *Interpretation Act,* R.S.B.C 1996, c. 238, this matter proceeds procedurally under the *PGA.*

Admissions

7. Mr. Kapusniak admits that he demonstrated unprofessional conduct contrary to the *EGA* as the Project I Drawings signed and sealed by Mr. Kapusniak did not comply with the 2012 British Columbia Building Code ("2012 BCBC"), including CAN/CSA A23.3-04 Design of Concrete Structures and its updates as incorporated into the 2012 BCBC, in particular:

    a. The load bearing spandrel beams for Project I, as depicted in the Project I Drawings, did not meet the strength requirements of the 2012 BCBC.

    b. The precast concrete double tees for Project I, as depicted in the Project I Drawings, did not meet the strength requirements of the 2012 BCBC as the flexural/normal force demand-to-capacity ratios for the roof double tees exceeded the 100% limit.

    c. The concrete column corbel connections supporting the floor and roof beams for Project I, as depicted in the Project I Drawings, did not comply with the 2012 BCBC.

    d. The rectangular steel reinforcing bars on load bearing spandrels for Project I, as depicted in the Project I Drawings, did not comply with the 2012 BCBC with respect to anchorage of torsion reinforcements for concrete spandrel beams subject to torsion as:

        i. The reinforcing bars were detailed with 90 degree hooks rather than 135 degree hooks as required for anchorage of torsion reinforcement; and,

ii. The Project I Drawings do not indicate any other details or reinforcing to prevent the concrete surrounding the bar anchorage from spalling.

e. The spandrel design at the floor and the roof level spandrels for Project I, as depicted in the Project I Drawings, did not comply with the 2012 BCBC with respect to flexural crack control for deep beams.

f. The roof loads on the precast concrete elements for Project I, as depicted in the Project I Drawings, did not comply with the 2012 BCBC as they did not include the full extent of the snow drift loading.

g. The structural system for Project I as depicted in the Project I Drawings did not provide the required strength to resist seismic forces and was not in compliance with the 2012 BCBC, including in particular inadequate member strength, connection strength and lack of a complete and sufficient load path to transfer required seismic loads to the foundation in several elements.

h. The Project I design as depicted in the Project I Drawings included various precast concrete litewall connections, shear wall connections, diaphragm connections to shear walls, diaphragm connections to litewalls, diaphragm connections to stair walls, stairwell foundation connections to CIP and stairwell panel-to-panel connections which were not in compliance with the 2012 BCBC.

8. Mr. Kapusniak admits that he demonstrated unprofessional conduct contrary to the *EGA* as the Project II drawings signed and sealed by Mr. Kapusniak did not comply with the 2012 BCBC, including CAN/CSA A23.3-04 Design of Concrete Structures and its updates as incorporated into the 2012 BCBC, in particular:

a. The load bearing spandrel beams for Project II, as depicted in the Project II Drawings, did not meeting the strength requirements of the 2012 BCBC.

b. The concrete column corbel connections supporting the floor and roof beams for Project II, as depicted in the Project II Drawings, did not comply with the 2012 BCBC due to insufficient steel reinforcement.

c. The rectangular steel reinforcing bars on load bearing spandrels for Project II, as depicted in the Project II Drawings, did not comply with the 2012 BCBC with respect to anchorage of torsion reinforcements for concrete spandrel beams subject to torsion as:

i. The reinforcing bars were detailed with 90-degree hooks rather than 135 degree hooks as required for anchorage of torsion reinforcement; and,

ii. The Project II Drawings do not indicate any other details or reinforcing to prevent the concrete surrounding the bar anchorage from spalling.

d. The spandrel design at the floor and the roof level spandrels for Project II, as depicted in the Project II Drawings, did not comply with the 2012 BCBC with respect to flexural crack control for deep beams.

e. The roof loads on the precast concrete elements for Project II, as depicted in the Project II Drawings, did not comply with the 2012 BCBC as they did not include the full extent of the snow drift loading.

f. The structural system for Project II as depicted in the Project II Drawings did not provide the required strength to resist seismic forces and was not in compliance with the 2012 BCBC, including in particular inadequate member strength, connection strength and lack of a complete and sufficient load path to transfer required seismic loads to the foundation in several elements.

g. The Project II design as depicted in the Project II Drawings included various precast concrete litewall connections, shear wall connections, diaphragm connections to shear walls, diaphragm connections to litewalls, diaphragm connections to stair walls, stairwell foundation connections to CIP and stairwell panel to panel connections which were not in compliance with the 2012 BCBC.

9. Mr. Kapusniak admits that he demonstrated unprofessional conduct contrary to the *EGA* as the Project Drawings signed and sealed by Mr. Kapusniak did not align with the design calculations and analysis for the Projects (the "Project Design Analysis") as demonstrated by the following discrepancies between the Project Design Analysis and the Project Drawings, in particular:

a. the Project Design Analysis is based on shorter spandrel lengths than those depicted in the Project Drawings;

b. the Project Design Analysis is based on rectangular spandrel cross sections when the Project Drawings depicted "L" shaped spandrels;

c. the Project Design Analysis indicate reinforcing bars in the spandrel beams in greater quantities and at different locations than were depicted in the Project Drawings; and

d. the Project Design Analysis was incorrectly based on bottom-loaded spandrel beams using top loading of the spandrel beam, neglecting the effects of bottom loading of beams compared to top loading beam and not considering the maximum shear and torsion effects of a bottom-loaded spandrel.

10. Mr. Kapusniak admits that he demonstrated unprofessional conduct contrary to the *EGA* by giving assurances that the design of the structural components for the Projects he was responsible for substantially complied with the 2012 BCBC in circumstances where the designs did not so comply, including by signing and sealing Schedule S-B Letters of Assurance in respect of each of the Projects.

11. Mr. Kapusniak admits that he did not comply with Bylaw 14(b)(2) of the now repealed bylaws of Engineers and Geoscientists BC as amended October 2014 (the "Applicable Bylaws"), which were in force at the time the conduct occurred, as each of the Projects did not have regular, documented checks of their design.

12. Mr. Kapusniak admits that he did not comply with Bylaw 14(b)(4) of the Applicable Bylaws as he failed to ensure for each of the Projects that an independent review of the design for the Projects was completed and properly documented prior to construction.

Disposition

13. By consent, this Consent Order is made pursuant to section 73 of the *PGA*.

14. Mr. Kapusniak's registration with Engineers and Geoscientists BC is suspended for a period of six months commencing December 1, 2023 (the "Suspension Period").

15. Prior to the end of the Suspension Period Mr. Kapusniak must provide written notice to Engineers and Geoscientists BC that, at his own expense, he has completed and passed the Engineers and Geoscientists BC Professional Practice Examination.

16. Mr. Kapusniak must, at his own expense, complete and pass one of the listed courses offered by the Structural Engineers Association of British Columbia, within 12 months of the date of this Consent Order, or at the first opportunity one of the listed courses is offered following the effective date of this Consent Order:

    i. C12-Reinforced Concrete Design I;

    ii. E5-1 Seismic Design of Concrete Structures;

iii. E14 Design of Prestressed and Post-Tensioned Concrete Structures

or an equivalent course approved in writing by Engineers and Geoscientists BC.

17. Upon Mr. Kapusniak resuming practicing status with Engineers and Geoscientists BC, he agrees to undergo a practice review conducted by the Audit and Practice Review Committee, and pay the costs associated with the practice review, within six months of his reinstatement with Engineers and Geoscientists BC. The precise timing and process of which will be determined by the Audit and Practice Review Committee

18. Mr. Kapusniak will pay $18,000 to Engineers and Geoscientists BC as a contribution towards the legal and investigative costs incurred in this matter, due contemporaneously with the execution of this Consent Order.

19. In the event that Mr. Kapusniak fails to comply with any of the terms of this Consent Order, his registration with Engineers and Geoscientists BC will be or remain suspended until every default has been remedied in accordance with the terms of this Consent Order.

Consequences of the Consent Order

20. The full text of this Consent Order will be published on the website of Engineers and Geoscientists BC, and a summary will be published in print and electronic publications, including in public communications.

21. This Consent Order has the same force and effect as an Order made under section 75(6) of the *PGA*.

22. Mr. Kapusniak has received independent legal advice regarding the content of this Consent Order.

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23. Mr. Kapusniak and Engineers and Geoscientists BC agree that this Consent Order may be executed in counterparts and delivered as an electronic document.

This Consent Order is approved and accepted by Mr. Kapusniak and the members of the Discipline Resolution Panel this 23 day of November, 2023.

<original signed by>

Kenneth Paul Kapusniak, P.Eng.

Michelle McDonald

Name of Witness

<original signed by>

Signature of Witness

<original signed by>

Emily Cheung, P.Eng.
Member, Discipline Resolution Panel

<original signed by>

Mike Racich, DMD
Member, Discipline Resolution Panel

<original signed by>

Thomas Leung, P.Eng., Struct.Eng.
Member, Discipline Resolution Panel