

PEO Submission for the 2025 AGM – 26th April 2025

1. Title of Submission

The Manhattan Syndrome

The need for professional engineers to have agency in the content and interpretation of PEO's Code of Ethics.

2. Please briefly describe the issue, problem, risk or gap that this submission addresses.

The PEO's current Code of Ethics is either vague or uncommitted to plastic and other hazardous waste management and Carbon footprint/Global Warming. Also, due to recent advancements in Cyber security, AI and the armament and munitions industries, PEO engineers need the guard rails of a new and specific code of ethics. The proposed changes to the Code of Ethics will remove any ambiguity in terms of the above-mentioned issues. These changes will bring clarity to engineering work for which licenced engineers may use their engineering seal.

3. Please summarize the action that you are requesting from Council and how it will address the issue, problem, risk or gap stated above.

Preamble to the proposed AGM motion

The following topics, not necessarily a complete list, are offered for consideration with justifications:

a) Artificial Intelligence (AI)

Considerable advances in AI have been made. It is an all-pervasive technology that can intrude into most aspects of our daily lives. Deep Learning in AI is fuelled by digitised neural networks. This forms the basis of Large Language Models (LLMs). LLMs power up Chatbots such as ChatGPT4. Engineers who use Chatbots in their work should be aware that the LLMs that Chatbots rely on can be contaminated with biased information and incorrect data. This could result in incorrect answers. An even bigger concern is when AI is used to write software. The use of Chatbots in engineering design should be allowed with reservations that require that the results to be independently checked.

A serious concern, based on the same reason given above, is the use of AI in the software of autonomous vehicles in highway traffic, drones and commercial aircraft. AI is also seen to be used by cyber criminals to infiltrate, banks, utilities and other critical infrastructure

b) Diversity, Equity and Inclusion (DEI)

DEI support is the hallmark of Canadian values. This also includes support for female engineers and engineers with disabilities in the workplace. DEI issues have come to the forefront since the US Federal administration has removed its support for DEI initiatives. Since the US is Canada's and Ontario's largest trading partner, it is likely that many Ontario based engineers could be employed on contract in the US. It should be made clear that regardless of

where a PEO engineer works, he/she/they are expected to conform to Canadian/Ontario standards and values on this issue in the workplace

b) Greenhouse Gas (GHG) Emission and Global Warming

PEO engineers should make every effort to reduce their “Carbon Footprint.” This could be done by using low carbon emitting vehicles, energy conservation and working on products that are low in carbon emissions. Securing job opportunities and investing in Canada/Ontario’s renewable energy industry is highly recommended.

c) Environmental Pollution and Waste Management

In pollution and waste generation there are two areas of concern:

i) Plastic Pollution in the Great Lakes and St Lawrence Seaway

Plastic pollution, in particular microplastics, pose a major health hazard to the residents in the Great Lakes region. In Lake Ontario about 7 million particles per square kilometre have been recorded. The size of each particle is less than five millimetres. As a result, Lake Ontario fish have been contaminated and what’s more disturbing, for many years, human breast milk in residents of Ontario has also been found to be contaminated with microplastics. Accordingly, PEO engineers should take steps to reduce or eliminate where possible the use of plastic in their businesses and manufacturing processes. Audited environmentally sound recycling processes are recommended.

ii) Mine Tailings

Canada has one of the world’s largest mining industries. But according to the United Nations Environment Programme (UNEP), Canada has more mine tailings spills than most other countries in the world. Canada is listed as the world’s second largest mining polluter. In Canada, including Ontario, the mining industry has a dismal record of contaminating First Nations and Indigenously owned land and waterways, which often pollute drinking water supplies in remote communities.

PEO engineers working in the mining industry should take proactive steps to protect native communities as part of the design of dams and mines they plan to build. Fair business practices should be implemented if they plan to lease or buy land from native communities.

d) Engineers Working in the Armament and Munitions Industry

It is not unethical to work for the Canadian Armament and Munitions industry. In particular supplying weaponry to Canadian law enforcement and Canadian defence forces would be deemed ethically acceptable because of the nature of their work. The Canadian Arms manufacturing and defence related industry is small compared to the US and Europe where PEO engineers may also seek employment. In these locations weaponry designed and manufactured are considerably more lethal. These include missiles, armed drones and weapons of mass destruction that when deployed could result in significant civilian fatalities or collateral casualties. In these situations, PEO engineers should consider resigning from PEO before enlisting in these industries.

Proposed Motion for the 2025 PEO AGM

Motion proposed by: Prakash Bansod, P.Eng.

Seconded by: Zeljko Sikic, P.Eng.

“This submission proposes that the PEO Council set up a Code of Ethics committee that examines the PEO’s current Code of Ethics and consider whether it needs to be updated due to changes in technology and recent geopolitics. A list of topics is offered in the preamble for the Committee’s consideration. The Code of Ethics should make its recommendations in a report to the PEO Council by the end of 2025. Moreover, the Code of Ethics should be considered as work in progress and should be updated in subsequent years, at a frequency decided by the council.”

4. Please cite and briefly summarize any research that supports the proposed action.

Professionals, of any discipline, not just engineers, are often faced with difficult executive orders, which compromises their own morality. If they don’t have an institutional Code of Ethics that gives them clear guidance, their decisions will be made in a state of mind that’s been compromised since they could be torn between following management’s direction or losing their job. This ethically degraded and compromised decision-making process is called the **Manhattan Syndrome**.

Here are more examples of how the Manhattan Syndrome has wrecked businesses and created widespread havoc.

1) A large Canadian engineering company was caught bribing an overseas customer to get a contract. What’s more the Canadian government made things worse by trying to protect this political contribution paying entity. The Prime Minister lost trust and credibility, and his public approval and party’s ratings continued to decline until he was replaced.

2) A German car manufacturer deliberately modified its vehicle’s emission control software so as to deceive the emission testing system. They too were caught cheating and had to pay billions of dollars in fines and lost a lot of business.

3) An American commercial aircraft manufacturer modified an existing design to make it more competitive. The software that controlled the stability and control of the new model was faulty and resulted in two crashes and the death of almost three hundred passengers. There is evidence to believe that the software was not properly tested and the engineers of the company who raised concerns were disregarded.

4) In the financial sector, the worst scandal in the twenty-first century, was the subprime mortgage debacle. Here several well know financial institutions tried to capitalise on the misfortune of clients who were defaulting on their mortgage payments by, repackaging these deficits as derivative investments and selling them to other clients. In 2008 when the system collapsed many well-known banks and insurance companies went bankrupt. This financial disaster triggered recession worldwide,

5) A well-known international pharmaceutical company developed and marketed an opioid based pain killing drug. They failed to inform physicians and their patients that the product was addictive and made efforts to conceal this deception. Several thousand people in Europe and North America, who got addicted to the drug, died of overdose. The subsequent lawsuits and fines bankrupted the company.

The above examples show entities, although disparate in product or service offering, had a hierarchical structure where bottom rung of the organization dutifully produced and delivered the product or service without questioning the ethical integrity of what they were doing. Presumably their ethical guidelines did not emphasize the “do no harm” aspect of business.

The lessons learned here is that all businesses should have a meaningful Code of Ethics chapter in their constitution. The language in this chapter should be clear and should cover most aspects of the entities business and relationships to the public, employees, vendors and customers they serve. **Awareness of the Manhattan Syndrome becomes the voice in engineers’ heads! This is their conscience!**

5. As applicable please describe how the proposed action will contribute to serving and protecting the public interest as it pertains to the regulation of professional engineering and the engineering profession.

Once the proposed Code of Ethics committee is set up, they will work towards developing additions to the existing code of ethics for topics proposed but not limited to those listed in the preamble. The public interest as it is related to practicing engineers will be protected as follows:

i) Software Engineers must be alerted to the malicious use of AI in money making scams that have been known to deceive senior citizens and steal their life savings. AI based cyber-attacks can threaten national security by infiltrating the IT infrastructures of large corporations, utilities, banks and the Government.

ii) DEI issues are not negotiable. Their implementation in the Ontario/Canadian engineering environment ensures that every one’s interests are cared for by fostering a fair, merit based working environment.

iii) GHG emissions are everyone’s responsibility due to its impact on Global warming. However, in the design, production, maintenance of GHG vehicles and machinery, PEO engineers have under their control the source of GHG production. They have a responsibility to the general public that they control items that meet regulated environmental standards. Alternatively, PEO engineers could be encouraged to work in industries that offer alternative products that do not produce GHG emissions. For production of energy, employment in the solar array, wind energy generation, hydroelectric power generation industries and small modular nuclear reactors construction should be encouraged

v) PEO Engineers serve the public interest when the nature of their work involves the responsible disposal of plastic waste that do untold damage to North American sources of fresh water. In the mining industry, PEO Engineers must heed Federal and Provincial regulations regarding the safe disposal of mine tailings.

vi) It is recognised that establishing a Code of Ethics for PEO engineers who work in the armament and munitions industry is difficult. However, based on recent conflicts in Europe and the Middle East, the public good can be served by avoiding employment or any form of engagement in the

design, production and transport of weapons of mass destruction that result in a disproportionate number of civilian casualties often referred to as “collateral damage.”

6. Please identify any legal considerations (e.g. the need for changes to the statute, regulation, by-laws etc.) that may affect Council’s ability to implement the proposed action.

The proposed motion will **not** make changes to the statutes, regulations and by-laws of PEO. The motion only requests the PEO council to set up a committee to study the existing Code of Ethics. They could propose changes, if required based on the topics presented in the preamble, or any consideration they come up with independently. These changes will be contained in a report to the PEO Council before the 2026 PEO AGM.

7. Please identify any considerations that are relevant to the timing (or urgency) of the proposed action.

The original motion at the 2024 AGM did not receive a majority vote. However, in 2025, the proposed renewed request for a review of PEO’s Code of Ethics by a committee is both urgent and timely for the following reasons:

a) The US administration has recently removed its support for DEI issues. Since the US is Canada’s largest trading partner, it is likely that PEO engineers could work for US corporations that have US Government contracts. Since support for DEI is a non-negotiable core Canadian value, it is imperative that PEO engineers maintain their support for DEI, as PEO engineers, regardless of where they work.

b) Since the 2024 PEO AGM, more research was done on the Code of Ethics. This is enshrined in an understanding of the Manhattan Syndrome and its relevance for an urgent need to upgrade the PEO’s Code of Ethics.

8. Please provide any other information that you feel will assist members of the AGM and Council in understanding your submission, in particular your proposed action.


The motivation for upgrading the PEO’s Code of Ethics is adequately covered in previous sections of this submission, hence no further information is provided.

9. Please list any attachments to this document.

No attachments included in this submission.

Member #1 (name/signature):

Prakash Bansod

A handwritten signature in black ink. The first letter 'P' is large and enclosed in a circle. The rest of the name 'Bansod' is written in a cursive, flowing style.

Member #2 (name/signature):

Zeljko Sikic

A handwritten signature in black ink. The name 'Zeljko' is written in a cursive style with a small 'v' above the 'j'. The name 'Sikic' is written in a similar cursive style.

Date: 12th April 2025