



Terms of Reference

Guideline for Preparing As-built and Record Documents (July 2018)

OBJECTIVES

The Guideline for Preparing As-built and Record Documents Subcommittee is directed by the Professional Standards Committee to investigate the legal, ethical and technical requirements for preparing as built and record drawings and documents for recently completed or existing structures, facilities, or other constructed works. The subcommittee shall develop criteria for best practices for professional engineers undertaking this work and prepare a guideline describing these best practices for use by professional engineers and others.

The intent of this guideline is to provide guidance to practitioners when preparing As-built and Record documents.

BACKGROUND

Clients or regulatory authorities often call upon professional engineers to prepare As-built or Record Drawings of engineering works. For instance, an industrial client anticipating the completion of a major facility would demand Record Drawings, which requires sealing by a professional engineer. However, at the time of the client's demand, professional engineers have not been provided with sufficient time and resources to observe construction in order to prepare and seal these Record Drawings.

In a different context, the Ontario Architects Association (OAA), its members often acting as a prime consultant, defines As-built and Record Drawings differently than PEO, resulting in clients requesting engineers to provide Record Drawings that do not align with OAA requirements. This difference in definition of Record Drawings between OAA and PEO is often confusing for all parties involved.

Professional engineers often have to produce documentation, particularly drawings, that reflect the actual conditions of the work. The subcommittee should be aware of and provide practices consistent with the definitions for such documentation given in the Guideline for Use of the Professional Engineer's Seal:

As-built drawing is documentation created by or based solely on information provided by a third party that reflects the installed, constructed, or commissioned conditions of a device, machine, equipment, apparatus, structure, system, or other outcome of an engineering project. Since the engineer has not verified that the information is complete or accurate, as-built drawings must not be sealed (see Record drawing).

Record drawing is a document created to accurately reflect as-constructed, as-built, or as-fabricated conditions and that has been sealed by a professional engineer after verifying that the document is accurate. They are usually retained to meet business or regulatory requirements.

Whenever undertaking projects of this kind, especially those requiring the professional engineer to seal Record Drawings of completed engineering works, professional engineers should be aware of the legal burdens that they may be assuming. They should be warned of their proper role and instructed to not assume obligations beyond those necessary to meet the requirements of the legislation or for the contract for which they are being paid. The guideline should clearly identify the legal and ethical responsibilities of professional engineers undertaking this work.

The subcommittee should consider the professional engineer's responsibility in situations where elements of the work, such as reinforcing steel in concrete, concealed beams and columns, or buried foundations, cannot be checked with or without the use of specialized equipment and techniques. Inspection after construction of sub-surface infrastructure such as intakes, outfalls, sewers, and buried utilities is usually expensive and occasionally impossible. The guideline should recommend best practices for dealing with such situations. The guideline should also discuss best practices for engineers relying on testing and other services provided by third-party contractors.

MANDATE (Specific Tasks)

This subcommittee, with the assistance of a legal advisor, is expected to obtain and provide information that will aid engineers to perform their engineering role as reviewers of completed projects in accordance with the *Professional Engineers Act and Regulation 941*. Subtasks that the subcommittee should consider as useful to this process are:

- a) identify criteria for establishing the purpose, intent, and limitations of a review of completed works by professional engineers.
- b) identify and analyze the regulatory, legal and ethical requirements for professional engineer review of completed projects, especially those designed by other engineers.
- c) develop criteria for ensuring that review procedures meet the requirements of the *Professional Engineers Act* and other legislation.
- d) consult with providers of professional liability insurance to obtain their opinions on defining terminology and specifying roles of professional engineers.
- e) prepare practice guideline.

MEMBERSHIP

The subcommittee should be comprised of 3-5 members including 1-2 representatives of organizations such as government regulatory bodies and private owners that often request practitioners to check as-built conditions. Practitioners should be from a variety of sectors including building construction, highway construction, utilities and industrial process industries.

DELIVERABLES

The Subcommittee will present the completed guideline to the Professional Standards Committee no later than December 2018.

Meeting Schedule: At the discretion of Chair
Completion Date: December 2018