



GUIDE TO THE STANDARD FOR DIRECT SUPERVISION

VERSION 2.0
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**ENGINEERS &
GEOSCIENTISTS**
BRITISH COLUMBIA

TABLE OF CONTENTS

PREFACE	ii
ABBREVIATIONS	iii
DEFINITIONS	iv
VERSION HISTORY	vi
1.0 INTRODUCTION	1
1.1 OVERVIEW	1
1.2 PURPOSE OF THIS GUIDE	1
1.3 ROLE OF ENGINEERS AND GEOSCIENTISTS BC	2
1.4 SCOPE	2
2.0 REGULATORY FRAMEWORK	5
3.0 STANDARDS FOR PRACTICE	7
3.1 WHAT IS THE REQUIREMENT WHEN DELEGATING WORK	7
3.2 HOW IS ACTIVE INVOLVEMENT DEMONSTRATED	7
3.3 HOW IS ADEQUATE SUPERVISION OF FIELD REVIEWS DEMONSTRATED	8
3.4 HOW IS RESPONSIBILITY FOR ENGINEERING AND GEOSCIENCE DECISIONS DEMONSTRATED	9
3.5 HOW IS THE APPROPRIATE DEGREE OF DIRECT SUPERVISION DEMONSTRATED	10
3.6 HOW IS DIRECT SUPERVISION DEMONSTRATED	12
3.7 WHAT ARE EXAMPLES OF INADEQUATE DIRECT SUPERVISION	12
3.8 RESOURCES FOR MANAGING DIRECT SUPERVISION	14
4.0 REFERENCES AND RELATED DOCUMENTS	15

PREFACE

This *Guide to the Standard for Direct Supervision* (the “Guide”) was developed by Engineers and Geoscientists BC to explain the standards of practice, conduct, and competence for Professional Registrants related to the Direct Supervision of Subordinates in Regulated Practice.

This current revision was undertaken to provide clarity in guidance to Professional Registrants, in accordance with the scheme and requirements of the *Professional Governance Act* and Engineers and Geoscientists BC’s Bylaws.

This document outlines the appropriate standards of practice, conduct, and competence to be followed at the time it was prepared. However, this is a living document that is to be revised and updated as required in the future, to reflect the developing state of practice.

ABBREVIATIONS

ABBREVIATION	TERM
BC	British Columbia
EIT	Engineer-in-Training
GIT	Geoscientist-in-Training
<i>PGA</i>	<i>Professional Governance Act</i>

DEFINITIONS

The following definitions are specific to this Guide. These words and terms are capitalized throughout the document.

TERM	DEFINITION
<i>Act</i>	The <i>Professional Governance Act</i> , S.B.C. 2018, c. 47.
Authenticate, Authenticating (see also Manually Authenticating and Digitally Authenticating)	The act of a Professional Registrant Manually Authenticating or Digitally Authenticating a Document.
Bylaws	The Bylaws of Engineers and Geoscientists BC made under the <i>Act</i> .
Delegated (and derivatives)	A Subordinate being directed to undertake certain work or decisions related to the Regulated Practice on behalf of a Professional Registrant who takes professional responsibility for the work of the Subordinate.
Digitally Authenticating	A Professional Registrant applying all of the following to a Document: (a) the Professional Registrant’s Digital Seal; (b) a digital image of the Professional Registrant’s signature; (c) a digital image of the date of authentication; (d) the Professional Registrant’s Digital Certificate.
Direct Supervision (and derivatives)	The responsibility for the control and conduct of the activities, work, or decisions related to the Regulated Practice that have been Delegated to a Subordinate.
Document(s)	Includes any physical or electronic Record, including but not limited to a report, certificate, memo, specification, drawing, map, or plan, that conveys a design, direction, estimate, calculation, opinion, interpretation, observation, model, or simulation that relates to the Regulated Practice.
Documentation	See the definition for “Record”.
Engineers and Geoscientists BC	The Association of Professional Engineers and Geoscientists of the Province of British Columbia, also operating as Engineers and Geoscientists BC.
Firm	As defined in the <i>Act</i> : “(a) a legal entity or combination of legal entities engaged in providing services in respect of a Regulated Practice, or (b) a ministry or agency of the government that the Lieutenant Governor in Council may prescribe by regulation, but does not include a legal entity or combination of legal entities that may be exempted from this <i>Act</i> by regulation of the Lieutenant Governor in Council.”

TERM	DEFINITION
Guide	A guide to a program or regulatory topic, published by Engineers and Geoscientists BC. These include Guides to quality management standards that in accordance with the <i>Act</i> and Bylaws define professional obligations related to specific processes and explain the minimum standards of practice, conduct, and competence expected from Professional Registrants and Firms.
Manually Authenticating	A Professional Registrant applying all of the following to a Document: (a) the Professional Registrant’s Manual Seal; (b) the Professional Registrant’s handwritten signature; and (c) the date of authentication.
Professional Registrant	A registrant of Engineers and Geoscientists BC who is registered in one of the following categories of registrants: (a) professional engineer; (b) professional geoscientist; (c) professional licensee engineering; (d) professional licensee geoscience; (e) life member prior to 1998; (f) honorary life member.
Record (Documentation)	Any Document that is evidence of Regulated Practice activities, events, or transactions, or is evidence that a Professional Registrant has met their professional and contractual obligations.
Regulated Practice	As defined in the <i>Act</i> and the <i>Regulation</i> , the carrying on of a profession by a registrant of a regulatory body, which for the purposes of this Guide means the practice of professional engineering or the practice of professional geoscience.
<i>Regulation</i>	The <i>Engineers and Geoscientists Regulation</i> , OIC 2021/37.
Reserved Practice	As defined in the <i>Act</i> and the <i>Regulation</i> , a Regulated Practice for which the right to practice is reserved for registrants of a regulatory body.
Subordinate	Any individual who engages in the Regulated Practice under the Direct Supervision of a Professional Registrant.

VERSION HISTORY

VERSION NUMBER	PUBLISHED DATE	DESCRIPTION OF CHANGES
2.0	February 17, 2021	Updated the content and terminology to conform with the <i>Professional Governance Act</i> and updated Bylaws; changed the main title to “Guide to the Standard for Direct Supervision”; changed the document category from “quality management guidelines” to “quality management guides.”
1.3	January 9, 2018	Updated format to align with new Engineers and Geoscientists BC brand; minor editorial corrections.
1.2	October 7, 2013	Minor editorial corrections.
1.1	February 25, 2013	Minor editorial corrections.
1.0	May 2012	Initial version.

1.0 INTRODUCTION

1.1 OVERVIEW

- 1.1.1 Engineers and Geoscientists BC is the regulatory and licensing body for the engineering and geoscience professions in British Columbia (BC). To protect the public, Engineers and Geoscientists BC establishes, monitors, and enforces standards for the qualification and practice of Professional Registrants.
- 1.1.2 Engineers and Geoscientists BC provides practice resources to Professional Registrants to assist them in meeting their professional and ethical obligations under the *Act* and Bylaws. One category of these practice resources is Guides to quality management standards, which explain the standards of practice, conduct, and competence for quality management in professional activities.
- 1.1.3 This *Guide to the Standard for Direct Supervision* explains the standards of practice, conduct, and competence for Professional Registrants related to the Delegation of professional engineering or professional geoscience work to Subordinates. This Guide explains how Professional Registrants should uphold their professional obligations while Directly Supervising professional engineering or professional geoscience work performed by others.

- 1.1.4 This current revision was undertaken to provide clarity in guidance to Professional Registrants, in accordance with the scheme and requirements of the *Act* and the current Bylaws, and to assist Professional Registrants in upholding their professional obligations under the *Act* and Bylaws.

1.2 PURPOSE OF THIS GUIDE

- 1.2.1 This document explains the standards of practice, conduct, and competence expected of Professional Registrants Directly Supervising Subordinates engaged in Regulated Practice. This Guide provides a common approach applicable to all Professional Registrants who engage in Direct Supervision as part of their professional activities.
- 1.2.2 The specific objectives of this Guide are to:
1. describe the minimum standards for Direct Supervision of Subordinates;
 2. describe requirements when Delegating work to Subordinates;
 3. describe how Professional Registrants should be actively involved in Delegated work, and demonstrate that active involvement;
 4. describe how Professional Registrants should Directly Supervise field reviews that have been Delegated, and how that active involvement is demonstrated;

5. describe how Professional Registrants should take professional responsibility for professional engineering and professional geoscience decisions, and demonstrate that acceptance of professional responsibility;
6. describe appropriate degrees of Direct Supervision reflecting the nature of the specific Professional Registrant/Subordinate relationship; and
7. provide guidance on how to meet the quality management requirements under the *Act* and Bylaws when engaged in the Direct Supervision of Regulated Practice by Subordinates.

1.3 ROLE OF ENGINEERS AND GEOSCIENTISTS BC

- 1.3.1 This Guide and the current revision was developed under the direction of Engineers and Geoscientists BC's Council and, prior to publication, underwent final legal and editorial reviews. This Guide forms part of Engineers and Geoscientists BC's continuing commitment to establishing and monitoring the quality of professional services that Professional Registrants provide to their clients and to the public.
- 1.3.2 Direct Supervision is a critical requirement for assisting Professional Registrants in fulfilling their professional obligations, including holding paramount the safety, health, and welfare of the public. Direct Supervision ensures that professional engineering and professional geoscience work being performed by Subordinates meet all regulatory requirements.

1.4 SCOPE

- 1.4.1 Proper and appropriate Direct Supervision of Delegated work to Subordinates is fundamental to upholding the *Act* and Bylaws, including the Code of Ethics in Schedule A of the Bylaws, which require that all Professional Registrants hold paramount the safety, health, and welfare of the public, including the protection of the environment, and the promotion of health and safety within the workplace.
- 1.4.2 As required by the Bylaws, Professional Registrants must meet the requirement of Delegation and Direct Supervision in all areas of Regulated Practice where there is Delegation to Subordinates.
- 1.4.3 This Guide is intended to assist Professional Registrants in establishing and maintaining a documented quality management procedure for the Delegation of professional engineering or professional geoscience work to Subordinates working under their Direct Supervision that complies with the requirements of the *Act* and of the Bylaws by addressing:
 - basic and general guidance on Direct Supervision;
 - active involvement by the Professional Registrant;
 - demonstrating adequate Supervision of field reviews;
 - demonstrating responsibility for professional engineering or professional geoscience decisions; and
 - appropriate consideration of experience levels when Delegating professional tasks.

- 1.4.4 Professional licensees can only provide Direct Supervision of professional engineering or professional geoscience work or decisions that are within the authorized areas of practice of their licences.
- 1.4.5 To comply with the *Act*, Professional Registrants must ensure that Regulated Practice activities Delegated to Subordinates are carried out under their Direct Supervision.
- 1.4.6 Professional Registrants must only Directly Supervise activities of Regulated Practice for which they themselves have the experience and expertise to perform.
- 1.4.7 To comply with the Bylaws, Professional Registrants must have established, or have access through their Firm to, a documented quality management procedure for Delegating professional engineering or professional geoscience work or decisions to Subordinates.
- 1.4.8 A documented quality management procedure is one that has been thought out and reduced to writing in a suitable form. The process may be captured in a written procedure, process flowchart, checklists, forms, or other Documentation developed to suit the nature of the work undertaken by Professional Registrants.
- 1.4.9 These obligations apply to Professional Registrants acting in their professional capacities in all industries, when their work involves, among other things:
- ongoing professional engineering or professional geoscience work;
 - projects with a defined start and finish;
 - products and services requiring the application of professional engineering or professional geoscience;
- professional engineering or professional geoscience deliverables such as reports, drawings, specifications, digital artifacts, or other deliverables;
 - implementation or use of professional engineering or professional geoscience work as may be found in a manufacturing facility, technology company, operations, or utilities work;
 - construction or installation of professional engineering or professional geoscience work;
 - implementation or construction carried out by others;
 - implementation or construction being carried out by the Professional Registrant’s Firm’s own forces;
 - professional engineering or professional geoscience work carried out for use internally within the Professional Registrant’s Firm; and
 - professional engineering or professional geoscience work carried out for others.
- 1.4.10 Terminology used within an industry may not match the terminology used in this Guide. However, the obligations of Professional Registrants who Delegate work in all industries remain the same: to ensure that Delegation of professional engineering or professional geoscience work to a Subordinate meets the intent of the *Act*, Bylaws, and this Guide.
- 1.4.11 At times, some activities of Regulated Practice are carried out by others, subject only to a final review by the Professional Registrant who takes responsibility for the work. This level of Direct Supervision may not be sufficient to fulfill the Professional Registrant’s Direct Supervision obligations set out in the *Act* and Bylaws.

1.4.12 Where there has been limited prior involvement and the work involves the Professional Registrant Authenticating a Document, guidance is found in the Engineers and Geoscientists BC *Guide to the Standard for the Authentication of Documents* (Engineers and Geoscientists BC 2021).

2.0 REGULATORY FRAMEWORK

2.1 Section 54(2) of the *Act*, Prohibitions regarding reserved practice, states that:

“If a regulation under section 51 (1) (b) or 89 (2) (e) prescribes a service as a reserved practice that may only be provided by or under the supervision of a registrant of a particular regulatory body

- (a) a person other than a registrant of the regulatory body must not provide the service unless the person does so under the supervision of such a registrant” ...

2.2 Section 57(1) of the *Act*, Standards of conduct and competence, states that:

“Subject to subsections (2) and (3), the council of each regulatory body must make bylaws establishing the following:

...

- (c) aspects of practice that a registrant may or must not
 - (i) delegate to a non-registrant to provide or perform, or
 - (ii) authorize a non-registrant to provide or perform under the supervision of a registrant;”

...

2.3 Section 7.3.8 of the Bylaws, Standard for Delegation and Direct Supervision, states that:

- “(1) A Professional Registrant who will Delegate work or decisions related to the Regulated Practice to a Subordinate must establish, maintain, and follow documented procedures for Delegation in accordance with the requirements set out in this section of the Bylaws.
- (2) A Professional Registrant must ensure that work or decisions related to the Regulated Practice that are Delegated to a Subordinate are carried out under the Direct Supervision of the Professional Registrant.
- (3) A professional licensee engineering or professional licensee geoscience may only provide Direct Supervision of work or decisions related to the Regulated Practice that are within the authorized area of practice on their licence.”

2.4 Section 5.5.1, of the Bylaws, Engineer-in-Training, states that:

- “(5) An engineer-in-training must not engage in any area of the Reserved Practice except under the Direct Supervision of an individual who is legally entitled to independently practise in that area of the Reserved Practice, and that area of the Reserved Practice is of the type that may be provided under

supervision pursuant to section 54(2) of the PGA [Prohibitions regarding reserved practice].”

2.5 Section 5.5.2 [Geoscientist-in-Training] of the Bylaws states that:

“(5) A geoscientist-in-training must not engage in any area of the Reserved Practice except under the Direct Supervision of an individual who is legally entitled to independently practise in that area of the Reserved Practice, and that area of the Reserved Practice is of the type that may be provided under supervision pursuant to section 54(2) of the PGA [Prohibitions regarding reserved practice].

2.6 This Guide is intended to assist Professional Registrants in understanding the minimum standard of practice and in fulfilling their professional obligations in accordance with sections 5.5.1, 5.5.2, and 7.3.8 of the Bylaws. Failure to meet the requirements as set out in this Guide could be evidence of incompetence, negligence, unprofessional conduct, or breach of the Bylaws, and may lead to disciplinary proceedings by Engineers and Geoscientists BC.

3.0 STANDARDS FOR PRACTICE

3.1 WHAT IS THE REQUIREMENT WHEN DELEGATING WORK

- 3.1.1 In order to comply with the requirement for Direct Supervision when Delegating Regulated Practice activities, Professional Registrants must be aware of and be actively involved in the work of Subordinates before the Professional Registrants take professional responsibility for the work.
- 3.1.2 Professional Registrants should consider the elements in [section 3.8.1](#) of this Guide when determining whether they have satisfied their professional duties of Direct Supervision.

3.2 HOW IS ACTIVE INVOLVEMENT DEMONSTRATED

- 3.2.1 Professional Registrants involved in Direct Supervision should have knowledge of all stages of the projects that they supervise, and they must demonstrate active involvement and continued interaction and input over the course of the projects.
- 3.2.2 Professional Registrants have a professional obligation to direct and monitor the activities of Subordinates under their Direct Supervision. While direction may be satisfied by active involvement in the initial stages or concept development, monitoring implies an awareness of activities and work throughout the process. Therefore,

Professional Registrants responsible for Direct Supervision who are unaware of the work throughout the process and only perform a final review do not adequately fulfill their professional obligations to Directly Supervise the work of Subordinates.

- 3.2.3 Professional Registrants can demonstrate active involvement by remaining aware of the project development or history of the project, providing input on drafts, reviewing particular elements at earlier stages, and regularly consulting with their Subordinates throughout a project.

- 3.2.4 Indicators of appropriate Direct Supervision of Subordinates may include:

- physical presence of both the Professional Registrant and the Subordinates at the same workplace at the same time;
- availability of the Professional Registrant for regular and continuing communication with the Subordinates;
- periodic documented reviews of Subordinates' work by the Professional Registrant;
- consultation between the Subordinates and the Professional Registrant throughout the project; and
- adequate Documentation of the Direct Supervision of the Professional Registrant.

3.3 HOW IS ADEQUATE SUPERVISION OF FIELD REVIEWS DEMONSTRATED

3.3.1 Section 7.3.3 of the Bylaws, Standard for Field Review, states that:

- “(1) Field reviews must be completed during the construction, manufacturing, fabrication, implementation, testing, or commissioning of work related to the Regulated Practice by a Professional Registrant, or a Subordinate under the Professional Registrant’s Direct Supervision, in a manner that is appropriate to the level of risk that has been assessed through a documented risk assessment.
- (2) If applicable pursuant to subsection (1), a Professional Registrant must establish, maintain, and follow documented procedures for documented field reviews of work related to the Regulated Practice in British Columbia.
- (3) Through a field review, a Professional Registrant, or a Subordinate under the Professional Registrant’s Direct Supervision, must determine whether the construction, manufacturing, fabrication, implementation, testing, or commissioning of work related to the Regulated Practice substantially complies with the concepts or intent reflected in the Documents prepared for the work related to the Regulated Practice.”

3.3.2 Professional Registrants must carefully instruct Subordinates who carry out field reviews.

3.3.3 When Professional Registrants are directing Subordinates with respect to undertaking field review tasks, Professional Registrants must ensure that such work is carried out in accordance with the definition of Direct Supervision in the *Act* and the requirements for Direct Supervision in the Bylaws. Direct Supervision of a task that occurs outside the office is challenging; nevertheless, Professional Registrants must take care to ensure that all field reviews meet the standards expected of Professional Registrants.

3.3.4 Direct Supervision of a field review performed by a Subordinate would typically require that the Subordinate be given specific instructions on what to observe, check, confirm, test, record, and report back to the Professional Registrant. Where circumstances go beyond such activities, or where professional engineering or professional geoscience decisions or judgments are required, the Subordinate must consult the Professional Registrant so that the Professional Registrant can make the professional engineering or professional geoscience decisions or judgments, or provide further direction or instruction to the Subordinate as appropriate at that point.

3.3.5 Adequate Direct Supervision of field reviews will require the Professional Registrant to:

- consider the project’s complexity and its level of risk to determine whether or not it is appropriate to Delegate one or more of the field reviews to a Subordinate;

- consider the level of complexity, or critical nature, of the field review to determine whether the quality and accuracy of observations made by a Subordinate may be relied upon;
- consider, in light of the project's complexity and level of risk, whether the Subordinate carrying out the field review has the appropriate level of training and experience;
- prior to the field review, discuss with the Subordinate the level of effort to be exercised, the level of detail required when reporting, and specific aspects of the construction or implementation activities which are to be included in the field review; and
- examine the field review reports prepared by the Subordinate upon receipt and follow up as required.

3.4 HOW IS RESPONSIBILITY FOR ENGINEERING AND GEOSCIENCE DECISIONS DEMONSTRATED

- 3.4.1 Professional Registrants must take professional responsibility for all professional engineering or professional geoscience decisions made in respect of Regulated Practice by Subordinates under their Direct Supervision.
- 3.4.2 Subordinates must not make professional engineering or professional geoscience decisions except in consultation with and with the approval of Professional Registrants. Subordinates should work to carry out or implement decisions made by Professional Registrants.
- 3.4.3 Responsibility for professional engineering or professional geoscience decisions does not require that Professional Registrants

actively make each and every decision relevant to projects. Codes and standards of practice that are accepted by Professional Registrants can guide much of the detailed work. However, Professional Registrants must have considered the relevant issues, monitored Subordinates who carried out the work, given directions where applicable, and reviewed and approved each decision and the reasons for making it.

3.4.4 Indicators of appropriate Direct Supervision of a Subordinate may include:

- the availability of the Professional Registrant to answer questions regarding the decisions made by the Subordinate during work on the project; and
- the Professional Registrant's awareness of relevant professional engineering or professional geoscience criteria, methods of analysis, selection of materials and systems, field conditions, practice constraints, economics of alternate solutions, and environmental considerations applicable to the Directly Supervised work.

3.4.5 **Example 1**

Mr. PEng is a "chief engineer" at a large engineering Firm where he Authenticates all engineering Documents prepared by the Subordinates who report to him.

3.4.6 Unacceptable Practice

Due to the size of the Firm and the number of Subordinates working under him, Mr. PEng has very little contact with his Subordinates and rarely conducts detailed reviews of their designs. Even though others in his Firm identify this practice as unacceptable, when questioned, Mr. PEng

states that he considers his supervisory duties are satisfied by his role in helping to establish the initial design concepts and requirements. Mr. PEng feels that his careful hiring practices ensure a high quality of work; therefore, his Subordinates do not require further detailed Supervision.

3.4.7 Acceptable Practice

Mr. PEng is involved in establishing design and engineering criteria for the projects under his Direct Supervision. Throughout their development, he reviews progress reports, checks various design elements, and provides input and further direction where needed. Mr. PEng is available for consultation throughout the process, should unforeseen problems arise or should his general advice be needed. Once work is completed, he carries out a detailed review of the Documents and completed designs prior to Authenticating the Documents.

Professional Registrant to substantively neglect or relegate their Direct Supervision of a senior experienced Subordinate. Instead, it recognizes that a Subordinate new to a field will likely require closer Direct Supervision and greater involvement from the Professional Registrant than a Subordinate who has worked for the supervising Professional Registrant on similar projects for years or decades.

3.5.3 It is expected that Subordinates who are EITs or GITs working their way through the competency building and training process will be granted increasing autonomy, independence, and responsibility over time. While the level of Direct Supervision an EIT or GIT receives may decrease during the training process, it must not disappear entirely.

3.5.4 Professional Registrants should be aware that some Subordinates may previously have had limited exposure to a system of Direct Supervision. To ensure their Subordinates effectively assist them, Professional Registrants must take appropriate steps to ensure the Subordinates receive an adequate level of instruction and support, and understand the intent, purpose, and scope of Direct Supervision.

3.5 HOW IS THE APPROPRIATE DEGREE OF DIRECT SUPERVISION DEMONSTRATED

3.5.1 The level of Direct Supervision may be adapted to reflect the nature of the specific relationship between the Professional Registrant and the Subordinate and their respective experience levels.

3.5.2 In both professional engineering and professional geoscience, the working relationship between a Professional Registrant and a Subordinate may span a number of years or even the length of a career. It is likely that under these circumstances the extent of Direct Supervision required will evolve to reflect the relative experience of both parties. This situation does not permit a

3.5.5 Indicators of appropriate Direct Supervision of an experienced Subordinate may include:

- assignment of broader or multi-stepped tasks with decreasing frequency of reviews as the Subordinate's experience increases; and
- continued availability of the Professional Registrant should the Subordinate have questions or require further direction.

3.5.6 **Example 1**
Mr. Technologist and Ms. PEng have been employees of the same manufacturer for more than 15 years. During that time, they have frequently collaborated on manufacturing processes. When working together, Mr. Technologist samples production lines, identifies parameters to be modified, and then calculates the changes to be made to maintain the production levels. Ms. PEng then approves the suggested changes to the parameters.

3.5.7 Unacceptable Practice
Ms. PEng feels she is very familiar with Mr. Technologist's work, and as a result has developed the practice of discussing the objectives with Mr. Technologist, then approving his parameters and changes without further review. She assumes that if Mr. Technologist does not come to her with any further issues, there are no problems and she can comfortably take professional responsibility. Ms. PEng assumes that unless Mr. Technologist indicates otherwise, the desired production levels will be met by the proposed changes.

3.5.8 Acceptable Practice
Ms. PEng trusts Mr. Technologist's work and over the years she has given him greater responsibilities. Nonetheless, before approving changes suggested by Mr. Technologist, Ms. PEng still discusses the objectives with him, reviews the parameters to be modified, and checks key points and calculations. Once the changes have been implemented, Ms. PEng verifies that they meet the production objectives. She keeps Records of all reviews she performs.

3.5.9 **Example 2**
Mr. Technologist has worked in a junior position at Mr. PEng's Firm for approximately one year. When they work on a project together, Mr. Technologist creates most of the design drawings, which Mr. PEng then Authenticates. Mr. PEng has developed a standard practice that he uses whenever working on a project with Mr. Technologist.

3.5.10 Unacceptable Practice
Mr. PEng discusses the initial project criteria with Mr. Technologist, and then leaves him to complete the work with only one or two points of review or interaction between the initial consultation and final drawings. He assumes that if Mr. Technologist does not come to him with any issues during the development stages, there were no problems. Once Mr. PEng receives the final draft, he does a cursory verification that everything looks acceptable, then Authenticates the Documents.

3.5.11 Acceptable Practice
Mr. PEng and Mr. Technologist discuss the initial project criteria and establish a work plan with specific tasks identified. Mr. PEng reviews the work at regular intervals, and the two discuss any new issues or further engineering decisions that must be made. When Mr. Technologist completes the drawings, Mr. PEng conducts a careful review, including verification of key decisions and calculations, before he Authenticates them.

3.5.12 **Example 3**
Mr. PLEng is the only Professional Registrant at a small engineering Firm that designs structural components (light gauge metal connected wood trusses). He Authenticates truss design drawings prepared by technicians employed by his clients.

3.5.13 Unacceptable Practice
Mr. PLEng has very little involvement with the technicians who design the trusses and rarely contacts them to discuss the designs. He does not have access to any software he can use to independently review the design of truss components.

3.5.14 Acceptable Practice
Mr. PLEng is available and often consulted by the technicians throughout the process, should unforeseen problems arise or should his general advice be needed. Once work is completed, Mr. PLEng carries out a detailed review of the Documents and completed designs prior to Authenticating them. Mr. PLEng has access to proprietary software tools that allow him to perform detailed review when required. Mr. PLEng has documented confirmation that his client's technicians have been appropriately trained in the use and application of the software, and that sufficient quality assurance procedures are in place.

3.6 HOW IS DIRECT SUPERVISION DEMONSTRATED

3.6.1 Regulated Practice activities carried out under Direct Supervision must be recorded in writing. This Record must be retained to confirm that Direct Supervision has taken place. Appropriate Records should provide information detailing the specific project,

the professional of record, the Subordinate(s) involved, and the substance of the activities performed under Direct Supervision. The Records may include mark-ups of checked work, completed forms or checklists, and emails or other communications documenting comments. Records may be electronic or hard copy.

3.6.2 Records must indicate any concerns raised in the course of the activities performed under Direct Supervision, how those concerns were addressed, and what corrective action, if any, was identified, approved, and undertaken.

3.7 WHAT ARE EXAMPLES OF INADEQUATE DIRECT SUPERVISION

3.7.1 Actions or practices that may indicate that a Professional Registrant has not adequately Directly Supervised their Subordinates include:

- being regularly and for significant periods of time absent from the principal office premises from which professional services are rendered;
- being regularly and for significant periods of time out of communication with Subordinates under their Direct Supervision;
- failing to personally inspect or review the work of Subordinates where necessary and appropriate;
- limited, cursory, or perfunctory review of plans or projects in lieu of appropriate detailed review;
- the Regulated Practice activities being Directly Supervised are not activities that the Professional Registrant has

experience and expertise to independently perform;

- lack of Documentation recording the Professional Registrant’s continuing oversight and involvement in the work; and
- failing to be personally available on a reasonable basis or with adequate advance notice for consultation with Subordinates where circumstances require personal availability.

3.7.2 **Example 1: Supervising Multiple Subordinates**

In his Firm, Mr. Senior PGeo Directly Supervises numerous Subordinates. As Subordinates with different levels of experience require different levels of Direct Supervision and attention, the Firm has concluded that it would be inappropriate to set a maximum number of Subordinates for each supervising PGeo.

3.7.3 Unacceptable Practice

As a result of the high number of Subordinates whose work is carried out under his Direct Supervision, Mr. Senior PGeo has great difficulty maintaining an appropriate level of Direct Supervision of each project. As a consequence, issues that require his attention are sometimes not addressed or are addressed inadequately.

3.7.4 Acceptable Practice

Mr. Senior PGeo has advised management that he must decline to Directly Supervise the work of any more Subordinates, as he can no longer meet the requirements of Direct Supervision under the *Act* and Bylaws. He has suggested that the Firm either engage additional professional geoscientists at an intermediate level or turn down work that cannot be accommodated with the existing resources.

Mr. Senior PGeo is cognizant of how his Supervisory activities compare with the indicators discussed above and recognizes that being too busy is not an excuse for failing to perform his responsibilities thoroughly. Management has agreed that Mr. Senior PGeo may Delegate the Direct Supervision of some Subordinates to other professional geoscientists who, in turn, are under his Direct Supervision, but without Mr. Senior PGeo necessarily Directly Supervising the Subordinates whose Direct Supervision are assigned to the other professional geoscientists.

3.7.5 **Example 2: Supervising Multidisciplinary Projects**

Ms. PEng works in a consulting Firm that is organized into client groups, and she supervises a multidisciplinary group of technologists who service a particular client.

3.7.6 Unacceptable Practice

Ms. PEng takes responsibility for all areas of projects and provides Direct Supervision to all her Subordinates, regardless of her area of competence. She Authenticates all project Documents.

3.7.7 Acceptable Practice

Ms. PEng relies on inputs from other Professional Registrants to Directly Supervise staff in areas in which she does not have professional expertise. In these cases, some staff that report to her within the Firm are Directly Supervised by Professional Registrants in other departments. She takes care that all Documents covering the relevant engineering disciplines are Authenticated by the appropriate Professional Registrants who Directly Supervised the work.

3.8 RESOURCES FOR MANAGING DIRECT SUPERVISION

- 3.8.1 Professional Registrants should review the following guidance on managing the Direct Supervision of Subordinates before starting professional engineering or professional geoscience work.
1. Assess the requirements of the work being considered for Delegation with regard to the knowledge, experience, and capabilities required of the Subordinate who will perform the work, and identify the tools and other resources the Subordinate requires to successfully complete the work.
 2. Assess the Subordinate being considered to perform the work to determine whether there is a gap between the requirements of the work and the knowledge, experience, and capabilities of the Subordinate.
 3. Arrange to make available the required tools and other resources identified in Item 1 above, or identify the gaps between the required tools and other resources and those that are available. This includes reasonable access to subject matter experts who must be consulted in the course of the work.
 4. Identify the means by which the gaps identified in Items 2 and 3 above will be mitigated, either directly by the Professional Registrant or by other individuals involved with the work. Until the gap is remediated, the Professional Registrant should Delegate the work that is identified as a gap to another person who is capable of performing it. The Professional Registrant should also ensure that an EIT or GIT is allowed the opportunity to expand existing skills, knowledge, experience, and capabilities. This process should involve allowing the EIT or GIT to perform unfamiliar work, with the work then being reviewed in detail by the EIT or GIT and a Professional Registrant in order to provide an opportunity for the EIT or GIT to expand skills.
 5. Establish the scope of work, duties, responsibilities, and authorities of the Subordinate, and establish limitations with respect to acting alone.
 6. Create a plan for the review of the professional engineering or professional geoscience work output of the Subordinate, including the timing and method.

4.0 REFERENCES AND RELATED DOCUMENTS

Engineers and Geoscientists Regulation, OIC 2021/37.

Professional Governance Act, S.B.C. 2018, c. 47.

Engineers and Geoscientists BC. 2021. Quality Management Guides – Guide to the Standard for the Authentication of Documents. Version 3.0. Burnaby, BC: Engineers and Geoscientists BC. [accessed: 2021 Feb 17].
<https://www.egbc.ca/Practice-Resources/Individual-Practice/Quality-Management-Standards>.

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