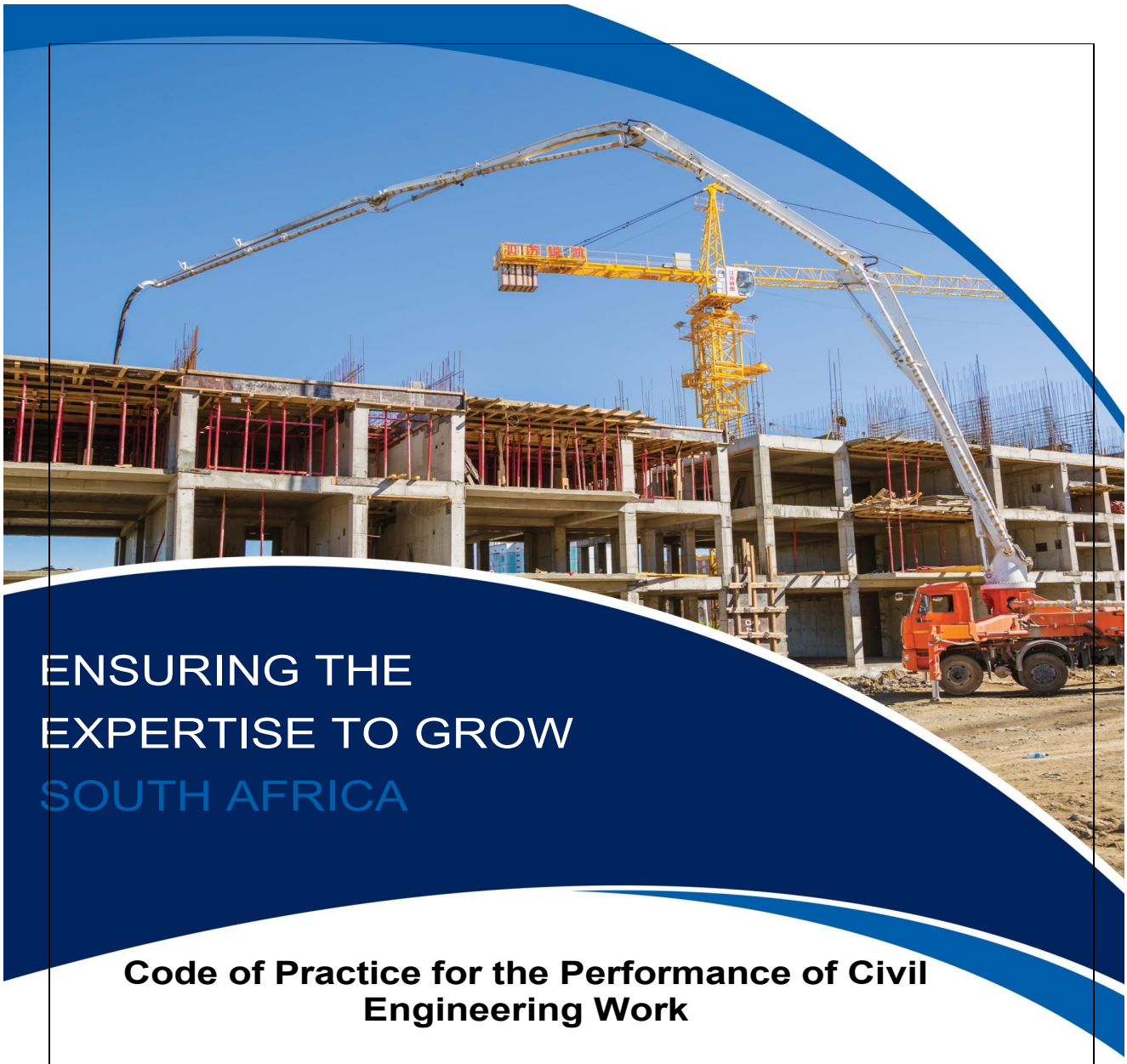
BOARD NOTICE 630 OF 2024



ENSURING THE
EXPERTISE TO GROW
SOUTH AFRICA

Code of Practice for the Performance of Civil Engineering Work

R-02-COP-CIV

REVISION No. 0: 30 March 2023

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ECSA

PREFACE

The development of the Civil Engineering Code of Practice is informed by the Overarching Code of Practice for the Performance of Engineering Work, and it leads towards transforming the industry to achieve the following objectives:

- Engineering practitioners' contributions towards quality of work produced in keeping with the project risk.
- A renewed focus on ethical behaviour in planning, design, and construction of Civil Engineering assets.
- Assist with mitigating South Africa's infrastructure challenges to support growth and prosperity.
- Ensure that all Civil Engineering practitioners provide sustainable engineering solutions in keeping with supporting design codes.
- Keep the profession relevant and current with respect to new technology that enables efficient designs and to understand the importance of learning and development.
- Implement a collective mindset towards building South Africa to be future fit, while seeking to progress our socio-economic development objectives.

In addition to the socio-economic objectives, this Code seeks to highlight key focus areas comprising the disciplines of Civil Engineering. It is not written to be a rigid document; greater granularity will be contained in the appendices. It is not intended to prescribe how civil engineering practitioners work but more why they work and what they achieve as meaningful outputs.

In addition to Civil Engineering practice, it seeks to inform the structures within which we operate of compliance requirements in performing engineering work. It is expected that all institutions employing civil engineering practitioners have the required organograms to support the effective deployment of Civil Engineering tasks. Engineering practitioners within these structures are expected to become familiar with their practice area, learn and develop excellence in the practice area, and thereafter mentor and support those who are their juniors.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

DEFINITIONS

In this Code, any word or expression defined in the Act has that meaning unless the context otherwise dictates:

Act means the Engineering Profession Act, 46 of 2000 as amended.

Code means this code of practice document.

Code of Conduct means the Code of Conduct for Registered Persons: Engineering Profession Act, 46 of 2000, Board Notice 41 of 2017 – Government Gazette 142 No. 40691.

Competency means a combination of knowledge, training, experience and applicable qualifications that enables an individual to perform a task or an activity successfully.

Competent Person means a person who is qualified by virtue of education, training, experience and contextual knowledge to perform Civil Engineering work and registered in terms of Section 18(1)(a) and (c) of the Act.

Council means the Engineering Council of South Africa, established by Section 2 of the Act.

Designer means the person undertaking work in relation to the process of devising a system, component, or process to meet desired needs. It is a decision-making process (often iterative), in which the basic sciences, mathematics, and engineering sciences are applied to convert resources optimally to meet a stated objective. Among the fundamental elements of the design process are the establishment of objectives and criteria, synthesis, analysis, construction, testing and evaluation of any Civil Engineering works and/or in its sub-disciplines, i.e., Geotechnical Engineering, Harbour Engineering, Railway Engineering, Structural Engineering, Transportation Engineering and Water Engineering, including drawings, calculations, design details and specifications.

Discipline means the disciplines of engineering and sub disciplines of Civil Engineering as recognised by the Engineering Council of South Africa.

Engineer means a professional engineer registered in terms of section 18(1)(a)(i) of the Act who has experience specifically in the field of Civil Engineering.

Engineering Practitioner means any registered professional registered in terms of section 18(1)(a) of the Act who has experience specifically in the field of Civil Engineering.

Engineering Technologist means a professional Engineering Technologist registered in terms of section 18(1)(a)(ii) of the Act who has experience specifically in the field of Civil Engineering.

Engineering Technician means a professional Engineering Technician registered in terms of section 18(1)(a)(iv) of the Act who has experience specifically in the field of Civil Engineering.

Engineering Geologist means a practitioner of engineering geology who is registered in section 18(1)(a) of the Natural Scientific Professions Act, 27 of 2003.

Engineering Work means the process of applying engineering and scientific principles, concepts, contextual and engineering knowledge to the research, planning, design, implementation, maintenance and management of work in the natural and built environments. It includes advisory services, assessment of engineering designs and determination of the risks posed by the design on workers, the public, and environment.

Geotechnical Engineering Work means Engineering Work identified specifically in the practice area of geotechnical engineering.

Harbour Engineering means Engineering Work identified specifically in the practice area of Harbour Engineering.

Identification of Engineering Work means the Identification of Engineering Work as gazetted.

Information means engineering documents and data produced or relied on in the performance of Engineering Work that form a material part of the project records, including design calculations, drawings, contract agreements, minutes of meetings and reports, whether in electronic format or otherwise.

Overarching Code of Practice means the Overarching Code of Practice for the Performance of Engineering Work as gazetted.

Practice means any engineering professional service, advisory service or creative work requiring engineering education, training and experience and the application of special knowledge of the mathematical, physical and engineering sciences, or creative work such as consultation, research,

investigation, evaluation, planning, surveying, risk assessment and design, in connection with any public or private utility, structure, building, machine, equipment, process, work or project.

Practitioner means a person who performs Engineering Work. It includes both registered persons and unregistered persons.

Profession means Engineering Profession.

Railway Track Engineering Work means Engineering Work identified specifically in the sub-discipline of Railway Track Engineering.

Registration Category means a professional registration category as specified under Section 18(1)(a)–(c) of the Act, including Professional Engineer, Professional Engineering Technologist, Professional Certificated Engineer, Professional Engineering Technician, Candidate and Specified Category Practitioner.

Registered Person means a person registered under a category referred to in Section 18 of the Act.

Risk means the effect of uncertainty on the objectives of a design and is expressed in terms of a combination of the consequences of an event and the likelihood of occurrence.

Site means the area or place where the investigation or construction is being carried out.

Specialist work means the sub-disciplines of Civil Engineering, i.e., Geotechnical Engineering, Harbour Engineering, Railway Engineering, Structural Engineering, Transportation Engineering and Water Engineering that requires training, knowledge and experience outside the normal education curriculum and beyond that which is obtained in the general practice of the profession.

Specified Category means those registration categories classified as such by ECSA.

Specified Category Practitioner means a person registered in terms of section 18(1)(c) of the Engineering Profession Act, carrying out specifically defined engineering activities.

Structural engineering work means Engineering Work identified specifically in the sub- discipline of Structural Engineering.

Sub-discipline means the specialist discipline of Civil Engineering, i.e., Geotechnical Engineering, Harbour Engineering, Railway Engineering, Structural Engineering, Transportation Engineering and Water Engineering.

Transportation Engineering Work means Engineering Work identified specifically in the sub-discipline of Transportation Engineering for road-based transport and for the purposes of this document, it also includes work relating to the governance of transportation systems, public transport, the execution of a transport project, associated activities required to comply with legislation or required to ensure the transport system is a sustainable infrastructure or service.

Water Engineering Work means Engineering Work identified specifically in the sub-discipline of Water Engineering and for the purposes of this document, it also includes work relating to sanitation such as sewage collection, disposal and wastewater treatment works.

ABBREVIATIONS

CoP	Code of Practice
ECSA	Engineering Council of South Africa
Pr Eng	Professional Engineer
Pr Tech Eng	Professional Engineering Technologist
Pr Cert Eng	Professional Certificated Engineer
Pr Techni Eng	Professional Engineering Technician
QCP	Quality Control Plan
RPS	Research Policy and Standards

1. INTRODUCTION

This Code of Practice has been developed by the Engineering Council of South Africa (ECSA) to supplement the Rules of Conduct for Registered Persons (Board Notice No. 15 of 2006). Section 27 of the Engineering Profession Act, 46 of 2000 empowers the Council to draw up codes of practice in addition to codes of conduct and it requires all registered persons to comply with such codes. Failure to do so constitutes improper conduct. In short, while codes of conduct regulate behaviour, codes of practice regulate engineering practice.

Section 18(1) of the Act provides for registration of professionals and candidates in four categories of registration, namely Engineers, Technologists, Technicians and Certificated Engineers. Section 18(2) prohibits persons so registered from practising in a category other than that in which they are deemed competent.

Whereas codes of conduct regulate the conduct of an individual in the professional environment as a whole, codes of practice regulate the execution of professional services in a practice area.

In line with these requirements, this Code of Practice classifies Civil Engineering Work and its sub-disciplines in terms of complexity and recommends the category of registration and the level of competence required for the execution of such work.

The Code also details the ethical values and professional standards that ECSA expects all registered persons to adhere to as a mark of their professionalism, as a condition of their registration and as affirmation of their competence and ability.

In writing this code of practice, it is recognised that various other legislation, such as each sub-discipline Act (namely, Geotechnical Engineering, Harbour Engineering, Transportation Engineering, Railway Engineering, Structural Engineering and Water Engineering), the Safety Act and the Occupational Health and Safety Act, includes definitions and specifies requirements that are to be met by “competent” persons in the practice area in the field of Civil Engineering and its sub-disciplines.

2. POLICY STATEMENT

The Code applies to the practice area of Civil Engineering and its sub-disciplines (namely, Geotechnical Engineering, Harbour Engineering, Transportation Engineering, Railway Engineering, Structural Engineering and Water Engineering).

The code identifies specific Engineering Work in the field of Civil Engineering and its sub-disciplines.

It classifies Engineering Work in the field of Civil Engineering and its sub-disciplines according to the complexity, the risks involved and the consequences of failure.

It sets out the level of competence required by persons registered in any of the categories of registration provided for in Section 18(1) of the Act for the performance of Civil Engineering Work and its sub-disciplines of varying complexity.

The code stipulates requirements for the practice of Engineering Work in the field of Civil Engineering and its sub-disciplines and it provides a statement of recognised good practice.

Where a Code or Act is referenced, the latest version thereof applies.

3. PURPOSE

3.1 In terms of the Standards Act, 29 of 1993, a code of practice is “a description of:

- the terminology to be used
- the extent of method to be applied, procedure to be followed or material to be used,
- any other requirements (e.g., competency) in connection with the execution in an orderly, systematic, practical, efficient, safe and effective manner of an act performed with a view to achieving a stated purpose or obtaining a stated result.”

3.2 The Code’s purpose is to:

(a) identify Engineering Work in the field of Civil Engineering and its sub-disciplines, and to classify such work in terms of its complexity;

(b) establish the appropriate level of competence required for the execution of various classes of Civil Engineering Work;

(c) make provision for and regulate the execution of Engineering Work in the field of Civil Engineering and its sub-disciplines by registered professionals in other fields and set technical and ethical standards for the execution of Civil Engineering Work.

4. APPLICABLE LEGISLATIVE FRAMEWORK

This code of practice should be read in conjunction with the Engineering Profession Act, 46 of 2000 and the Code of Professional Conduct (Board Notice 15 of 2006), Council for the Built Environment Act, 43 of 2000 and Occupational Health and Safety Act, Construction Regulations and other applicable regulations.

5. NATIONAL AND INTERNATIONAL COMPLIANCE

ECSA has been empowered by Section 27 of the Engineering Profession Act, 46 of 2000 to draw up a code of practice whereby all registered persons are required to comply wholly. In addition to the Act mentioned above, the development of this code of practice is guided by the ECSA Policy and Standards Framework on ECSA Policies, the Road Map for drafting the Code of Practice, which sets out steps to be taken to get the process of developing ECSA Codes of Practice and the ECSA Overarching Code of Practice.

6. CIVIL ENGINEERING WORK

6.1 Identification and classification of Civil Engineering Work

Civil Engineering work and its sub-disciplines can be identified from the gazetted, Identification of Engineering Work Regulations. This section of the code specifically identifies Civil Engineering work according to its complexity and risk-consequence and sets out the competencies required for the execution of such work.

A high-level summary of the Civil Engineering work is shown in Table 1.

Table 1: Civil Engineering Work

Characteristics	Types of work	Functions
• Theoretical experimental investigation and solving of problems. • Analysis and design solutions to meet specific objectives. • Application of knowledge and engineering technology, based on mathematics, basic sciences, information technology as well as specialist and contextual knowledge. • Management of engineering works. • Addressing the safety and environmental consequences and other impacts of engineering work. • Exercising judgment and taking responsibility for engineering work. • Conducting research and developing new or improved theories and methods related to civil engineering.	Due to the various sub-disciplines within Civil Engineering, the types of work would relate to the specific sub-discipline concerned.	• Feasibility and conceptual studies. • Project definition and planning. • Advising, reporting and auditing. • Establishing control standards and procedures to monitor performance of work. • Preparation of tender and / or working drawings. • Provision of information for the design of services. • Preparation of specifications and schedule of quantities. • Cost estimates, capital and life cycle costs, financial. • Implications and works programmes. • Draft tender documentation and tender strategies. • Advise on contractors and calling for tenders. • Procurement and tender adjudication. • Contract administration, coordination and construction monitoring. • Management of safety risk and maintenance of civil engineering solutions. • Communication of the impacts and outcomes. • Education, training and mentoring of Civil Engineering personnel.

6.2 Risk response

Risk and impact mitigation includes the probability and impact of all the risks connected with the project. The focus areas of the project must be indicated on a risk matrix. Mitigation must include the time of mitigation and the person who is responsible. Solutions must include a Plan A and a Plan B. The risk document must be a live document throughout the life cycle of a project and must include the following:

- technical risk
- environmental risk
- quality risk
- commercial risk (late or wrong deliveries of equipment)
- schedule risk
- social risk
- construction risk.

Registered Persons must implement quality and risk management systems covering all aspects of their work, appropriate to the nature of the work and the size of the organisation. Quality and risk management systems must be reviewed on a regular basis. Compliance with the system must be audited at least annually. Organisations undertaking Engineering Work should consider external certification, such as ISO 9001 and ISO 14001.

7. CIVIL ENGINEERING COMPETENCY LEVELS

7.1 Work within area of competency

Engineering Work in the field of Civil Engineering and its sub-disciplines can be identified from the gazetted, Identification of Work Regulations. This section of the code specifically identifies Civil Engineering work according to its complexity and risk-consequence and sets out the competencies required for the execution of such work.

The following criteria must be used to assess the competence of a civil engineer/technologist/ technician:

- Tertiary education (minimum base qualification as required for registration or as a recognised alternative).
- Category of registration
- Experience (experience can be defined as learning and adopting the established and developing engineering ways of work and protocols as well as assembling engineering knowledge through the practical execution of work in an engineering environment. Three years of practice experience is the minimum and, in most instances, is insufficient for professional registration).
- Knowledge (engineering knowledge is the understanding achieved through the combination of education, experience producing skill and wisdom. CPD is an essential element required to educate with wisdom in the context of experience to enhance engineering knowledge to develop the engineering expert).
- Recognition by the profession.

Civil Engineering Practitioners, depending on the tertiary education, training and experience, category of registration and recognition by the profession, function at one of two distinct levels as indicated in Table 2.

Civil Engineering Practitioners must perform their duties within the professional category limitations specified in the Identification of Engineering Work (Government Gazette No. 44333).

Table 2: Competence levels of Civil Engineering Practice

Level	Designation	Typical characteristic of the practitioner	Risk associated with work done
1	Candidate	Practitioner has a tertiary education qualification in Civil Engineering and works under supervision and control from a Professionally Registered Person.	Low risk
2	Registered professional in Civil Engineering	Practitioner is registered with the ECSA as a Professional Engineer, Professional Engineering Technologist or Professional Engineering Technician in the Civil Engineering discipline.	Moderate to High risk

It is accepted that due to the varying nature of a Civil Engineering service, rigid boundaries are not applicable, but an experienced Civil Engineering Practitioner would recognise the appropriate competence level required. A person may only conduct work for which his or her education, experience and acquired knowledge has deemed him or her competent to undertake.

7.2 Categories of work for competency

The level of practitioner assuming responsibility for Engineering Work in the field of Civil Engineering and its sub-disciplines is linked to the category of risk as defined in Table 3.

Table 3: Minimum competence level in relation to categories of risk of task to be performed

Minimum required competence level	Categories of risk	Illustrative nature of civil engineering work
1	Low	Simple Civil Engineering solutions with low safety and serviceability performance requirements where the analysis requires a simple application of design rules or direct interpretation of reference guidelines.
2	Moderate	Civil Engineering solutions with moderate to challenging safety and serviceability performance requirements where the design approach involves either a process of: • reasoning and calculation based on the application of standards, or • reasoning, calculation and consideration of accepted analytical principles, based on a combination of deductions from available information, research and data, appropriate testing and service experience.
3	High	Systems (or parts thereof) with challenging safety and serviceability performance requirements that require specialist skills, recognised expertise or knowledge beyond that required for Category 2 systems

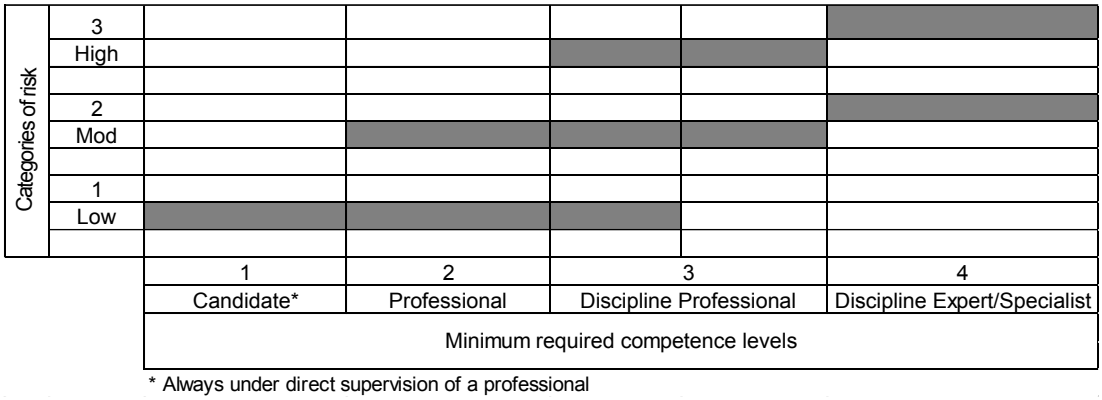

Figure 1: Minimum competence level in relation to categories of risk of task to be performed

Note 1: Competence Level 1 (candidates) are always required to work under direct supervision and control of an appropriately Registered Person.

Note 2: Registered Engineering Technicians do not usually assume responsibility for a category of risk level of higher than 1 unless they have gained vast experience within their sub discipline or the problem is well defined.

7.3 Levels of competency

The level of practitioner assuming responsibility for Engineering Work in the field of Civil Engineering and its sub-disciplines is linked to the category of risk as defined in Table 3.

The levels of competence required for Civil Engineering Practitioners and a career path to achieving these levels is indicated in Figure 2.

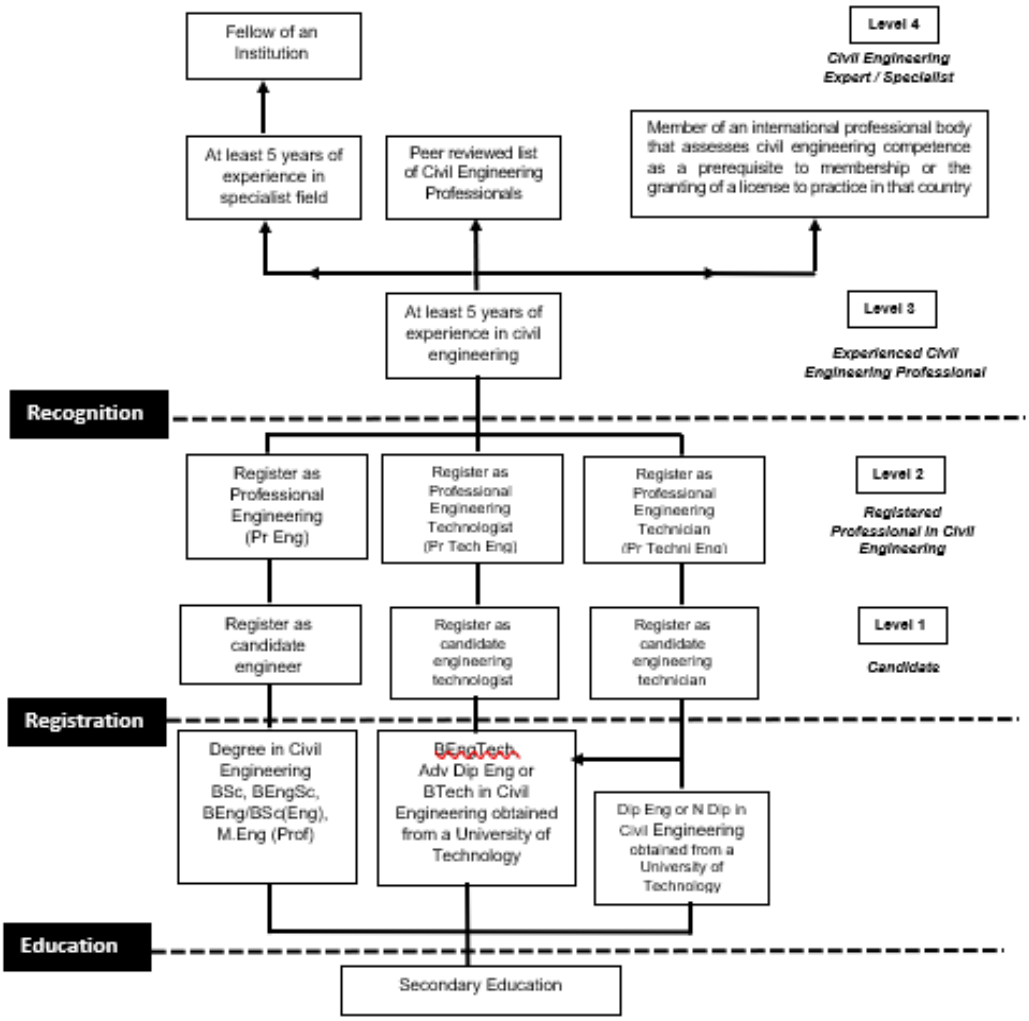

Figure 2: Levels of competence required to practise

7.4 Misrepresentation of competence

Civil Engineering Practitioners may only execute Engineering Work in the field of Civil Engineering and its sub-disciplines in accordance with the provisions of the ECSA's Code of Conduct. In particular, they must conduct work within their area of competence.

7.5 Development of knowledge, skills and expertise

Civil Engineering Practitioners must continue to develop knowledge, skill and expertise in accordance with ECSA's Standard for Continuing Professional Development (ECPD-01-STA).

8. CIVIL ENGINEERING GOOD PRACTICE

8.1 Design requirements

The design of Civil Engineering solutions must be performed by or under the direction, control and supervision of a Professionally Registered Person who needs to accept responsibility for the design. The full scope of the client requirements must be agreed and documented as part of the design package and alternative solutions considered.

The selected solution must clearly demonstrate how client requirements are met in a safe, effective and cost-efficient way to ensure adherence to reliability, availability, maintainability and safety requirements.

Problem solving through experienced engineering judgement and testing of samples is an integral part of Civil Engineering in most of the sub-disciplines where empirical judgement, experience and skill have to be used due to the lack of proven engineering formulae or procedures.

8.2 Design process

The Civil Engineering design process is a series of steps to be followed by Engineering Practitioners to create functional products and processes while solving problems. These steps include the following:

- Define the problem.
- Research the problem and specify requirements.
- Develop possible/alternative solutions.

- Evaluate and choose best solution.
- Develop and prototype solution.
- Test and evaluate solution.
- Communicate results (and redesign if required).
- Monitor the performance of the solution.

A typical final design package when the correct design process is followed includes design calculations (including simulations), drawings, test procedures and results, and other relevant technical documentation such as user requirements and specifications.

The design standards, specifications and related publications used in a design must be communicated and agreed with the client. All designs must conform to relevant Acts, design codes and regulations, as set out below.

8.2.1 Design calculations and simulation

Formal calculations must be prepared for all Civil Engineering solutions. Calculations must be recorded on calculation sheets or downloaded from a computer simulation tool to form part of a design report. For manual analysis, all analysis calculations must be shown together with the results of the analysis.

- The designer must take all reasonable steps to generally ascertain that the works being constructed on site comply with the design.
- The designer should ensure that quality control is instituted on site to ensure accordance with the design.
- The full scope of the client requirements should be agreed and documented. The designer should take steps to determine any special operational requirements, the likelihood of future changes or other factors that may increase the risk of failure
- Should the designer not be satisfied with the arrangements regarding quality control instituted on site, he or she should raise this with the construction contractor, and, if necessary, with the client. Should the quality control on site remain unsatisfactory, giving inadequate demonstration that the structure has been built in accordance with the design, the designer

should not sign off on the works, or cease all the works, in accordance to the current legislation and standards.

- All analysis should be thoroughly checked by the person conducting the design. In addition, all analysis should be reviewed for accuracy by a registered person
- The checker/auditor and/or designer should ensure that the checking/auditing has been done prior to commencement of construction. If the checker/auditor is required to verify the actual outcomes of the design analysis, this should be done by another means than that used by the original designer.
- Any changes or modification to the design, proposed by the checker/auditor should be communicated to the designer for design and implementation. The checker/auditor should sign off on the cover sheet of the original design, stating the date, his/her name, contact details and ECSA registration number.
- Approval of a design means that the design is complete, the design complies with the required standards, specifications and legislation in terms of safe operability of the line, stability and serviceability, and the design is fit for the intended purpose.

General information or data to be indicated on calculations and simulations includes the following:

- Name of client or owner
- Project title
- Title of civil engineering design under consideration
- Name of person who carried out the calculations and date undertaken
- Name of person who reviewed the calculations and date reviewed
- Project number or calculations file number
- Calculation sheet number and revision number
- Software name and version, data file name and location.

8.2.2 Design drawings

Design drawings must show all information required for implementation, application and/or installation and must be checked prior to issuing. Appropriate requirements must be included. The responsible Civil Engineering Practitioner must approve all design drawings of Civil Engineering solutions. General information or data to be indicated includes the following:

- Name of the responsible Civil Engineering Practitioner
- Name and address of the consulting firm responsible for civil design
- All symbols and units used must be consistent with the symbols used in the particular code of practice or standard being used.

Approval of a design drawing/illustrative model means that the drawing/model is complete, it conforms to the design and the technical content of the drawing/model is correct.

8.2.3 Design testing

Any tests required for design purposes must be stated and communicated to the contractor and/or client for execution. Test results and other relevant data must be filed with the calculations or overall design package.

8.2.4 Design documentation approval and preservation

Approval of designs means that the design is complete and complies with the required standards, specifications and legislation in terms of safe operation and that the design is fit for the intended purpose.

Approval of a design drawing/illustrative model means that the drawing/model is complete, that the drawing/model conforms to the design and that the civil engineering content of the drawing/model is correct.

Irrespective of client requirements regarding the retention of design information, all design drawings, calculations, computer printouts, test results, test certificates, etc. must be retained in a form easily retrievable for a period not less than that specified by the ECSA or relevant legislation. Data must be stored electronically in a recognised international format.

Should there be a need to review the approved documents, the designer must adhere to the process implemented to ensure that all changes are done, accepted and communicated to all relevant parties in good time.

8.2.5 Technology

Civil Engineering requires practitioners to work, model and construct from materials of the earth. The key take-away is that much of our technology seeks to model or simulate a form of reality in the designs that we perform. This awareness must remain at the forefront of those designing and those checking or reviewing designs. Simulating reality is and will not be a perfect science. As such practitioners must ensure optimum and pragmatic designs.

Engineering practitioners must ensure that they are familiar with practical understanding of the asset, construction methodology, phasing, temporary works, concept of constructability, life cycle costs and maintenance when designing*. It is a required attribute that all practitioners have good site experience to support decisions to commence construction, for example.*

As technology advances, the risk of disconnects between reality and design simulation grows, giving rise to site-related problems which increase both direct and consequential time and costs. The country can ill afford further corruption, poor ethics in practitioners wanting to complete the design as fast as possible with a greater focus on bottom line profits versus quality robust designs. If practitioners accept that design software is just technology support to get to a product, the industry has an improved chance of lowest cost work, balanced with quality and professionalism of producing quality assets that are fit for purpose and meet the service limits as expected.

8.3 Quality and maintenance of designs

8.3.1 Design testing

The designer must take all reasonable steps for quality control to generally ascertain that the Civil Engineering solutions implemented or installed on site comply with the design. This quality control is not limited to the actual site but also needs to include any manufacture/pre-assembly and assembly work completed.

It is recommended that a quality control plan (QCP) be instituted by the contractor and approved by the designer, which provides for not only conforming to all the requirements of the design, but also to the requirements of the codes and/or relevant specifications that the contractor is expected to satisfy. The steps must be signed off by the contractor as having been correctly completed and overviewed by the engineer for important issues.

Should the designer not be satisfied with the arrangements regarding quality control instituted on site, he or she must raise this with the contract manager (if work is external) and, where applicable and necessary, with the client. Should the quality control on site remain unsatisfactory, the designer must not sign off any work.

The designer, if satisfied that the Civil Engineering solutions have been implemented and installed in accordance with the requirements of the design, must certify that the Civil Engineering solutions have been commissioned according to relevant standards and a certification of completed works must be issued.

8.3.2 Maintenance of designs

Maintenance requirements must be defined and clarified by designer and client. This refers to both preventative and corrective maintenance types. As per the Regulations issued in terms of the Occupational Health and Safety Act, an obligation is placed on all plant owners to ensure that the Civil Engineering solutions are safe for continued use and are inspected regularly.

Should there be a risk or hazard identified, relevant parties must be notified and recommended actions communicated.

8.4 Obligations to society

Any Civil Engineering Work carried out must adhere to the following:

- Social, environmental and other possible consequences
- Honesty (truth and objectivity), integrity and fairness without discrimination
- Health, welfare and community safety
- Effects on the natural environment
- Conflicts of interest
- Confidentiality.

The Engineering Work in the field of Civil Engineering and its sub-disciplines must adhere to legislation and recognised standards in executing Civil Engineering Work, which include among others the following Acts as amended:

- Engineering Profession Act, 46 of 2000
- Occupational Health and Safety Act, 85 of 1993
- National Building Regulations and Building Standards Act, 103 of 1977
- National Environmental Management Act, 107 of 1998
- Employment Equity Act, 55 of 1998.
- Basic Conditions of Employment Act, 7 of 2018.

All Engineering Work in the field of Civil Engineering and its sub-disciplines must be carried out in accordance with the norms of the profession. Such norms are generally represented by national and international standards, industry standards, codes of practice and best practice guidelines. A Civil Engineering Practitioner must assess any deviation from recognised standards or work beyond the scope of such standards in terms of sound engineering and scientific fundamentals.

9. INTERPRETATION AND COMPLIANCE

9.1 Interpretation

The word “must” indicates a peremptory provision.

The word “should” indicates a provision directive or informative in character, requiring substantial compliance only.

The word “they” in its singular form, or its derivative forms “their/them” are pronouns used for gender neutrality.

9.2 Compliance

Failure to comply with a peremptory provision, directive or informative provision of this code of practice constitutes improper conduct in terms of the Act

10. ADMINISTRATION

The Council is responsible for administering this code of practice, including its publication, maintenance and distribution.

The Council must ensure that the code of practice and all amendments to it are available on the ECSA website and must upon request, provide a copy thereof.

The Council must take all reasonable steps to introduce the code of practice to the general public.

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Subject: Code of Practice for the Performance of Civil Engineering Work			
Compiled by: Manager RPS	Approved by: Executive RPS	Next Review Date: N/A	Page 27 of 27
Date: 14/09/2022	Date: 270/1/2023		

REVISION HISTORY

Revision number	Revision date	Revision details	Approval by
Rev 0 Draft A	14 September 2022	New document	RPS & Working Group
Rev0. Draft B	07 October 2023	Steering Committee Draft	Steering Committee
Rev0. Draft C	07 October 2022	Broader Consultation draft	Working Group
Rev.0 Draft D	11 January 2023	Incorporation of comments received from Broader consultation	Working Group
Rev.0 Draft E	26 January 2023	Steering Committee recommendation to submit to RPSC for approval	Steering Committee
Rev 0.	14 February 2023	Approval by RPSC	RPSC
Rev 0.	30 March 2023	Ratification	Council

The Code of Practice for:

Performance of Civil Engineering Work

Revision 0 dated 30 March 2023 and consisting of 27 pages reviewed for adequacy by the Business Unit Manager and approved by the Executive: Research, Policy and Standards (**RPS**).

.....
Business Unit Manager

14 April 2023
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Date

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Executive: **RPS**

2023/04/14
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Date

This definitive version of this policy is available on our website.