

**PROPOSED REGULATION  
PUBLISHED BY MINISTER OF PUBLIC WORKS**

**Identification of Engineering Work for Persons  
registered in a Category contemplated in Section 18(1)  
of the Engineering Profession Act, 2000, (Act No. 46 of 2000)**

I, Thoko Didiza, Minister of Public Works, in terms of Section 22(iii) of the Council for the Built Environment Act, 2000 (Act No. 43 of 2000) made the Regulations pertaining to engineering work which has been identified by the Council for the Built Environment in terms of Section 20(2) of the said Act, as set out in the Schedule hereto.

The provisions of this Regulation shall come into operation on the date of publication hereof.

**SCHEDULE**

**1. Definitions**

In this Schedule, any word or expression defined in the Act, has that meaning, and unless the context otherwise indicates –

- (i) *“Engineering Council of South Africa” means the Engineering Council of South Africa established by section 2 of the Engineering Profession Act, 2000 (Act No. 46 of 2000), and “ECSA” has the same meaning;*
- (ii) *“Engineering Profession Act” means the Engineering Profession Act, 2000 (Act No. 46 of 2000);*
- (iii) *“engineering work” means the work identified in Annexure 1 of this Schedule;*
- (iv) *“improper conduct” as contemplated in Section 27(1)(3) of the Engineering Profession Act, means conduct which is in contravention of a Code of Conduct or any Code of Practice prescribed from time to time by –*
  - (a) *ECSA in terms of Section 36(1) of the Engineering Profession Act; or*
  - (b) *any professional council in terms of the equivalent provisions of the applicable professions’ Acts;*
- (v) *“practice in a category” as contemplated in section 18(2) of the Engineering Profession Act, means the regular and consistent performance, by any person, of engineering work, in a manner and at a level which may lead the public to infer that he or she is practising in any particular category of registration mentioned in section 18(1) of the Engineering Profession Act;*
- (vi) *“professional council” means a council for the professions as defined in section 1(iv) of the Act, but also includes:*
  - (aa) *South African Council for Planners established in terms of the Planning Profession Act, 2002 (Act No 36 of 2002);*
  - (bb) *South African Council for Natural Scientific Professions established in terms of the National Scientific Professions Act, 2003 (Act No 27 of 2003); and*
  - (cc) *South African Council for Professional and Technical Surveyors established in terms of the Professional and Technical Surveyors’ Act, 1984 (Act No 40 of 1984).*

- (vii) **“public”** means any person or group of persons who is, or whose environment is, either directly or indirectly affected by any engineering activity, or by a product, outcome or influence of an engineering activity, which may impact on the health, safety and interest of such person or group of persons.
- (viii) **“substantially practise”** means regularly and consistently carrying out engineering work identified in sections 2, 3 and 4 of Annexure 1 of this Schedule, while accruing professional responsibility to a client or an employer for the performance of such functions;
- (ix) **“the Council”** means the Council for the Built Environment established under section 2 of the Act,
- (x) **“the Act”** means the Council for the Built Environment Act, 2000 (Act No 43 of 2000).

## 2. Engineering Work Identified for the Professional Categories of Registered Persons

- (1) The *engineering work*, as set out in Annexure 1 of this Schedule, has been identified for persons who are registered with the *Engineering Council of South Africa* in any of the professional categories mentioned in Section 18(1)(a) of the *Engineering Profession Act*,
- (2) Unless the context otherwise indicates, nothing contained in this regulation may be construed as implying that persons:
  - (a) ordinarily referred to as artisans, such as workers skilled in a trade, mechanics, operators or craftsmen,
  - (b) managing engineering works relating to construction works and mining activities for or on behalf of an enterprise which is classified as *micro* or *very small* enterprise in terms of the Small Business Act of 1996 (Act 102 of 1996);
 are required to register in any category mentioned in section 18(1), and the exemption contemplated in section 26(4) of the *Engineering Profession Act* is deemed to apply in respect of such persons.

## 3. Prohibitions

- (1) In terms of section 18(2) and 26(3)(a) of the *Engineering Profession Act*, any person -
  - (a) who is not registered as a professional in any category of registration mentioned in section 18(1)(a) of the *Engineering Profession Act*, may not perform *engineering work* identified under Regulation 2(1);
  - (b) who is registered as a candidate in any category mentioned in section 18(1)(b), may, as contemplated in section 18(4) of the *Engineering Profession Act*, not perform *engineering work* identified under regulation 2(1) unless such work is performed under the supervision and control of a person registered in any professional category mentioned in section 18(1)(a) of the *Engineering Profession Act*;
  - (c) who is not registered as a candidate in a category mentioned in section 18(1)(b) and who does not qualify for registration in a professional category mentioned in section 18(1)(a), may not perform *engineering work* identified under regulation 2(1) unless such work is performed under the supervision and control of a person registered in any professional category mentioned in section 18(1)(a) of the *Engineering Profession Act*.
- (2) Notwithstanding any exemption granted in terms of Regulation 7, any person who is registered in a professional category with a *professional council*, and who *substantially practises* in engineering may not continue to practice as such unless he or she is registered in a professional category mentioned in section 18(1)(a) of the *Engineering Profession Act*.

#### **4. Offences**

- (1) Any person who fails to comply with the provisions of regulation 3(1)(a) or (c) or regulation 3(2) is deemed to have contravened the provisions of sections 18(2) and 26(3)(a) of the *Engineering Profession Act* and is guilty of an offence in terms of section 41(1) of the Act.

#### **5. Improper Conduct**

- (1) Subject to Regulation 5(2), any person who is registered in a professional category mentioned in section 18(1)(a) of the *Engineering Profession Act* and who performs, or takes responsibility for the performance of, any one or more of the elements of *engineering work* identified in terms of regulation 2(1) at a level, or within knowledge areas, which his or her education, training and experience have not rendered him or her competent to perform, is guilty of *improper conduct* in terms of section 27(3) of the *Engineering Profession Act* and is subject to disciplinary action in terms of that Act.
- (2) The *engineering work*, as set out in Annexure 1 of this Schedule, which is ordinarily performed by persons registered in an appropriate professional category of registration mentioned in Section 18(1)(a) of the *Engineering Profession Act*, is deemed to fall within the range of characteristics specified for each professional category, as set out Annexure 2 of this Schedule of these Regulations, and any registered person undertaking such work shall, for purposes of any disciplinary action referred to in sub-regulation (1), be deemed to have purported to be competent in performing such work.
- (3)
  - (a) Any person registered in a candidate category referred to in regulation 3(1)(b), who fails to perform *engineering work* under the supervision and control of a person registered as a professional in any professional category, is guilty of improper conduct in terms of section 27(3) of the *Engineering Profession Act* and is subject to disciplinary action in terms of that Act;
  - (b) Any person registered in a candidate category referred to in Regulation 7(2), who fails to comply with the condition contained in that regulation is deemed to be guilty of improper conduct as prescribed by the relevant Council and is subject to disciplinary action by that Council in terms of its Act.
- (4) Notwithstanding any exemption granted in Regulation 7(1); any person who is registered with a professional council mentioned in Regulation 7(1) and who regularly performs, or takes responsibility for the performance of, any one or more of the elements of the *engineering work* for which his or her education, training, experience and contextual knowledge have not specifically rendered him or her competent to perform, is deemed to be guilty of *improper conduct* and is subject to disciplinary action by such professional council with whom he or she is registered.

#### **6. Application of this Regulation**

- (1) This regulation applies in respect of –
  - (a) any *engineering work* performed within the borders of the RSA, whether or not the intended outcome of such work is to be executed outside the RSA;
  - (b) any person who is not ordinarily resident in the Republic of South Africa, but who performs *engineering work* within the borders of the RSA.
  - (c) any engineering system, product, component or commodity that have been designed, manufactured or produced outside the borders of the RSA, and which are incorporated, installed or executed in an engineering related project, to the extent that the person who undertakes such work inside the RSA must be registered in an appropriate professional category mentioned in section 18(1)(a) of the *Engineering Profession Act* and must take responsibility for the work so performed.

- (2) These regulations also apply in respect of any person who is in possession of any one or more of the Government Certificates of Competency mentioned in sub-regulation 6(3), and if, from the time of coming into operation of these regulations, such person –
- (a) does not hold a statutory appointment in terms of the Mines Health and Safety Act 1996, the Occupational Health and Safety Act 1993 or the Merchant Shipping Act 1951, but performs engineering work for which the relevant certificate of competency is required in terms of such Acts, must register as a professional in the relevant category of registration mentioned in section 18(1)(a) of the Engineering Profession Act; or
  - (b) holds a statutory appointment in terms of the Mines Health and Safety Act 1996, the Occupational Health and Safety Act 1993 or the Merchant Shipping Act 1951, and performs engineering work for which the relevant certificate of competency is required, must register as a professional certificated engineer mentioned in section 18(1)(a)(iii) of the Engineering Profession Act.
- (3) The Government Certificates of Competency, which should not be of limited scope, referred to in regulation 6(2) are:
- (a) Electrical Engineer's Certificate of Competency issued in terms of the Mine Health and Safety Act, 1996;
  - (b) Mechanical Engineer's Certificate of Competency issued in terms of the Mine Health and Safety Act, 1996;
  - (c) Electrical Engineer's Certificate of Competency issued in terms of the Occupational Health and Safety Act, 1993;
  - (d) Mechanical Engineer's Certificate of Competency issued in terms of the Occupational Health and Safety Act, 1993;
  - (e) Manager's Certificate of Competency (Metalliferous) issued in terms of the Mine Health and Safety Act, 1996;
  - (f) Manager's Certificate of Competency (Coal) issued in terms of Mine Health and Safety Act, 1996; and
  - (g) Chief Engineer Officer – Foreign Going Certificate of Competency issued in terms of the Merchant Shipping Act, 1951.

## 7. Exemptions

- (1) Notwithstanding the provisions of regulation 2, and subject to regulation 3(2), the following persons may, in the course of practising their profession, perform such elements of *engineering work* identified in terms of regulation 2(1), provided that their education, training, experience and contextual knowledge have specifically rendered them competent to perform such work:

Persons registered with the -

- (a) South African Council for the Architectural Profession in terms of the Architectural Profession Act, 2000 (*Act No 44 of 2000*);
- (b) South African Council for the Landscape Architectural Profession in terms of the Landscape Architectural Profession Act, 2000 (*Act No 45 of 2000*);
- (c) South African Council for the Property Valuers Profession in terms of the Property Valuers Profession Act, 2000 (*Act No 47 of 2000*);
- (d) South African Council for the Project and Construction Management Professions in terms of the Project and Construction Management Professions Act, 2000 (*Act No 48 of 2000*);
- (e) South African Council for the Quantity Surveying Profession in terms of the Quantity Surveying Profession Act, 2000 (*Act No 49 of 2000*);

- (f) South African Council for Planners in terms of the Planning Profession Act, 2002 (*Act No 36 of 2002*);
  - (g) South African Council for Natural Scientific Professions in terms of the National Scientific Professions Act, 2003 (*Act No 27 of 2003*); and
  - (h) South African Council for Professional and Technical Surveyors in terms of the Professional and Technical Surveyors' Act, 1984 (*Act No 40 of 1984*).
- (2) The provisions of regulation 7 (1) also apply in respect of a person who is registered as a candidate in terms of the relevant Act: Provided that such functions are performed under the direction, control and direct supervision of a person registered as a professional in terms of the same Act.

## **8. Engineering Work identified for Specified Categories**

- (1) Any Rule, in terms of which engineering work is identified by ECSA, in respect of a specified category of registration contemplated in section 18(1)(c) of the *Engineering Profession Act*, is deemed to be incorporated in this Regulation and the work so identified must be interpreted as augmenting or refining, as the case may be, the *engineering work* identified in Annexure 1 of this Schedule.
- (2) Any engineering work which, on the authority of legislation other than the Engineering Profession Act or the Council for the Built Environment Act, requires the person who performs such work, or who takes responsibility for the performance of such work, to be registered in terms of the Engineering Profession Act, is deemed to augment or refine, as the case may be, the engineering work identified in Annexure 1 of this Regulation.

## **9. Transitional Provisions**

- (1) Any person who is not registered in terms of the *Engineering Profession Act*, and who is required to be registered as a professional in terms of these Regulations must, within 12 months of the date on which this regulation comes into operation, be registered in any of the professional categories mentioned in section 18(1)(a) of the *Engineering Profession Act*.
- (2) Any person whose registration in a professional category was cancelled in terms of the Engineering Profession Act within one year prior to the date on which these regulations commence, must be re-registered in a professional category within six months from the date on which these regulations commence, unless he or she is not required to be so registered in terms of these regulations.
- (3) Any person contemplated in Regulation 6(2)(b) must, within a period of 24 months from the date on which this Regulation comes into operation, be registered as a Professional Certificated Engineer in terms of section 19(2)(a) of the Engineering Profession Act.



# ANNEXURE 1

## Engineering Work and Engineering Functions identified for Professional Categories of Persons Registered with ECSA

### 1. Identified Work

- (1) Engineering work identified for professional categories of persons registered with ECSA is work which -
  - (a) involves in its execution one or more of the following characteristics:
    - (i) investigation and solving of problems and design solutions;
    - (ii) application of knowledge and technology engineering based on mathematics, basic sciences and engineering sciences, information technology as well as specialist and contextual knowledge;
    - (iii) management of engineering works;
    - (iv) the addressing of the impacts of engineering work including the application of engineering principles and methods in the identification, analysis, evaluation, treatment and monitoring of risk; or
    - (v) the exercising of judgment and the taking of responsibility for engineering work; and
  - (b) falls within the scope of any types of work identified in section 2 of this schedule; and
  - (c) requires for its performance, any of the functions listed in section 3 of this schedule; and
  - (d) requires for its execution any of the minimum level of competencies identified in section 4 of this Schedule
- (2) Management of engineering works is the co-ordinated activities required to:
  - (a) direct and control everything that is constructed or results from construction or manufacturing operations;
  - (b) operate engineering works safely and in the manner intended;
  - (c) return engineering works, plant and equipment to an acceptable condition by the renewal, replacement or mending of worn, damaged or decayed parts;
  - (d) direct and control engineering processes, systems, commissioning, operation and decommissioning of equipment;
  - (e) maintain engineering works or equipment in a state in which it can perform its required function; or
  - (f) mitigate risks relating to health, safety and the environment and the functioning of such works.
- (3) Risk in relation to engineering works is the chance of something happening that is a source of potential harm to or has the potential to negatively impact upon health, safety, or environment in relation to or the functioning of such works.

### 2. Types of engineering works

The specific types of engineering works are:

- (1) Transportation systems including roads, railways, waterways, ports, harbours, airports, gas transmission and distribution systems, pipelines, and all associated works such as yards, docks, lighthouses, rolling stock, vessels, aircraft, lifts, hoists and escalators and pumping plant.
- (2) Civil works including township services, water treatment and supply, sewerage works, sanitation, soil conservation works, irrigation works, storm-water and drainage works, coastal engineering and solid waste disposal.

- (3) Structural works relating to the structural safety and serviceability of both the temporary and permanent works associated with structures that provide shelter, carry loads or retain materials or fluids.
- (4) Mechanical systems including materials handling, lifting machinery, heating, ventilation and cooling, prime movers, pumps, internal combustion engines, hydraulic, compressed air and other motive power machinery, agricultural machinery and accessories.
- (5) Works for the harnessing of energy including that derived from fossil fuel combustion, nuclear fission or fusion and solar radiation and other renewable sources, yielding energy suitable for commercial application.
- (6) Electrical power systems for the generation, transmission and distribution of electrical energy and the application thereof.
- (7) Electronic systems including that employed in telecommunication, measurement, control, computation and healthcare.
- (8) Process systems including chemical works, metallurgical works, manufacturing, food processing such as that in concentrator machinery and apparatus, oil and gas wells, smelters, cyanide plants, acid plants, metallurgical machinery, equipment and apparatus, and works necessary for the beneficiation of metals, minerals, rocks, petroleum and organic substances or other chemical processes.
- (9) Mining operations or activities for the purposes of winning any mineral on, in or under the earth, water or any residue deposit, whether by underground or open working or otherwise.**
- (10) The mechanical, electrical, chemical, electrochemical, metallurgical, biological or heat treatment of any substance, whether biological, organic or inorganic, and combinations thereof for any purpose.**
- (11) Building services such as water supply, drainage, fire protection measures, electrical and electronic systems**
- (12) Lightning protection measures.
- (13) Overseeing the planning, design and delivery of education and training programmes accredited by ECSA at the exit level.
- (14) The mentoring of persons in their preparation for registration with ECSA.

### **3. Functions performed**

The following functions are performed in engineering works:

- (1) design of materials, components, systems, plant or processes;
- (2) planning the capacity and location of infrastructure.
- (3) investigating, advising, costing and reporting on engineering problems and auditing thereof;
- (4) improvement or optimisation of materials, components, systems or processes;
- (5) management of, procurement within or the implementation of engineering projects and maintenance of engineering infrastructure;
- (6) implementation of engineering designs and solutions;
- (7) application of the results of research and development, and the engineering contribution to the commercialization of projects and products;
- (8) management of the risk associated with engineering processes, systems, equipment, plant and infrastructure;
- (9) communication of the impacts and outcomes of engineering analysis, design solutions, systems and processes to a wide range of stakeholders; and
- (10) the education, training and mentoring of engineering personnel, including candidates and students at higher education institutions in programmes that have been accredited by ECSA.

#### 4. Minimum Level of Competencies

(1) The minimum competencies required in relation to the following are:

(a) Engineering Problems:

Define, investigate and analyse engineering problems, where problems have the following attributes:

- (i) they are discrete, focused tasks within engineering systems;
- (ii) information is concrete and largely complete, but requires checking and possible supplementation by the practitioner;
- (iii) they are routine, frequently encountered and thus familiar to most practitioners in the practice area, and if unfamiliar, they are found in a familiar context;
- (iv) problem definitions may require clarification;
- (v) Involve several issues but with few of these imposing conflicting constraints;
- (vi) can be solved in standardised or prescribed ways; or
- (vii) solution of problems encompasses standards, codes and documented procedures and work outside these prescriptions is subject to authorisation.

(b) Engineering Solutions

Design or develop solutions to engineering problems, where the nature of the solutions has the following attributes:

- (i) they involve a limited range of interested and affected parties with differing needs; or
- (ii) the consequences of which are locally important but not far reaching.

(2) In applying the competencies in relation to engineering problems and engineering solutions, persons performing such work must be competent to:

- (a) comprehend and apply knowledge embodied in established engineering practices and knowledge specific to the jurisdiction; .
- (b) manage part or all of one or more engineering activity and communicate clearly with others in the course of these activities;
- (c) recognise the foreseeable social, cultural and environmental effects of engineering activity and meet all legal and regulatory requirements and protect the health and safety of affected persons;
- (d) conduct his or her engineering activities ethically; exercise sound judgement; and
- (e) be responsible for making decisions;

# ANNEXURE 2

## ENGINEERING COUNCIL OF SOUTH AFRICA

(Draft 4 – 11 May 2006)

### Guidelines: Characteristics of Engineering Work ordinarily performed by Professional Categories of Registration

#### 1. Introduction and Scope

The Regulations governing the identification of engineering work which are to be issued by the Minister of Public Works in terms of the Council for the Built Environment Act, 2000, are framed around the identification of engineering work[s] for persons who are registered in a category mentioned in section 18(1) of the Engineering Profession Act, 2000. **Annexure 1** of these Regulations is generic by nature and identifies the types of engineering works as well as the typical engineering activities practiced in the context of such engineering works. It does not definitively identify the scope of engineering work associated with each category of registration, i.e. -

- (a) professional engineer;
- (b) professional engineering technologist;
- (c) professional certificated engineer; and
- (d) professional engineering technician

These guidelines should be read in conjunction with Regulation 5(1) and (2) as well as **Annexure 1** of these Regulations prescribed by the Minister of Public Works ..... which read as follows:

#### *"5. Improper Conduct*

- (1) *Subject to Regulation 5(2), any person who is registered in a professional category mentioned in section 18(1)(a) of the Engineering Profession Act and who performs, or takes responsibility for the performance of, any one or more of the elements of engineering work identified in terms of regulation 2(1) at a level, or within the knowledge areas, which his or her education, training and experience have not rendered him or her competent to perform, is guilty of improper conduct in terms of section 27(3) of the Engineering Profession Act and is subject to disciplinary action in terms of that Act.*
- (2) *The engineering work, as set out in Annexure 1 of this Schedule, which is ordinarily performed by persons registered in an appropriate professional category of registration mentioned in Section 18(1)(a) of the Engineering Profession Act, is deemed to fall within the range of characteristics specified for each professional category, as set out Annexure 2 of this Schedule, and any registered person undertaking such work shall, for purposes of any disciplinary action referred to in sub-regulation (1), be deemed to have purported to be competent in performing such work."*

Regulation 5(1) reinforces a fundamental principle contained in the Code of Professional Conduct, namely that registered persons may not perform engineering work for which their education, training and experience have not rendered them competent to perform.

Regulation 5(2) contextualises Annexure 1 (identified engineering work) in relation to these guidelines, and specifically the generic characteristics of work generally performed by any one of the four professional categories of registration. The sub-regulation also establishes a (refutable) presumption that a person who actually performs identified engineering work is purporting to be competent in performing such work.

In the event that a person is found to have exceeded the boundaries of his or her competence, by performing engineering work that are normally associated with professionals registered in another category, or in a different discipline, such person is subject to disciplinary action by the Council.

## **2. Requirements**

The provisions of Regulation 5(1) and (2) are deemed to be satisfied where a person registered in an appropriate professional category performs and takes responsibility for engineering work which have the characteristics commensurate with his or her particular category of registration, as set out in 3.

Non-compliance with Regulation 5(1) and (2) constitutes improper conduct.

## **3. Characteristics of Engineering Practice**

### **3.1 Professional Engineer**

The engineering work of a professional engineer is characterised by:

- (a) the application of a significant range of fundamental principles, enabling the development and application of new technologies, the promotion of advanced designs and design methods, the introduction of new and innovative production techniques and construction concepts;
- (b) the pioneering of new engineering services and management methods;
- (c) advanced design, research and field engineering;
- (d) the management of high levels of risk associated with engineering processes, systems, equipment, and infrastructure; and
- (e) activities that are essentially intellectual in nature, requiring discretion and judgement

### **3.2 Professional Engineering Technologist**

The engineering work of a professional engineering technologist is characterised by:

- (a) the application of current engineering technology;
- (b) the management and operation of technology based engineering solutions and processes;
- (c) the introduction of known engineering services and management methods;
- (d) the management of the implementation of broadly defined engineering projects and the routine maintenance of engineering infrastructure; and
- (e) the management of moderate levels of risks associated with engineering processes, systems, equipment and infrastructure.

### **3.3 Professional Certificated Engineer**

The engineering work of a professional certificated engineer is characterised by:

- (a) the application of current engineering technology;
- (b) the management and operation of technology based engineering solutions and processes;
- (c) the introduction of known engineering services and management methods;
- (d) the management of the implementation of broadly defined engineering projects and the routine maintenance of engineering infrastructure; and
- (e) the management of moderate to high levels of risk associated with engineering processes, systems, equipment and infrastructure;

in specific contexts relating to persons working in factories, mines and on ships as certificated persons appointed in terms of the Occupational Health and Safety Act, 1993, the Mine Health and Safety Act, 1996 and the Merchant Shipping Act, 1951.

### 3.4 Professional Engineering Technician

The engineering work of a professional engineering technician is characterised by:

- (a) the application of established procedures, practices, standards and codes of practice in support of engineering activities;
- (b) the management and operation of routine engineering operations and processes;
- (c) the implementation of standard engineering systems and solutions;
- (d) management of the implementation of straightforward and simple engineering projects and the routine maintenance of engineering infrastructure; and
- (e) the management of relatively low levels of risk associated with engineering processes, systems, equipment and infrastructure.

