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VAN DIE REPUBLIEK VAN SUID-AFRIKA
REPUBLIC OF SOUTH AFRICA
GOVERNMENT GAZETTE

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**DEPARTEMENT VAN GEMEENSKAPS-
ONTWIKKELING**

No. R. 1113

11 Junie 1982

WET OP PROFESSIONELE INGENIEURS, 1968
(WET 81 VAN 1968)

KENNISGEWING INGEVOLGE ARTIKEL 7 (6).—
GELDETARIEF VIR PROFESSIONELE INGENIEURS

Kragtens artikel 7 (6) van die Wet op professionele Ingenieurs, 1968 (Wet 81 van 1968), maak ek Stephanus Francois Kotzé, Minister van Gemeenskapsontwikkeling, hierby bekend dat ek, na oorweging en goedkeuring van 'n ter sake dienende aanbeveling van die Suid-Afrikaanse Raad vir Professionele Ingenieurs, kragtens artikel 7 (3) (b) van genoemde Wet die voorsiening soos uiteengesit in die Bylae hiervan, gemaak het.

Die voorsiening tree in werking op die datum van publikasie hiervan.

Vir enige werk verrig voor die datum van publikasie hiervan, in verband met 'n projek waarna in die Bylae as geheel of gedeeltelik verwys word, sal die gelde waarop voor die datum van publikasie hiervan ooreengekom is, gehef word. Vir enige werk wat nog verrig moet word in verband met 'n projek soos voormeld na die datum van publikasie hiervan, kan die gelde gehef word op die basis van die voorsiening soos uiteengesit in die Bylae.

Enige afwyking van die voorsiening soos uiteengesit in die Bylae sal onderworpe wees aan regulasie 10.17 van die Regulasies uitgevaardig kragtens artikel 26 van die voormelde Wet soos gepubliseer in Goewermenskennisgewing R. 1527 van 17 Julie 1981 (soos gewysig by Goewermenskennisgewings R. 1782 van 21 Augustus 1981 en R. 2199 van 16 Oktober 1981); asook paragrawe 5.2.2 of 6.3 of 7.2.2. of 8.3 van die voorsiening gemaak ingevolge artikel 31 (1) van die voormelde Wet soos gepubliseer in Goewermenskennisgewing R. 1142 van 29 Mei 1981.

GOVERNMENT NOTICE

**DEPARTMENT OF COMMUNITY
DEVELOPMENT**

No. R. 1113

11 June 1982

PROFESSIONAL ENGINEERS' ACT, 1968
(ACT 81 OF 1968)

NOTICE IN TERMS OF SECTION 7 (6).—TARIFF
OF FEES FOR PROFESSIONAL ENGINEERS

In terms of section 7 (6) of the Professional Engineers' Act, 1968 (Act 81 of 1968), I Stephanus Francois Kotzé, Minister of Community Development, hereby make known that, after consideration and approval of a relevant recommendation of the South African Council for Professional Engineers, I have, in terms of section 7 (3) (b) of the said Act, made the provisions as set out in the Schedule hereto.

These provisions shall come into operation on the date of publication of this notice.

Any work performed in respect of any project to which the Schedule refers in whole or in part, prior to the date of publication of this notice shall be charged for on the basis as agreed upon prior to the aforementioned date. Any work still to be performed in respect of any such project referred to above after the date of publication of this notice may be charged for on the basis of the provisions as set out in the Schedule.

Any deviation from the provisions as set out in the Schedule shall be subject to regulation 10.17 of the Regulations made in terms of section 26 of the said Act as published in Government Notice R. 1527 of 17 July 1981 (as amended by Government Notices R. 1782 of 21 August 1981 and R. 2199 of 16 October 1981), and paragraphs 5.2.2 or 6.3 or 7.2.2 or 8.3 of the provisions made in terms of section 31 (1) of the said Act as published in Government Notice R. 1142 of 29 May 1981.

BYLAE

GELDETARIEF WAARVOLGENS 'N PROFESSIONELE INGENIEUR DIE BEDRAG KAN BEREKEN TEN OPSIGTE VAN DIE LEWERING VAN PROFESSIONELE DIENSTE: SIVIELE, STRUKTURELE, MEGANIESE EN ELEKTRIESE INGENIEURSWEESE

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1. ALGEMEEN.

1.1 In hierdie Bylae, tensy strydig met die samehang, het 'n uitdrukking of woord waaraan in die Wet op Professionele Ingenieurs, 1968 (Wet 81 van 1968), 'n besondere betekenis geheg is, dieselfde betekenis en beteken—

“kliënt” enige persoon of regspersoon wat die professionele ingenieur in private professionele raadgewende praktyk opdrag gee om ten behoeve van hom die dienste te verrig wat in regulasies 2, 3 of 4 uiteengesit word;

1. GENERAL.

1.1 In this Schedule, unless inconsistent with the context, an expression or word to which a meaning has been assigned in the Professional Engineers' Act, 1968 (Act 81 of 1968), shall bear the same meaning, and—

“client” means any person or body corporate engaging a professional engineer in private professional consulting practice to perform on his behalf the services set for in regulations 2, 3 or 4;

“kontrakteur” enige persoon of regspersoon onder kontrak by ’n kliënt om ingenieurswerke of ’n gedeelte daarvan te verrig, en omvat enige subkontrakteur aan wie enige gedeelte van die werke deur ’n kontrakteur uitbestee is;

“projek” ’n gebou of skema vir die geheel of ’n gedeelte waarvan die professionele ingenieur ’n opdrag ontvang;

“stadium” die verslagstadium, die voorlopige ontwerpstadium, die ontwerp- en tenderstadium, of die konstruksiestadium van die dienste wat deur die professionele ingenieur verrig moet word, soos beskryf in regulasies 2.1.1, 3.1.1 en 4.1.1;

“werke” of “ingenieurswerke” daardie gedeelte van ’n projek waarvan die professionele ingenieur verantwoordelik is;

1.2 Die dienste waarvoor die gelde kragtens hierdie Bylae heef kan word, word uiteengesit—

1.2.1 in regulasie 2.1, ten opsigte van ingenieursdienste vir siviele, strukturele, meganiese en elektriese projekte;

1.2.2 in regulasie 3.1, ten opsigte van strukturele en siviele ingenieursdienste wat met bouprojekte in verband staan; en

1.2.3 in regulasie 4.1, ten opsigte van meganiese en elektriese ingenieursdienste wat met bouprojekte in verband staan.

1.3 Indien die gelde wat kragtens hierdie Bylae heef kan word, op die koste van die werke bereken word, word die koste van die werke vasgestel soos bepaal in regulasies 2.2.3, 3.2.3 en 4.2.3.

1.4 Indien die dienste van die professionele ingenieur van ’n normale aard is, is die gelde neergelê in regulasies 2.3.1, 3.3.1 en 4.3.1 van toepassing.

1.5 Indien die dienste van die professionele ingenieur van sodanige aard is dat die eise aan hom gestel buitengewoon hoog is, kan die gelde neergelê in regulasies 2.3.1, 3.3.1 en 4.3.1, of dié gedeelte van sodanige gelde wat ooreenstem met die koste van sodanige gedeelte van die werke, na gelang van die geval, verhoog word soos bepaal in regulasies 2.3.2.1.5, 3.3.2.1.1.3 en 4.3.2.1.5. Die oorsake vir die buitengewone hoë eise aan die professionele ingenieur is nie tot die volgende beperk nie maar sluit die volgende in:

1.5.1 Waar die werke die toepassing verg van nuwe, ongewone of onbeproepte tegnieke, veranderinge aan bestaande werke, invoeging van tweedehandse toerusting, ontwerp of toepassing van ingewikkelde beheerbane, stelsels of prosesse of buitengewone ingewikkeldheid van die geheel of ’n gedeelte van die werke of van afsonderlike elemente wat elkeen oorspronklike ontwerp vereis;

1.5.2 waar die werke aansienlike gedeeltes van uiteenlopende soorte dienste behels dermate dat die gesamentlike besondere aandag van professionele ingenieurs met bepaald verskillende kundigheid nodig is;

1.5.3 waar die werke wat onderneem word op verskillende nie-aangrensende terreine is, selfs waar sodanige werke deel uitmaak van ’n oorkoepelende aanstelling; en

1.5.4 wanneer, met die toestemming of op versoek van die kliënt, die deurlopendheid van die werke onderbreek of die werke gefragmenteer word deur dit in afsonderlik gedokumenteerde stadia of gedeeltes uit te voer.

1.6 Indien die dienste van die professionele ingenieur van sodanige aard is dat die eise aan hom gestel buitengewoon laag is, kan die gelde neergelê in regulasies 2.3.1, 3.3.1 en 4.3.1, of dié gedeelte van sodanige gelde wat ooreenstem met die koste van sodanige gedeelte van die werke, na gelang van die geval, verminder word soos bepaal in regulasies 2.3.2.2, 3.3.2.2 en 4.3.2.2.

“contractor” means any person or body corporate under contract to a client to perform engineering works or part thereof and includes any sub-contractor to whom any part of the works has been sublet by a contractor;

“project” means a building or scheme for all or part of which the professional engineer is commissioned;

“stage” means the report stage, the preliminary design stage, the design and tender stage, or the construction stage of the services to be performed by the professional engineer as described in regulations 2.1.1, 3.1.1 and 4.1.1;

“works” or “engineering works” means that part of a project for which the professional engineer is responsible.

1.2 The services covered by the fees which are chargeable in terms of this Schedule are set out—

1.2.1 in regulation 2.1, in respect of all engineering services for Civil, Structural, Mechanical and Electrical projects;

1.2.2 in regulation 3.1, in respect of structural and civil engineering services pertaining to building projects; and

1.2.3 in regulation 4.1, in respect of mechanical and electrical engineering services pertaining to building projects.

1.3 Where the fees chargeable in terms of this Schedule are to be calculated on the cost of the works, the cost of the works shall be determined as in regulations 2.2.3, 3.2.3 and 4.2.3.

1.4 Where the services of the professional engineer are of normal character the fee stated in regulations 2.3.1, 3.3.1 and 4.3.1 shall apply.

1.5 Where the services of the professional engineer are of such a nature that the demands on him are unusually high the fee stated in regulations 2.3.1, 3.3.1 and 4.3.1 or the portion of such fee corresponding to the cost of such part of the works, as the case may be, may be increased as provided in regulations 2.3.2.1.5, 3.3.2.1.1.3 and 4.3.2.1.5. The causes of the demands on the professional engineer being unusually high are not limited to the following but include the following:

1.5.1 Where the works call for the application of new, unusual or untried techniques, alteration to existing works, incorporation of second-hand plant, design or application of complex control circuits, systems or processes or excessive complexity of the whole or part of the works or of individual elements each requiring original design;

1.5.2 where the works comprise substantial portions of dissimilar types of services such that the joint detailed attention of professional engineers of distinctly different expertise is required;

1.5.3 where the works being undertaken are on separate non-contiguous sites, even if such works form part of one overall appointment;

1.5.4 when, with the agreement or at the request of the client, the continuity of the works is interrupted or the works are fragmented by being constructed in separately documented phases or sections.

1.6. Where the services of the professional engineer are of such a nature that the demands on him are unusually low the fee stated in regulations 2.3.1, 3.3.1 and 4.3.1 or the portion of such fee corresponding to the cost of such part of the works, as the case may be, may be decreased as provided in regulations 2.3.2.2, 3.3.2.2 and 4.3.2.2.

1.7 Indien die dienste van die professionele ingenieur van sodanige aard is dat 'n persentasie of ander neergelegde gelde nie geskik is nie, is die gelde op 'n tydbasis berekenbaar soos in regulasies 2.3.4, 3.3.4 en 4.3.4 uiteengesit: Met dien verstande dat waar die gelde op 'n tydbasis, of die voorgeskrewe tarief, onvoldoende is in vergelyking met die dienste gelewer deur 'n professionele ingenieur, geskikte spesiale gelde tussen die professionele ingenieur en sy kliënt beding mag word.

1.8 Die ondergemelde uitgawes deur 'n professionele ingenieur aangegaan in die uitvoering van sy opdrag is verhaalbaar en moet aan die professionele ingenieur terugbetaal word bo en behalwe die gelde voormeld, teen koerse soos met die kliënt ooreengekom:

1.8.1 Drukwerk, afrolwerk, verkryging van alle dokumente, rekords, tekening of landkaarte;

1.8.2 regs-, argitek- of ander deskundige advies namens die kliënt met sy toestemming verkry;

1.8.3 opmetings, modeltoetse, terrein-, fondament- of spesiale ondersoek of laboratoriumtoetse en -ontledings namens die kliënt en met sy toestemming uitgevoer;

1.8.4 spesiale kabelgramme, telegramme, telekskoste, telefoonoprope en posgeld op tekening en dokumente soos met die kliënt ooreengekom;

1.8.5 reiskoste redelikerwys deur die professionele ingenieur en sy personeel aangegaan in die uitvoering van hulle pligte;

1.8.6 huisvesting en verblyf koste redelikerwys en behoorlik deur die professionele ingenieur en lede van sy personeel aangegaan;

1.8.7 advertering ten behoeve van die kliënt;

1.8.8 spesiale versekering uitgeneem met die kliënt se toestemming;

1.8.9 rekenaarkoste aangegaan waar die gelde op 'n tyd-basis bereken word;

1.8.10 nagaan-, inspeksie-, aansoek- en ander formele heffings opgelê deur bevoegde owerhede;

1.8.11 die koste verbonde aan die verskaffing van terreinpersoneel kragtens regulasies 2.1.2.1, 3.1.2.1 en 4.1.2.1.

2. INGENIEURSDIENSTE VIR SIVIELE, STRUKTURELE, MEGANIESE EN ELEKTRIESE PROJEKTE.

2.1 DIENSTE DEUR DIE PROFESSIONELE INGENIEUR VERRIG TE WORD.

2.1.1 NORMALE DIENSTE.

Die normale dienste deur die professionele ingenieur verrig te word, behels:

2.1.1.1 VERSLAGSTADIUM.

Die opstel en voorlegging van 'n verslag met voorlopige voorstelle of gangbaarheidstudies en kosteramings vir ooreweging deur die kliënt en, indien nodig, met inbegrip van—

2.1.1.1.1 oorlegpleging met die kliënt of sy gemagtigde verteenwoordigers;

2.1.1.1.2 inspeksie van die terrein van die werke;

2.1.1.1.3 voorlopige ondersoek, roetebeplanning, beplanning en ontwerp waar enige hiervan nodig is om gangbaarheid te bepaal;

2.1.1.1.4 oorlegpleging met owerhede wat oor beslissingsregte of -magte beskik;

2.1.1.1.5 raadgewing aan die kliënt oor die noodsaaklikheid van opmetings, ontledings, toetse en terrein- of ander ondersoek wat nodig mag wees vir afhandeling van die verslag, en die tref van reëlins om dit op koste van die kliënt te laat uitvoer;

1.7 Where the services of the professional engineer are of such a nature that a percentage or other stated fee is inappropriate, a fee shall be chargeable on a time basis as set out in regulations 2.3.4, 3.3.4 and 4.3.4: Provided that where the fee on a time basis, or the prescribed tariff, would be inadequate in relation to the services rendered by the professional engineer, an appropriate special fee may be negotiated between the professional engineer and his client.

1.8 The following costs incurred by a professional engineer in the execution of his commission are of a reimbursive nature and are refundable to the professional engineer over and above the aforementioned fees as rates as agreed with the client:

1.8.1 Printing, copying, acquisition of all documents, records, drawings or maps;

1.8.2 legal, architectural or other specialist advice obtained on behalf of the client with his consent;

1.8.3 surveys, model tests, site of foundation or special investigations or laboratory tests and analyses carried out on behalf of the client and with his consent;

1.8.4 special cablegrams, telegrams, telex charges, telephone calls and postage on drawings and documents as agreed with the client;

1.8.5 travelling costs reasonably incurred by the professional engineer and his staff in performing their services;

1.8.6 accommodation and subsistence costs reasonably and properly incurred by the professional engineer and members of his staff;

1.8.7 advertising on behalf of the client;

1.8.8 special insurance taken out with the client's consent;

1.8.9 computer costs incurred where the fee is charged on a time basis;

1.8.10 scrutiny, inspection, application and other formal charges raised by competent authorities;

1.8.11 the cost of providing site staff appointed in terms of regulations 2.1.2.1, 3.1.2.1 and 4.1.2.1.

2. ENGINEERING SERVICES FOR CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL PROJECTS.

2.1 SERVICES TO BE PERFORMED BY THE PROFESSIONAL ENGINEER.

2.1.1 NORMAL SERVICES.

The normal services to be performed by the professional engineer are:

2.1.1.1 REPORT STAGE.

The preparation and submission of a report embodying preliminary proposals or feasibility studies and estimates of cost for consideration by the client, including, as may be necessary:—

2.1.1.1.1 consultation with the client or his authorised representatives;

2.1.1.1.2 inspection of the site of the works;

2.1.1.1.3 preliminary investigation, route location, planning and design where any of these are required for determination of feasibility;

2.1.1.1.4 consultation with authorities having rights or powers of sanction;

2.1.1.1.5 advice to the client as to the need for surveys, analyses, tests and site or other investigations where such are required for the completion of the report and arranging for these to be carried out at the client's expense;

2.1.1.1.6 ondersoek en saamvoeging van beskikbare gegewens, tekeninge en planne wat op die werke betrekking het;

2.1.1.1.7 ondersoek, waar nodig, na die finansiële implikasies van die voorstelle.

2.1.1.2 VOORLOPIGE ONTWERPSTADIUM.

Die ontwikkeling van die voorlopige voorstelle of die basiese beplanning van die werke, soos deur die kliënt verlang en, indien nodig, met inbegrip van—

2.1.1.2.1 voorlegging van 'n basiese beplanningsverslag, indien die kliënt dit verlang;

2.1.1.2.2 raadgewing aan die kliënt oor die noodsaaklikheid van enige verdere opmetings, ontledings, toetse en terrein- of ander ondersoek waar nodig, en die tref van reëlins om dit op koste van die kliënt te laat uitvoer;

2.1.1.2.3 raadgewing aan die kliënt, na gelang dit nodig is, oor die aanstelling en die omskrywing van die dienste van ander professionele ingenieurs, argitekte en deskundige raadgewers, en die reëling van sodanige aanstellings en oorlegplegings met sodanige raadgewers oor sake rakende die werke;

2.1.1.2.4 die ontwerp van enige proses of stelsel of verfyning van die voorlopige prosesontwerp, waar sodanige prosesontwerp 'n voorvereiste is vir die ontwerp van die werke;

2.1.1.2.5 opstel van die voorlopige planne, tekeninge en kosteramings wat nodig is ten einde die goedkeuring van statutêre owerhede aan te vra;

2.1.1.2.6 oorlegpleging oor tegniese aangeleenthede met ander owerhede en belanghebbendes as dié met beslissingsregte of -magte;

2.1.1.2.7 aanbring van wysigings aan die voorlopige ontwerp van die werke wat voortspruit uit of verband hou met die oorlegplegings voornoemd.

2.1.1.3 ONTWERP- EN TENDERSTADIUM.

Die opstel van alle dokumente wat nodig is sodat tenders vir die werke ingewing of die werke andersins deur die kliënt uitbestee kan word, en, indien nodig, met inbegrip van—

2.1.1.3.1 raadgewing aan die kliënt oor die noodsaaklikheid van die uitpen of die afbakening van die werke en die tref van reëlins om dit op koste van die kliënt te laat uitvoer;

2.1.1.3.2 opstel van ontwerpe, tekeninge, spesifikasies en ingenieurshoeveelheidslyste;

2.1.1.3.3 opstel of wysiging van tenderadvertensies, tendervoorwaardes, tendervorms en kontrakvoorwaardes;

2.1.1.3.4 ontledings van tenders en voorlegging van aanbevelings oor die aanvaarding van tenders en kosteramings van die werke.

2.1.1.4 KONSTRUKSIESTADIUM.

Die algemene administrasie en ander dienste in verband met die uitvoering van die werke en, indien nodig, met inbegrip van—

2.1.1.4.1 plasing van bestellings vir die werke namens die kliënt;

2.1.1.4.2 raadgewing aan die kliënt oor die opstel van die kontrakdokumente, of opstel van die kontrakdokumente;

2.1.1.4.3 raadgewing aan die kliënt oor die aanstelling van terreinpersoneel kragtens regulasie 2.1.2.1;

2.1.1.4.4 voorbereiding van enige verder planne, ontwerpe en tekeninge, uitgesonderd werkwinkeltekeninge, wat vir die uitvoering van die werke nodig mag wees maar wat buigskedules in die geval van gewapendebetonwerk insluit;

2.1.1.1.6 investigation and collation of available data, drawings and plans relating to the works;

2.1.1.1.7 investigations, as may be required, of financial implications in relation to the proposals.

2.1.1.2 PRELIMINARY DESIGN STAGE.

The development of preliminary proposals or the basic planning of the works, as may be required by the client, including, as may be necessary—

2.1.1.2.1 submission of a basic planning report if required by the client;

2.1.1.2.2 advice to the client as to the need for any further surveys, analyses, tests and site or other investigations which may be required and arranging for these to be carried out at the client's expense;

2.1.1.2.3 advice to the client, as may be necessary, upon the appointment and delineation of the services of other professional engineers, architects and specialist advisers and arranging such appointments and consultations with such advisers in matters affecting the works;

2.1.1.2.4 design of any process or system or refinement of the preliminary process design, where such process design is a prerequisite to the design of the works;

2.1.1.2.5 preparation of preliminary plans, drawings and estimates required for seeking the approval of statutory authorities;

2.1.1.2.6 consultation on technical matters with authorities and interested parties other than those having rights or powers of sanction;

2.1.1.2.7 making modifications to the preliminary design of the works dictated by or in connection with the aforesaid consultations.

2.1.1.3 DESIGN AND TENDER STAGE.

The preparation of all documents necessary to enable the works to be tendered for or otherwise placed by the client, including, as may be necessary—

2.1.1.3.1 advice to the client as to the necessity for setting out or staking out the works and arranging for such to be carried out at the client's expense;

2.1.1.3.2 preparation of designs, drawings, specifications and engineering schedules of quantities;

2.1.1.3.3 drafting or adapting invitations to tender, tender conditions, forms of tender and conditions of contract;

2.1.1.3.4 analyses of tenders and submission of recommendations on the acceptance of tenders and estimates of the cost of the works.

2.1.1.4 CONSTRUCTION STAGE.

The general administration and other services in connection with the carrying out of the works, including, as may be necessary—

2.1.1.4.1 placing orders for the works on behalf of the client;

2.1.1.4.2 advice to the client as to the preparation of the contract documents or preparation of the contract documents;

2.1.1.4.3 advice to the client as to the appointment of site staff in accordance with regulation 2.1.2.1;

2.1.1.4.4 preparation of any further plans, designs and drawings, excluding shop details, which may be necessary for the carrying out of the works, but including bending schedules in the case of reinforced concrete work;

2.1.1.4.5 kontrolering van die kontrakteurs se tekeninge van strukture, toerusting, uitrusting en stelsels vir die permanente werke om seker te maak dat dit aan die ontwerpvereistes voldoen, maar uitgesonderd die gedetailleerde kontrolering van vervaardiging- en installeringsdetails vir oprigting- of installasiejuistheid;

2.1.1.4.6 raadgeving aan die kliënt oor alternatiewe ontwerpe en tenders maar uitgesonderd gedetailleerde inspeksie, hersiening en kontrolering van alternatiewe ontwerpe en tekeninge wat nie deur die professionele ingenieur opgestel is nie en deur enige kontrakteur of voornemende kontrakteur voorgelê is;

2.1.1.4.7 uitreiking van opdragte aan kontrakteurs, koördinerende en algemene inspeksie van die uitvoering van die werke tot nakoming van die kontrak by tussenpose soos deur die professionele ingenieur nodig geag, leidinggewing aan terreinpersoneel maar uitgesonderd gedetailleerde en daaglikse inspeksie van die werke en terreinadministrasie waarvoor in regulasie 2.1.2.1 voorsiening gemaak word;

2.1.1.4.8 uitreiking van sertifikate vir betaling aan kontrakteurs en vasstelling van finale hoeveelhede saam met kontrakteurs waar terreinpersoneel aangestel is, maar uitgesonderd opmetings op die terrein;

2.1.1.4.9 beslegting van geskille of verskille wat tussen die kliënt en die kontrakteurs mag ontstaan, maar uitgesonderd bemiddeling, arbitrasie en regsdinge;

2.1.1.4.10 uitreiking van wysigingsopdragte;

2.1.1.4.11 raadgeving aan die kliënt oor die inspeksie en toets van sodanige materiaal en toerusting as wat normaalweg geïnspekteer en getoets word, en die tref van reëlins om sodanige inspeksie en toetsing op koste van die kliënt te laat uitvoer;

2.1.1.4.12 die tref van reëlins vir die uitvoer en die bywoning van werkverrigting- of aanvaardingtoetse op die terrein;

2.1.1.4.13 die tref van reëlins, namens die kliënt, vir die verskaffing en reproduksie van sodanige tekeninge en dokumente as wat die kontrakteurs en terreinpersoneel nodig mag hê om die werke uit te voer;

2.1.1.4.14 die tref van reëlins om die kliënt, na voltooiing van die werke, van sodanige rekordtekeninge en handleidings te voorsien as wat vir die bedryf en instandhouding van die werke nodig mag wees en die opstel van sodanige dokumente as wat nodig mag wees om die tekeninge en handleidings wat voorsien is, te koördineer.

2.1.2 BYKOMENDE DIENSTE.

Dienste in verband met onderstaande items is bykomend by die normale dienste van die professionele ingenieur, wat die kliënt se goedkeuring moet verkry vir die verrigting van sodanige dienste.

2.1.2.1 VERSKAFFING VAN TERREINPERSONEEL.

2.1.2.1.1 Indien die kliënt dit verlang van die professionele ingenieur belas met die dienste omskryf in regulasie 2.1.1.4, stel die professionele ingenieur sodanige bevoegde terreinpersoneel aan as wat nodig mag wees vir die doeltreffende kontrolering van die uitpyn, daaglikse inspeksie van die konstruksie van die werke, die opmeet van werk op die terrein en die vasstelling van die hoeveelhede saam met verteenwoordigers van die kontrakteurs.

2.1.2.1.2 Indien voldoende terreinpersoneel nie aangestel is nie, moet die professionele ingenieur, met die goedkeuring van die kliënt, sodanige bykomende dienste lewer as wat nodig mag wees om die funksies omskryf in regulasie 2.1.2.1.1 uit te voer.

2.1.1.4.5 checking contractors' drawings of structures, plant, equipment and systems for the permanent works for conformity with design requirements but excluding detailed checking of manufacture and installation details for erection or installation fit;

2.1.1.4.6 advice to the client on alternative designs and tenders but excluding detailed inspection, reviewing and checking of alternative designs and drawings not prepared by the professional engineer and submitted by any contractor or potential contractor;

2.1.1.4.7 issuing instructions to contractors, co-ordinating and generally inspecting the execution of the works for compliance with the contract at such intervals as the professional engineer may deem necessary, directing site staff but excluding detailed and day-to-day inspection of the works and site administration as provided for under regulation 2.1.2.1;

2.1.1.4.8 issuing certificates for payment to contractors and agreeing final quantities with contractors where site staff are engaged, but excluding measurements on site;

2.1.1.4.9 deciding in disputes or differences that may arise between the client and the contractors excepting mediation, arbitration and litigation;

2.1.1.4.10 issuing variation orders;

2.1.1.4.11 advice to the client regarding the inspection and testing of such materials and plant as are usually inspected and tested and arranging for such inspection and testing to be carried out at the client's expense;

2.1.1.4.12 arranging for the carrying out and witnessing of performance or acceptance tests at site;

2.1.1.4.13 making arrangements on behalf of the client for the provision and reproduction of such drawings and documents as may be required by contractors and site staff for the execution of the works;

2.1.1.4.14 making arrangements to provide the client, on completion of the works, with such record drawings and manuals as may be required for the operation and maintenance of the works and preparing such documents as may be necessary to co-ordinate the drawings and manuals provided.

2.1.2 ADDITIONAL SERVICES.

Services in connection with the items listed below are additional to the normal services of the professional engineer, who shall obtain the approval of the client for any such services to be carried out:

2.1.2.1 PROVISION OF SITE STAFF.

2.1.2.1.1 Should the client require the professional engineer charged with the services in regulation 2.1.1.4 so to do, the professional engineer shall appoint such competent site staff as is necessary for the efficient checking of setting out, day-to-day inspection of construction of the works, measuring up of work on site and agreeing quantities with contractors' representatives.

2.1.2.1.2 Where adequate site staff are not appointed the professional engineer shall provide such additional services as are necessary for carrying out the functions described in regulation 2.1.2.1.1 subject to the approval of the client.

2.1.2.2 LEIER VAN DIE PROFESSIONELE SPAN.

Indien die kliënt verlang dat die professionele ingenieur as leier van die professionele span moet optree wat ander professionele ingenieurs, argitekte, of tegniese raadgewers kan insluit, sluit die bykomende dienste die volgende in:

2.1.2.2.1 Verantwoordelikheid vir die algehele administrasie van alle gedeeltes van die projek met inbegrip van dié wat binne die bestek val van die ander professionele raadgewers in die span;

2.1.2.2.2 verantwoordelikheid vir die algehele koördinerings, programmering van ontwerp en finansiële beheer van die projek;

2.1.2.2.3 goedkeuring van sertifikate vir betaling aan kontrakteurs, uitgereik deur die ander professionele raadgewers in die span, voor voorlegging aan die kliënt vir vereffening.

2.1.2.3 BEMIDDELING, ARBITRASIE EN REGSGEDINGE EN SOORTGELYKE DIENSTE.

Indien die kliënt die professionele ingenieur opdrag gee om die ondergemelde dienste te onderneem, is die omvang daarvan onderworpe aan ooreenkoms tussen die twee partye:

2.1.2.3.1 Hantering van Waterhof- en Waterregaangeleenthede, verkryging van parlementêre of ander statutêre goedkeuring, lisensies of permitte;

2.1.2.3.2 bystand by beoogde of werklike bemiddeling, arbitrasie- of regsverrigtinge;

2.1.2.3.3 optrede by of bywoning van geregshoue en kommissies van ondersoek, gekose komitees en soortgelyke liggame wat by wet, regulasie of verordening ingestel is.

2.1.2.4 DIVERSE BYKOMENDE DIENSTE.

2.1.2.4.1 Ondersoeke wat nie regstreekse verband hou met die ontwerp, dokumentering en inspeksie van die uitvoering van die werke nie.

2.1.2.4.2 Waardebepaling vir die aankoop, verkoop of huur van toerusting, uitrusting, materiaal, stelsels, grond of geboue of die tref van reëlins vir sodanige waardebe-paling.

2.1.2.4.3 Die tref van reëlins vir deurgangsregte, serwi-tute of onteienings.

2.1.2.4.4 Onderhandelings oor en die tref van reëlins vir die verskaffing of verlegging van utiliteitsdienste wat nie deel uitmaak van die werke nie.

2.1.2.4.5 Aanbring van sodanige wysigings as wat nodig mag wees om formele goedkeuring te verkry van die betrokke staatsdepartemente of openbare owerhede, voort-spruitende uit besluite deur sodanige departemente of ower-hede as gevolg van beleidsveranderings en ander oorsake buite die beheer van die professionele ingenieur.

2.1.2.4.6 Opmetings, ontledings, toetse en terrein- of fondament-of ander ondersoeke, modeltoetse, laborato-riumtoetse en -ontledings uitgevoer namens die kliënt en die uitvoering van werkverrigting- of aanvaardingstoetse op die terrein ooreenkomstig regulasies 2.1.1.1.5, 2.1.1.2.2 en 2.1.1.4.12.

2.1.2.4.7 Uitpen of afbakening van die werke ooreen-komstig regulasie 2.1.1.3.1.

2.1.2.4.8 Opstel of gedetailleerde kontrolering van ver-vaardiging en installeringsbesonderhede vir oprigtingjuis-theid.

2.1.2.4.9 Gedetailleerde inspeksie, hersiening en kontro-lering van ontwerpe en tekeninge wat nie deur die professio-nale ingenieur opgestel is nie en deur enige kontrakteur of voornemende kontrakteur voorgelê is as alternatief vir dié wat ingesluit is by die tender of soortgelyke dokumente wat deur die professionele ingenieur opgestel is.

2.1.2.2 LEADER OF THE PROFESSIONAL TEAM.

Should the client require the professional engineer to assume the leadership of a team which may include other professional engineers, architects or technical advisers, the additional services shall include the following:

2.1.2.2.1 Responsibility for the overall administration of all sections of the project including those which fall within the ambit of the other professional advisers in the team;

2.1.2.2.2 responsibility for the overall co-ordination, programming of design and financial control of the project;

2.1.2.2.3 approval of certificates for payment to contrac-tors issued by the other professional advisers in the team, prior to their presentation to the client, for settlement.

2.1.2.3 MEDIATION, ARBITRATION AND LITIGATION PROCEEDINGS AND SIMILAR SERVICES.

Where the client instructs the professional engineer to undertake the services listed below, the extent thereof shall be subject to agreement between the two parties:

2.1.2.3.1 Dealing with Water Court matters, Water Law matters, obtaining Parliamentary or other statutory appro- val, licences or permits;

2.1.2.3.2 assisting with contemplated or actual media- tion, arbitration or litigation proceedings;

2.1.2.3.3 officiating at or attending courts and commis- sions of inquiry, select committees and similar bodies con- vened by statute, regulation or decree.

2.1.2.4 DIVERSE ADDITIONAL SERVICES.

2.1.2.4.1 Enquiries not directly concerned with the design, documentation and inspection of the execution of the works.

2.1.2.4.2 Valuation for purchase, sale or leasing of plant, equipment, material, systems, land or buildings or arrang- ing for such valuation.

2.1.2.4.3 Making arrangements for wayleaves, servi- tudes or expropriations.

2.1.2.4.4 Negotiating and arranging for the provision or diversion of utility services not forming part of the works.

2.1.2.4.5 Making such revisions as may be required to obtain the formal approval of the appropriate Government Departments or public authorities, resulting from decisions of such departments or authorities arising out of changes in policy and other causes beyond the professional engineer's control.

2.1.2.4.6 Surveys, analyses, tests and site or foundation or other investigations, model tests, laboratory tests and analyses carried out on behalf of the client and the carrying out of performance or acceptance tests at site in accordance with regulations 2.1.1.1.5, 2.1.1.2.2 and 2.1.1.4.12.

2.1.2.4.7 Setting out or staking out the works in accord- ance with regulation 2.1.1.3.1.

2.1.2.4.8 Preparation or detailed checking of manufac- ture and installation details for erection fit.

2.1.2.4.9 Detailed inspection, reviewing and checking of designs and drawings not prepared by the professional engi- neer and submitted by any contractor or potential contractor as alternative to those embodied in tender or similar docu- ments prepared by the professional engineer.

2.1.2.4.10 Opstel en uiteensetting van besonderhede en berekeninge op 'n wyse wat deur enige aangewese owerheid verlang word en wat verskil van wat die kliënt verlang.

2.1.2.4.11 Dienste wat aanleiding gee tot buitengewone bykomende kostes vir die professionele ingenieur, insluitende—

2.1.2.4.11.1 dienste wat ontstaan omrede 'n kontrakteur in gebreke bly om sy kontrak te voltooi;

2.1.2.4.11.2 dienste deur die professionele ingenieur verrig wat gebruikelikewys of kontraktueel die verantwoordelikheid van die kontrakteur is, hetsy uit hoofde van spesiale kontraktuele bepalinge wat die kontrakteur onthef van sy gebruikelike verpligtinge of as gevolg daarvan dat die kontrakteur in gebreke bly om sy kontraktuele verpligtinge na te kom;

2.1.2.4.11.3 dienste wat die professionele ingenieur verrig deur remediërende maatreëls te bepaal, bykomende of meer uitgebreide besoeke aan die terrein te bring of om geskille te besleg wat die direkte en noodwendige gevolg is van die versuim deur die kontrakteur om aan enige spesifikasies, tekeninge, prosedures, konstruksieprogramme, tydtafel of vasgestelde voltooiingsdatum ooreenkomstig die kontrak te voldoen.

2.1.2.4.12 Uitvoering van of die tref van reëlins vir periodieke kontroliering en aanpassing van die werke om behoorlike funksionering van enige proses of stelsel te optimaliseer of te handhaaf.

2.1.2.4.13 Ondersoek na en verslagdoening oor tariewe of vorderings wat deur die kliënt hef kan word.

2.1.2.4.14 Vooruitbestelling of reservering van materiale, die verkryging van lisensies en permitte en die kontroliering van werklike arbeids-, toerusting- en materiaalopgawes vir die vasstelling of wysiging van die kontrakprys.

2.1.2.4.15 Inspeksie en toets (uitgesonderd dié op die terrein) van materiale en toerusting, met inbegrip van inspeksie en werktoetsing gedurende en na vervaardiging.

2.1.2.4.16 Bykomende dienste soos omskryf in—
regulasie 2.1.2.1.2—terreinpersoneel nie aangestel nie;

regulasie 2.2.4—skade aan of vernietiging van die werke;

regulasie 2.2.5—uitstef, kansellering of abandonnering van die werke;

regulasie 2.2.6—veranderings of wysigings aan ontwerpe.

2.1.2.4.17 Enige bykomende dienste van welke aard ookal uitgesonderd dié spesifiek in regulasie 2.1.2 genoem.

2.2 VERGOEDING VAN EN BASIS VAN BETALING AAN DIE PROFESSIONELE INGENIEUR VIR INGENIEURSDIENSTE VIR SIVIELE, STRUKTURELE, MEGANIESE EN ELEKTRIESE PROJEKTE.

2.2.1 VERGOEDING.

2.2.1.1 VOLLEDIGE NORMALE DIENSTE.

Die vergoeding van die professionele ingenieur vir die normale dienste wat hy ooreenkomstig regulasie 2.1.1 verrig, is soos volg:

2.2.1.1.1 VERSLAGSTADIUM—REGULASIE 2.1.1.1

Die gelde word op 'n tydbasis bereken teen die tariewe uiteengesit in regulasie 2.3.4 en is aan die professionele ingenieur betaalbaar by voorlegging van die voorlopige voorstelle of gangbaarheidstudies aan die kliënt, tensy anders ooreengekom.

2.1.2.4.10 Preparing and setting out particulars and calculations in a form required by any appropriate authority differing from that required by the client.

2.1.2.4.11 Services which give rise to abnormal additional costs for the professional engineer, including—

2.1.2.4.11.1 services arising from the failure of any contractor to perform his contract;

2.1.2.4.11.2 services performed by the professional engineer which it is customarily or contractually incumbent upon the contractor to perform, whether by virtue of special contractual provisions relieving the contractor of customary obligations or in consequence of the contractor's failure to meet contractual obligations;

2.1.2.4.11.3 services performed by the professional engineer in determining any remedial measure, making any additional or more extended site visits or resolving any disputes which are the direct and necessary consequence of any failure by the contractor to comply with any specifications, drawings, procedures, construction programmes, timetable or due completion date with which he is required to comply in terms of the contract.

2.1.2.4.12 Executing or arranging for the periodic monitoring and adjustment of the works in order to optimise or maintain the proper functioning of any process or system.

2.1.2.4.13 Investigating or reporting upon tariffs or charges leviable by the client.

2.1.2.4.14 Advance ordering or reservation of materials, the obtaining of licences and permits and the checking of actual labour, plant and material returns for the purpose of contract price establishment or adjustment.

2.1.2.4.15 Inspection and testing (other than on site) of materials and plant, including inspection and works testing during and after manufacture.

2.1.2.4.16 Additional services as defined in—

regulation 2.1.2.1.2—site staff not appointed;
regulation 2.2.4—damage to or destruction of the works;

regulation 2.2.5—postponement, cancellation or abandonment of the works;

regulation 2.2.6—alterations or modifications to design.

2.1.2.4.17 Any additional services of whatever nature other than those specifically referred to in regulation 2.1.2.

2.2 REMUNERATION AND BASIS OF PAYMENT OF THE PROFESSIONAL ENGINEER IN RESPECT OF ENGINEERING SERVICES FOR CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL PROJECTS.

2.2.1 REMUNERATION.

2.2.1.1 FULL NORMAL SERVICES.

The remuneration of the professional engineer for the normal services performed by him under regulation 2.1.1 shall be as follows:

2.2.1.1.1 REPORT STAGE—REGULATION 2.1.1.1.

The fee shall be calculated on a time basis at the rates set out in regulation 2.3.4 and shall become due to the professional engineer, unless otherwise agreed, on the submission of the preliminary proposals or feasibility studies to the client.

2.2.1.1.2 DAAROPVOLGENDE STADIUMS—REGULASIES 2.1.1.2, 2.1.1.3 EN 2.1.1.4.

Behoudens regulasie 2.2.1.2, word die gelde bereken op die basis en wyse in regulasies 2.3.1 en 2.3.2 uiteengesit en is soos volg aan die professionele ingenieur betaalbaar, tensy anders ooreengekom:

2.2.1.1.2.1 VOORLOPIGE ONTWERPSTADIUM—REGULASIE 2.1.1.2.

Twintig persent van die gelde wanneer die ontwikkelde voorstelle vir die konstruksie van die werke voorberei en aan die kliënt voorgelê is, onderworpe daaraan dat die professionele ingenieur 'n gepaste toelating maak vir die waarde van sodanige ontwerpwerk wat verband hou met die aanvaarde voorstelle en uitgevoer is ingevolge regulasie 2.1.1.1, en wat gebruik is of gebruik kan word in die ontwikkeling van die voorlopige voorstelle.

2.2.1.1.2.2 ONTWERP- EN TENDERSTADIUM—REGULASIE 2.1.1.3.

'n Verdere 40 persent van die gelde wanneer die tekeninge en ander dokumente wat nodig is om die werke op tender of andersins deur die kliënt uitbestee te laat word, voltooi en aan die kliënt voorgelê is: Met dien verstande dat waar die professionele ingenieur sodanige tekeninge en dokumente as deel van die ontwikkeling van sy voorlopige voorstelle opgestel het, die gelde ooreenkomstig regulasie 2.2.1.1.2.1 tot 50 persent verhoog en die gelde ingevolge regulasie 2.2.1.1.2.2 tot 10 persent verminder word.

2.2.1.1.2.3 KONSTRUKSIESTADIUM—REGULASIE 2.1.1.4.**2.2.1.1.2.3.1 SIVIEL EN STRUKTUREEL.**

'n Verdere 15 persent (of *pro rata*) van die gelde by voltooiing van werkstekeninge: Met dien verstande dat waar die professionele ingenieur alle of sommige van sodanige werkstekeninge opgestel het as deel van die tenderdokumente of voordat die werke uitbestee is, die hele of toepaslike gedeelte van die gelde, na gelang van die geval, neergelê in regulasie 2.2.1.1.2.3, gevoeg word by die gelde neergelê in regulasie 2.2.1.1.2.2 en afgetrek word van die gelde neergelê in regulasie 2.2.1.1.2.3; die oorblywende 25 persent van die gelde na gelang die konstruksie- of installeringswerk vorder in verhouding tot die koste van die werke voltooi.

2.2.1.1.2.3.2 MEGANIES EN ELEKTRIES.

Die oorblywende 40 persent van die gelde na gelang die konstruksie- of installeringswerk vorder in verhouding tot die koste van die werke voltooi.

2.2.1.2 GEDEELTELIKE NORMALE DIENSTE.

Indien die professionele ingenieur aangestel word om dienste te verrig wat nie al die stadia uiteengesit in regulasies 2.1.1.1, 2.1.1.2, 2.1.1.3 en 2.1.1.4 bevat nie, word die gelde soos volg toegeedeel:

2.2.1.2.1 Voorlopige ontwerpstadium alleenlik—30 persent van die gelde onderworpe aan 'n gepaste toelating soos in regulasie 2.2.1.1.2.1 uiteengesit;

2.2.1.2.2 voorlopige ontwerpstadium en die ontwerp- en tenderstadium alleenlik:

2.2.1.2.2.1 Siviël en struktureel, uitgesonderd die voltooiing van werkstekeninge—70 persent van die gelde onderworpe aan 'n gepaste toelating soos in regulasie 2.2.1.1.2.1 uiteengesit.

2.2.1.2.2.2 Siviël en struktureel, met inbegrip van die voltooiing van werkstekeninge—85 persent van die gelde onderworpe aan 'n gepaste toelating soos in regulasie 2.2.1.1.2.1 uiteengesit.

2.2.1.1.2 SUBSEQUENT STAGES—REGULATIONS 2.1.1.2, 2.1.1.3 AND 2.1.1.4.

Subject to regulation 2.2.1.2, the fee shall be calculated on the basis and in the manner set out in regulations 2.3.1 and 2.3.2 and shall, unless otherwise agreed, become due to the professional engineer as follows:

2.2.1.1.2.1 PRELIMINARY DESIGN STAGE—REGULATION 2.1.1.2.

Twenty per cent of the fee when the developed proposals for the construction of the works have been prepared and submitted to the client, subject to the professional engineer allowing an appropriate credit for the value of such design work related to the accepted proposals and carried out under regulation 2.1.1.1, and which can be or are utilised in the development of the preliminary proposals.

2.2.1.1.2.2 DESIGN AND TENDER STAGE—REGULATION 2.1.1.3.

A further 40 per cent of the fee when the drawings and other documents necessary to enable the works to be tendered for or otherwise placed by the client have been prepared and submitted to the client: Provided that if the professional engineer shall have prepared such drawings and documents as part of the development of the preliminary proposals, the fee under regulation 2.2.1.1.2.1 shall be increased to 50 per cent and the fee under regulation 2.2.1.1.2.2 shall be reduced to 10 per cent.

2.2.1.1.2.3 CONSTRUCTION STAGE—REGULATION 2.1.1.4**2.2.1.1.2.3.1 CIVIL AND STRUCTURAL.**

A further 15 per cent (or *pro rata*) of the fee on completion of working drawings: Provided that if the professional engineer has prepared all or some such working drawings as part of the tender documents or prior to the placing of the works, then all or the appropriate portion of the fee, as may be applicable under regulation 2.2.1.1.2.3, shall be added to the fee under regulation 2.2.1.1.2.2 and deducted from the fee under regulation 2.2.1.1.2.3; the remaining 25 per cent of the fee as and when the construction or installation work proceeds in proportion to the cost of the works completed.

2.2.1.1.2.3.2 MECHANICAL AND ELECTRICAL.

The remaining 40 per cent of the fee as and when the construction or installation work proceeds in proportion to the cost of the works completed.

2.2.1.2 PARTIAL NORMAL SERVICES.

Where the professional engineer is appointed to perform services not constituting all the stages set out in regulations 2.1.1.1, 2.1.1.2, 2.1.1.3 and 2.1.1.4, the fee shall be apportioned as follows:

2.2.1.2.1 Preliminary design stage only—30 per cent of the fee subject or an appropriate credit as set out in regulation 2.2.1.1.2.1;

2.2.1.2.2 preliminary design stage and the design and tender stage only:

2.2.1.2.2.1 Civil and structural excluding completion of working drawings—70 per cent of the fee subject to an appropriate credit as set out in regulation 2.2.1.1.2.1.

2.2.1.2.2.2 Civil and structural including completion of working drawings—85 per cent of the fee subject to an appropriate credit as set out in regulation 2.2.1.1.2.1.

2.2.1.2.2.3 Siviël en struktureel, insluitende die voltooiing van werkstekeninge, wapeningsbesonderhede en buigskedules en strukturele staaltekeninge uitgesonderd werkwinkeldetails—100 persent van die bykomende gelde bepaal kragtens regulasies 2.3.1.1.2, 2.3.1.1.3 en 2.3.1.1.4, tesame met 85 persent van die basiese gelde soos in regulasie 2.3.1.1.1 uiteengesit.

2.2.1.2.2.4 Meganies en elektries—70 persent van die gelde onderworpe aan 'n gepaste toelating soos in regulasie 2.2.1.1.2.1 uiteengesit;

2.2.1.2.3 konstruksiestadium alleenlik, maar uitgesonderd die opstel van werkstekeninge:

2.2.1.2.3.1 Siviël en struktureel—35 persent van die gelde.

2.2.1.2.3.2 Meganiese en elektries—50 persent van die gelde.

2.2.1.3 BYKOMENDE DIENSTE.

Die gelde of heffings vir bykomende dienste verrig ooreenkomstig regulasie 2.1.2 is soos volg:

2.2.1.3.1 VERSKAFFING VAN TERREINPERSONEEL.

Die heffing van die bykomende dienste wat die professionele ingenieur verrig ter verskaffing van terreinpersoneel kragtens regulasie 2.1.2.1.1, is soos neergelê in regulasie 2.3.3.1.

2.2.1.3.2 LEIER VAN DIE PROFESSIONELE SPAN.

Die gelde vir die bykomende dienste wat die professionele ingenieur verrig as leier van die professionele span ooreenkomstig regulasie 2.1.2.2 is soos neergelê in regulasie 2.3.3.2 en word toegedeel soos vir normale dienste ooreenkomstig regulasie 2.2.1.1.

2.2.1.3.3 BEMIDDELING, ARBITRASIE EN REGSGEDINGE EN SOORTGELYKE DIENSTE.

Die gelde vir die dienste deur die professionele ingenieur verrig kragtens regulasie 2.1.2.3 word bereken op 'n tyd-basis soos in regulasie 2.3.3.3 uiteengesit.

2.2.1.3.4 DIVERSE BYKOMENDE DIENSTE.

Die gelde vir diverse bykomende dienste deur die professionele ingenieur verrig kragtens regulasie 2.1.2.4 word bereken op 'n tydbasis soos in regulasie 2.3.4 uiteengesit.

2.2.1.3.5 TERREINPERSONEEL NIE AANGESTEL NIE.

Indien voldoende terreinpersoneel nie aangestel is nie, hef die professionele ingenieur gelde op 'n tydbasis soos in regulasie 2.3.4 uiteengesit vir die nodige bykomende dienste deur hom of sy personeel gelewer en vir terreinbesoeke bo en behalwe dié in regulasie 2.1.1.4.7 genoem, of soos met die kliënt ooreengekom.

2.2.2 TUSSENTYDSE BETALINGS AAN DIE PROFESSIONELE INGENIEUR.

2.2.2.1 Om die tussentydse betalings verskuldig ooreenkomstig regulasie 2.2.1.1.2 te bepaal, is die koste van die ingenieurswerke, uitgesonderd enige voorlopige toelaes gemaak ter dekking van gebeurlikhede en eskalasie, soos volg:

2.2.2.1.1 Die netto bedrag van die aanvaarde tender; of

2.2.2.1.2 indien geen tender aanvaar is nie, die netto bedrag van die laagste geskikte tender; of

2.2.2.1.3 indien die kontrak by wyse van onderhandeling toegeken is, die bedonge prys; of

2.2.2.1.4 indien geen tenders ingewin is nie of indien geen geskikte tenders ontvang is of indien geen onderhandeling enduit gevoer is nie, die beraming waaroor onderling ooreengekom word.

2.2.1.2.2.3 Civil and structural including completion of working drawings, reinforcing details and bending schedules and structural steel drawings excluding shop details—100 per cent of the additional fee prescribed in terms of regulations 2.3.1.1.2, 2.3.1.1.3 and 2.3.1.1.4, together with 85 per cent of the basic fee as set out in regulation 2.3.1.1.1.

2.2.1.2.2.4 Mechanical and electrical—70 per cent of the fee subject to an appropriate credit as set out in regulation 2.2.1.1.2.1;

2.2.1.2.3 construction stage only, but excluding the preparation of any working drawings:

2.2.1.2.3.1 Civil and structural—35 per cent of the fee.

2.2.1.2.3.2 Mechanical and electrical—50 per cent of the fee.

2.2.1.3 ADDITIONAL SERVICES.

The fee or charge for additional services carried out under regulation 2.1.2 shall be as follows:

2.2.1.3.1 PROVISION OF SITE STAFF.

The charge for the additional services performed by the professional engineer in providing site staff in terms of regulation 2.1.2.1.1 shall be in accordance with regulation 2.3.3.1.

2.2.1.3.2 LEADER OF THE PROFESSIONAL TEAM.

The fee for the additional services performed by the professional engineer as leader of the professional team under regulation 2.1.2.2 shall be in accordance with regulation 2.3.3.2, apportioned as for normal services under regulation 2.2.1.1.

2.2.1.3.3 MEDIATION, ARBITRATION AND LITIGATION PROCEEDINGS AND SIMILAR SERVICES.

The fee for the services performed by the professional engineer under regulation 2.1.2.3 shall be calculated on a time basis as set out in regulation 2.3.3.3.

2.2.1.3.4 DIVERSE ADDITIONAL SERVICES.

The fee for diverse additional services performed by the professional engineer under regulation 2.1.2.4 shall be calculated on a time basis as set out in regulation 2.3.4.

2.2.1.3.5 SITE STAFF NOT APPOINTED.

Where adequate site staff are not appointed the professional engineer shall charge for the necessary additional services rendered by himself or his staff and for site visits additional to those referred to in regulation 2.1.1.4.7 on a time basis as set out in regulation 2.3.4, or as agreed with the client.

2.2.2 INTERIM PAYMENTS TO THE PROFESSIONAL ENGINEER.

2.2.2.1 For the purpose of ascertaining the interim payments due under regulation 2.2.1.1.2, the cost of the engineering works, which shall exclude any provisional allowances made to cover contingencies and escalation, shall be—

2.2.2.1.1 the net amount of the accepted tender; or

2.2.2.1.2 if no tender is accepted the net amount of the lowest suitable tender; or

2.2.2.1.3 if the contract is awarded by negotiation the negotiated price; or

2.2.2.1.4 if no tenders are invited or if no suitable tenders are received or if no negotiation is concluded, the mutually agreed estimate.

2.2.2.2 Sodanige fussedtydse betalings tel alleenlik as gedeeltes van die totale gelde wat uiteindelik betaalbaar is en bereken word op die finale koste van die werke soos in regulasie 2.2.3 omskryf.

2.2.3 KOSTE VAN DIE INGENIEURSWERKE.

2.2.3.1 Om die totale gelde te bereken wat uiteindelik betaalbaar is ooreenkomstig regulasie 2.2.2.2 is die koste van die werke, of enige gedeelte daarvan, die koste van die werke wat ontwerp, gespesifiseer of geadministreer is deur die professionele ingenieur en word soos volg bereken:

2.2.3.1.1 Die bedrag gesertifiseer vir betaling aan kontrakteurs ten opsigte van werke, voor aftrekking van gelikwiderde skadevergoeding of boetes (indien enige);

2.2.3.1.2 indien die kliënt arbeid, gereedskap, konstruksietoerusting of -materiaal, vervaardigde goedere of masjinerie verskaf vir insluiting in die werke, 'n regstreekse en billike waardasie gegrond op normale tariewe van kontrakteurs vir soortgelyke items met inbegrip van waardevermindering, verspilling en herstelwerk, oorhoofse koste en winste; en

2.2.3.1.3 'n billike ooreengekome waardasie van die verskil tussen die koste van enige tweedehandse materiale, vervaardigde goedere of masjinerie wat in die werke ingesluit is en die markwaarde van sulke materiale, vervaardigde goedere en masjinerie asof hulle nuut aangekoop is.

2.2.3.2 Die koste van die werke sluit die koste in van enige toetsboorwerk, proefheiwerk, meet van grondweerstand, uitgraving van skagte, toegangstunnels, en so meer, waarvoor die professionele ingenieur kontrakdokumente moet opstel en wat hy moet inspekteer of administreer.

2.2.3.3 Indien die werke waarvoor die professionele ingenieur verantwoordelik is uitgevoer word as 'n gedeelte van die kontrak, hetsy deur subkontrak, of andersins, sal die koste van die werke 'n billike gedeelte van die kontrakteur se voorlopige en algemene heffings insluit.

2.2.3.4 Die koste van die werke sluit nie die volgende in nie:

2.2.3.4.1 Administratiewe uitgawes deur die kliënt aangegaan;

2.2.3.4.2 professionele gelde en uitgawes;

2.2.3.4.3 opmetingskoste;

2.2.3.4.4 salarisse, reiskoste en toevallige en kantooruitgawes van die terreinpersoneel;

2.2.3.4.5 finansieringskoste en -heffings aangegaan deur die kliënt;

2.2.3.4.6 die koste van grond, serwitute en deurgangsregte.

2.2.3.5 Indien enige kontrak, ondanks die bepalinge van regulasie 2.2.3.1, bepaal dat betalings aan kontrakteurs verhoog of verlaag moet word tydens die duur van die kontrak na gelang van enige skommeling in die werklike koste van gespesifiseerde items of in voorgeskrewe indekssyfers, moet die waarde van sodanige verhogings of verlaginge in die koste, na gelang van die geval, soos volg in ag geneem word by die bepaling van die koste van die werke vir die berekening van die totale gelde uiteindelik betaalbaar:

2.2.3.5.1 Ten opsigte van daardie gedeelte van die totale gelde wat gedurende die konstruksiestadium verskuldig word kragtens regulasie 2.2.1.1.2.3 die totaal van die verhogings of verlaginge in die koste wat werklik vir betaling kragtens die kontrakte gesertifiseer word;

2.2.3.5.2 ten opsigte van daardie gedeelte van die gelde wat voor die konstruksiestadium verskuldig word kragtens regulasies 2.2.1.1.2.1 en 2.2.1.1.2.2 en, waar van toepassing, ten opsigte van enige werkstekeninge is voor die plasing van die werke soos bepaal in regulasie 2.2.1.1.2.3,

2.2.2.2 Such interim payments shall rank solely towards the total fee ultimately payable, which shall be calculated on the final cost of the works as defined in regulation 2.2.3.

2.2.3 COST OF THE ENGINEERING WORKS.

2.2.3.1 For the purpose of calculating the total fee ultimately payable in terms of regulation 2.2.2.2, the cost of the works or any part thereof shall be the cost of the works designed, specified or administered by the professional engineer, calculated as follows:

2.2.3.1.1 The amount certified for payment to contractors in respect of the works, before deduction of liquidated damages or penalties (if any);

2.2.3.1.2 where the client provides labour, tools, construction plant or materials, manufactured goods or machinery for incorporation in the works, a direct and fair valuation based on normal charges by contractors for similar items including depreciation, waste and repairs, overheads and profit; and

2.2.3.1.3 a fair valuation to be agreed of the difference between the cost price of any second-hand materials, manufactured goods and machinery incorporated in the works and the market value of such materials, manufactured goods and machinery as though they were purchased new.

2.2.3.2 The cost of the works shall include the cost of any exploratory drilling, test piling, soil resistivity measurement, excavation of shafts, adits, etc., for which the professional engineer is required to prepare contract documents and which he is required to inspect or administer.

2.2.3.3 Where the works for which the professional engineer is responsible are carried out as a portion of the contract, whether by subcontract or otherwise, the cost of the works shall also include a fair proportion of the contractors preliminary and general charges.

2.2.3.4 The cost of the works shall not include—

2.2.3.4.1 administrative expenses incurred by the client;

2.2.3.4.2 professional fees and disbursements;

2.2.3.4.3 cost of surveys;

2.2.3.4.4 salaries, travelling, out-of-pocket and office expenses of site staff;

2.2.3.4.5 finance costs and charges incurred by the client;

2.2.3.4.6 cost of land, servitudes and wayleaves.

2.2.3.5 Notwithstanding the provisions of regulation 2.2.3.1 where any contract provides that payment to contractors shall be increased or decreased during the currency of the contract in accordance with any fluctuation in the actual cost of specified items or in prescribed indices, the value of such increases or decreases in cost, as the case may be, shall be brought into account in determining the cost of the works for purposes of calculating the total fee ultimately payable in the following manner:

2.2.3.5.1 In respect of that portion of the total fee becoming due during the construction stage in accordance with regulation 2.2.1.1.2.3 the total of the increases or decreases in cost actually certified for payment in terms of the contracts;

2.2.3.5.2 in respect of that portion of the fee becoming due prior to the construction stage in accordance with regulations 2.2.1.1.2.1 and 2.2.1.1.2.2 and, where applicable, in respect of any working drawings completed prior to the placing of the works as provided in regulation 2.2.1.1.2.3,

die totaal van die verhogings of verlaging in die koste wat werklik vir betaling gesertifiseer is met 'n maksimum van 10 persent van die oorspronklike kontrakbedrag uitsluitende onvoories.

2.2.4 SKADE AAN OF Vernietiging van die werke.

Indien enige gedeelte van die werke of die toerusting daarvoor te eniger tyd as gevolg van oorlog, brand, storms, vloedwater of ander oorsake buite die beheer van die professionele ingenieur beskadig of vernietig word voordat die werke voltooi is, betaal die kliënt die professionele ingenieur die toepaslike gelde vir enige bykomende dienste wat van hom verlang word, met inbegrip van ontwerp, inspeksie en administrasie as gevolg van sodanige skade of vernietiging.

2.2.5 UITSTEL, KANSELLERING OF ABANDONNERING VAN DIE WERKE.

2.2.5.1 Indien die werke in die geheel of gedeeltelik uitgestel, gekanselleer of geabandonneer word nadat die kliënt opdrag aan die professionele ingenieur gegee het om voort te gaan met enige van die stadiums genoem in regulasies 2.1.1.2, 2.1.1.3 en 2.1.1.4, word die betaling aan die professionele ingenieur vir dienste verrig ten opsigte van daardie deel van die werke wat aldus uitgestel, gekanselleer of geabandonneer is, bereken ooreenkomstig regulasie 2.2.1.1.2, plus 'n toeslag van een tiende, en ooreenkomstig enige ander toepaslike regulasies in verhouding tot die dienste verrig voordat die werke uitgestel, gekanselleer of geabandonneer is.

2.2.5.2 Indien daar binne twee jaar met die uitgestelde werke, of enige gedeelte daarvan, voortgegaan word, is die betaling kragtens regulasie 2.2.5.1 finaal vir dienste alreeds verrig en word betaling vir toekomstige dienste afsonderlik bereken ooreenkomstig die toepaslike bepalings van hierdie Bylae.

2.2.5.3 Indien bykomende dienste van die professionele ingenieur verlang word ten opsigte van die hervatting van die uitgestelde werke, hef die professionele ingenieur vir sulke verdere dienste gelde op 'n tyd basis soos in regulasie 2.3.4 uiteengesit.

2.2.5.4 Ingeval die werke, of enige gedeelte daarvan, langer as twee jaar uitgestel word, word sodanige werke geag geabandonneer te wees.

2.2.5.5 Vir doeleindes van regulasie 2.2.5 is die koste van die werke die onderling ooreengekome beraming van die koste van die betrokke gedeelte van die werke wat voltooi was ten tyde van die uitstel, kansellering of abandonnering daarvan.

2.2.6 VERANDERING OF WYSIGINGS AAN ONTWERPE.

Indien omstandighede hulle voordoende wat redelikerwys nie deur die professionele ingenieur voorsien kon gewees het nie of as die kliënt die ontwerpvereistes wysig wat veranderinge aan voltooiende ontwerpe meebring, of veranderinge aan ontwerpe waaraan gewerk word en wat ook die verandering of heropstel vereis van enige spesifikasie, tekening of ander dokument wat in die geheel of gedeeltelik deur die professionele ingenieur opgestel is, is die algehele koste van enige hersiening, wysiging of reproduksie van sodanige ontwerpe, tekeninge of dokumente om die werk te bring tot die stadium waar dit gewysig is, onderworpe aan bykomende betaling op 'n tyd basis bereken soos in regulasie 2.3.4 uiteengesit: Met dien verstande dat die professionele ingenieur die kliënt van die bykomende koste verwittig wat by wyse van gelde aangegaan mag word.

the total of the increases or decreases in cost actually certified for payment with a maximum of 10 per cent of the original contract amount, excluding contingencies.

2.2.4 DAMAGE TO OR DESTRUCTION OF THE WORKS.

If, at any time before the completion of the works, any part of the works or of the equipment therefor is damaged or destroyed by operation of war, fire, storm, flood or other cause beyond the control of the professional engineer, the client shall pay to the professional engineer the appropriate fee for any additional services which may be required of him including design, inspection and administration as a result of such damage or destruction.

2.2.5 POSTPONEMENT, CANCELLATION OR ABANDONMENT OF THE WORKS.

2.2.5.1 If, instructions having been given by the client to the professional engineer to proceed with any of the stages referred to in regulations 2.1.1.2, 2.1.1.3 and 2.1.1.4, the whole or any part of the works is postponed, cancelled or abandoned, the payment to be made to the professional engineer for services performed in respect of that part of the works so postponed, cancelled or abandoned, shall be determined in accordance with regulation 2.2.1.1.2, plus a surcharge of one tenth, and in accordance with such other regulations as may be applicable, in proportion to the services performed prior to the works being postponed, cancelled or abandoned.

2.2.5.2 If, within two years, the postponed works or any part thereof shall again proceed, the payment defined in regulation 2.2.5.1 shall be final for the services already performed and payment for subsequent services shall be separately determined in accordance with the relevant provisions of this Schedule.

2.2.5.3 Should additional services by the professional engineer be required in connection with resumption of the postponed works, the professional engineer shall charge for such additional services on a time basis as set out in regulation 2.3.4.

2.2.5.4 In the event of the works, or any part thereof, being postponed for a period longer than two years, such works shall be considered as having been abandoned.

2.2.5.5 For the purpose of regulation 2.2.5 the cost of the works shall be the mutually agreed estimate of the cost of the relevant part of the works completed at the time of its postponement, cancellation or abandonment.

2.2.6 ALTERATIONS OR MODIFICATIONS TO DESIGNS.

In the event of circumstances arising which could not have been reasonably foreseen by the professional engineer or in the event of the client modifying the design requirements and thus necessitating alterations to completed designs or alterations to designs in progress and which also require the alteration or remaking of any specification, drawing or other document prepared in whole or in part by the professional engineer, the whole of the cost of revising, amending or reproducing such designs, drawings or documents to bring the work up to the stage at which it was modified shall be the subject of additional payment calculated on a time basis as set out in regulation 2.3.4: Provided that the professional engineer shall inform the client in respect of additional costs which may be incurred by way of fees.

2.3 GELDETARIEF VIR INGENIEURSDIENSTE VIR SIVIELE, STRUKTURELE, MEGANIESE EN ELEKTRIESE PROJEKTE.

2.3.1 DIENSTE VAN NORMALE AARD.

Ten opsigte van werke wat normale eise aan die professionele ingenieur se tyd stel, is die gelde soos voorgeskryf in regulasies 2.3.1.1, 2.3.1.2 en 2.3.1.3.

2.3.1.1 SIVIELE EN STRUKTURELE INGENIEURSDIENSTE.

2.3.1.1.1 BASIESE GELDE.

Indien die koste van die werke—		Die gelde is die som van die primêre gelde genoem in kolom 3 en die sekondêre gelde bereken kragtens kolom 4	
meer is as— (kolom 1)	maar nie meer is nie as— (kolom 2)	Primêre gelde (kolom 3)	Sekondêre gelde: Bereken op die totale koste van die werke teen die volgende persentasies (Kolom 4)
R	R	R	%
—	60 000	200	10,00
60 000	100 000	800	9,00
100 000	150 000	1 300	8,50
150 000	250 000	2 050	8,00
250 000	400 000	3 300	7,50
400 000	600 000	5 300	7,00
600 000	1 000 000	8 300	6,50
1 000 000	1 500 000	13 300	6,00
1 500 000	3 000 000	20 800	5,50
3 000 000	5 000 000	35 800	5,00
5 000 000	7 000 000	60 800	4,50
7 000 000	12 000 000	78 300	4,25
12 000 000	—	108 300	4,00

2.3.1.1.2 BYKOMENDE GELDE VIR DIE GEWAPENDEBETONGEDEELTE VAN DIE WERK.

Die bykomende gelde vir die gewapendebetongedeelte van die werke, met inbegrip van die beton, wapening en bekisting, wat strukturele ontwerp aan die kant van die professionele ingenieur behels, tesame met die betrokke gedeelte van die items onder die opskrif "Voorlopig en Algemeen" in die hoeveelheidslys ten opsigte van die werke, is soos volg:

Indien die koste van die gewapendebetongedeelte van die werke, tesame met die koste van die betrokke deel van die voorlopige en algemene items—		Die bykomende gelde is die som van die primêre gelde genoem in kolom 3 en die sekondêre gelde bereken kragtens kolom 4	
meer is as— (kolom 1)	maar nie meer is nie as— (kolom 2)	Primêre gelde (kolom 3)	Sekondêre gelde: Bereken op die totale koste van die werke teen die volgende persentasies (kolom 4)
R	R	R	%
—	600 000	—	3,25
600 000	900 000	1 500	3,00
900 000	1 200 000	3 750	2,75
1 200 000	2 000 000	6 750	2,50
2 000 000	3 000 000	16 750	2,00
3 000 000	—	31 750	1,50

2.3.1.1.3 BYKOMENDE GELDE VIR DIE STRUKTURELE STAALWERK-GEDEELTE VAN DIE WERKE.

Die bykomende gelde vir die strukturele staalwerk-gedeelte van die werke tesame met die toepaslike gedeelte van die voorlopige en algemene items word bereken teen een helfte van die tarief van die bykomende gelde vir die gewapende betongedeelte van die werke, soos in regulasie 2.3.1.1.2 uiteengesit.

2.3 TARIFF OF FEES FOR ENGINEERING SERVICES FOR CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL PROJECTS.

2.3.1 SERVICES OF NORMAL CHARACTER.

In respect of works making normal demands on the time of the professional engineer, the fee shall be as provided in regulations 2.3.1.1, 2.3.1.2 and 2.3.1.3.

2.3.1.1 CIVIL AND STRUCTURAL ENGINEERING SERVICES.

2.3.1.1.1 BASIC FEE.

Where the cost of the works—		The fee shall be the sum of the primary fee stated in column 3 and the secondary fee calculated in terms of column 4	
exceeds— (column 1)	but does not exceed— (column 2)	Primary fee (column 3)	Secondary fee: Calculated on the total cost of the works at the following percentages (column 4)
R	R	R	%
—	60 000	200	10,00
60 000	100 000	800	9,00
100 000	150 000	1 300	8,50
150 000	250 000	2 050	8,00
250 000	400 000	3 300	7,50
400 000	600 000	5 300	7,00
600 000	1 000 000	8 300	6,50
1 000 000	1 500 000	13 300	6,00
1 500 000	3 000 000	20 800	5,50
3 000 000	5 000 000	35 800	5,00
5 000 000	7 000 000	60 800	4,50
7 000 000	12 000 000	78 300	4,25
12 000 000	—	108 300	4,00

2.3.1.1.2 ADDITIONAL FEE FOR REINFORCED CONCRETE PORTION OF THE WORKS.

The additional fee for the reinforced concrete portion of the works, including the concrete, reinforcement and formwork, which involves structural design on the part of the professional engineer, together with the relevant proportion of the items under the heading "Preliminary and General" in the schedule of quantities relating to the works, shall be:

Where the cost of the reinforced concrete portion of the works including the cost of the relevant proportion of the preliminary and general items—		The additional fee shall be the sum of the primary fee stated in column 3 and the secondary fee calculated in terms of column 4	
exceeds— (column 1)	but does not exceed— (column 2)	Primary fee (column 3)	Secondary fee: Calculated on the total cost of the works at the following percentages (column 4)
R	R	R	%
—	600 000	—	3,25
600 000	900 000	1 500	3,00
900 000	1 200 000	3 750	2,75
1 200 000	2 000 000	6 750	2,50
2 000 000	3 000 000	16 750	2,00
3 000 000	—	31 750	1,50

2.3.1.1.3 ADDITIONAL FEE FOR STRUCTURAL STEELWORK PORTION OF THE WORKS.

The additional fee for the structural steelwork portion of the works together with the relevant proportion of the preliminary and general items shall be calculated at one half the rate of the additional fee for the reinforced concrete portion of the works as set out in regulation 2.3.1.1.2.

2.3.1.1.4 BYKOMENDE GELDE VIR DIE STRUKTURELE GEDEELTE VAN DIE WERKE IN ANDER MATERIALE.

Die bykomende gelde vir die strukturele gedeelte van die werke in ander materiale is soos ooreengekom tussen die kliënt en die professionele ingenieur.

2.3.1.2 SIVIELE EN STRUKTURELE INGENIEURSDIENSTE WAARVOOR SPESIALE GELDE VOORSIEN WORD.

2.3.1.2.1 SPOORBAANWERK.

Die gelde vir spoorbaanwerk word bereken op die wyse uiteengesit vir siviele en strukturele ingenieursdienste in regulasie 2.3.1.1, behalwe dat—

2.3.1.2.1.1 die koste van die permanente spoorbaanmateriale ten opsigte van spoorbaanwerk uitgesluit word van die koste van die werke soos omskryf in regulasie 2.2.3 maar die koste van ballas en toerusting spesiaal ontwerp deur die professionele ingenieur ingesluit moet word by die koste van die werke soos omskryf in regulasie 2.2.3;

2.3.1.2.1.2 die gelde ten opsigte van permanente spoorbaanmateriale, wat uitgesluit word van die koste van die werke kragtens regulasie 2.3.1.2.1.1, soos volg bereken moet word in ooreenstemming met die lengte van die spoorbaan:

Indien die spoorbaanlengte—		Die gelde is die som van die primêre gelde aangegee in kolom 3 en die sekondêre gelde bereken kragtens kolom 4	
langer is as— (kolom 1)	maar nie langer is nie as— (kolom 2)	Primêre gelde (kolom 3)	Tarief vir sekondêre gelde bereken op die totale spoorbaanlengte (kolom 4)
m	m	R	R/m
—	500	80	1,58
500	1 000	395	0,95
1 000	2 000	545	0,80
2 000	3 000	725	0,71
3 000	5 000	965	0,63
5 000	10 000	1 365	0,55
10 000	20 000	2 115	0,475
20 000	50 000	3 715	0,395
50 000	—	7 715	0,315

2.3.1.2.1.3 die gelde ten opsigte van keerblokke, ruitkruisings, uitdraaistelle en enkel- of dubbelslippe van standaardontwerp bereken word ooreenkomstig regulasie 2.3.1.2.1.2 op die basis van die volgende ekwivalente spoorbaanlengtes:

Item	Ekwivalente spoorbaanlengte
Keerblokke.....	10 m
Ruitkruisings.....	50 m
Uitdraaistelle.....	100 m
Enkelslippe.....	150 m
Dubbelslippe.....	250 m

2.3.1.2.2 PADWERKE.

Die gelde vir padwerke word bereken op die wyse uiteengesit vir siviele en strukturele ingenieursdienste in regulasie 2.3.1.1 behalwe dat die gelde vir die padwerkgedeelte van die projek (d.w.s. uitgesonderd die gelde vir die strukturele gedeelte) verminder word met die toepaslike persentasie soos hieronder uiteengesit:

Tipe padwerk	Persentasie vermindering in gelde vir die padwerkgedeelte
Plattelandse paaie.....	20%
Plattelandse deurpaaie.....	5%
Buitestedelike deurpaaie.....	5%
Stedelike strate.....	Nul
Stedelike deurpaaie.....	Nul

2.3.1.1.4 ADDITIONAL FEE FOR STRUCTURAL PORTION OF THE WORKS IN OTHER MATERIALS.

The additional fee for the structural work in other materials shall be as agreed between the client and the professional engineer.

2.3.1.2 CIVIL AND STRUCTURAL ENGINEERING SERVICES FOR WHICH SPECIAL FEES ARE PROVIDED.

2.3.1.2.1 RAILWAY TRACKWORK.

The fee for railway trackwork shall be calculated in the manner set out for civil and structural engineering services under regulation 2.3.1.1, except that—

2.3.1.2.1.1 the cost of permanent way materials in respect of railway trackwork shall be excluded from the cost of the works as defined in regulation 2.2.3 but the cost of ballast and equipment specially designed by the professional engineer shall be included in the cost of the works as defined in regulation 2.2.3;

2.3.1.2.1.2 the fee for permanent way materials, excluded from the cost of the works in terms of regulation 2.3.1.2.1.1, shall be calculated in accordance with the length of track as follows:

Where the length of track—		The fee shall be the sum of the primary fee stated in column 3 and the secondary fee calculated in terms of column 4	
exceeds— (column 1)	but does not exceed— (column 2)	Primary fee (column 3)	Rate for secondary fee calculated on the total length of track (column 4)
m	m	R	R/m
—	500	80	1,58
500	1 000	395	0,95
1 000	2 000	545	0,80
2 000	3 000	725	0,71
3 000	5 000	965	0,63
5 000	10 000	1 365	0,55
10 000	20 000	2 115	0,475
20 000	50 000	3 715	0,395
50 000	—	7 715	0,315

2.3.1.2.1.3 the fee for stopblocks, diamond crossings, turnouts and single or double slips of standard design shall be calculated in accordance with regulation 2.3.1.2.1.2 on the basis of the following equivalent track lengths:

Item	Equivalent track length
Stopblocks.....	10 m
Diamond crossings.....	50 m
Turnouts.....	100 m
Single slips.....	150 m
Double slips.....	250 m

2.3.1.2.2 ROADWORKS.

The fee for roadworks shall be calculated in the manner set out for civil and structural engineering services under regulation 2.3.1.1 except that the fee for the roadworks element of the project (i.e. excluding the fee for the structural element) shall be reduced by the appropriate percentage as listed below:

Type of roadwork	Percentage reduction in fee for roadworks element.
Rural roads.....	20%
Rural freeways.....	5%
Peri-urban freeways.....	5%
Urban streets.....	Nil
Urban freeways.....	Nil

2.3.1.3 MEGANIESE EN ELEKTRIESE INGENIEURSDIENSTE.

Indien die koste van die werke—		Die gelde is die som van die primêre gelde aangegee in kolom 3 en die sekondêre gelde bereken kragtens kolom 4	
meer is as— (kolom 1)	maar nie meer is nie as— (kolom 2)	Primêre gelde (kolom 3)	Sekondêre gelde: Bereken op die totale koste van die werke teen die volgende persentasies (kolom 4)
R	R	R	%
—	60 000	200	10,0
60 000	100 000	800	9,0
100 000	150 000	1 300	8,5
150 000	250 000	2 050	8,0
250 000	400 000	3 300	7,5
400 000	700 000	5 300	7,0
700 000	1 000 000	8 800	6,5
1 000 000	1 500 000	13 800	6,0
1 500 000	3 500 000	21 300	5,5
3 500 000	—	38 800	5,0

2.3.2 DIENSTE VAN NIE-NORMALE AARD.

2.3.2.1 WERKE WAT BUITENGEWOON HOË EISE STEL.

Ten opsigte van sekere werke of gedeeltes van werke soos hierin genoem wat buitengewoon hoë eise aan die professionele ingenieur stel, word die gelde as volg bereken:

2.3.2.1.1 BUITENGEWOON TYDROWENDE WERKE.

2.3.2.1.1.1 Vir stedelike deurpaaie word die gelde soos neergelê in regulasie 2.3.1.2.2 met tot 25 persent verhoog soos ooreengekom met die kliënt.

2.3.2.1.1.2 Vir water- en afloopwaterbehandelingswerke word die gelde soos neergelê in regulasie 2.3.1.1 met 25 persent verhoog.

2.3.2.1.1.3 Vir veranderinge aan bestaande werke word die gelde soos neergelê in regulasie 2.3.1 met 25 persent verhoog.

2.3.2.1.2 Indien die werke meer as een van die hoofkategorieë, naamlik siviël (insluitend struktureel), meganiese en elektriese behels, word die gelde apart bereken ooreenkomstig regulasie 2.3.1 ten opsigte van die totale koste van die werke in elke sodanige kategorie.

2.3.2.1.3 Indien die werke aansienlike gedeeltes van uiteenlopende soorte werk behels binne die hoofkategorieë genoem in regulasie 2.3.2.1.2 sal die kliënt en die professionele ingenieur ooreenkom oor die gelde wat sal lê tussen die gelde soos bepaal in regulasie 2.3.1 as van toepassing op die totale koste van die werke binne sodanige hoofkategorie en die gelde bepaal deur regulasie 2.3.1 te beskou as van toepassing op die koste van elk van die uiteenlopende soorte van werke asof hulle afsonderlike werke is en na gelang van die mate waarin die eise aan die professionele ingenieur ooreenstem met die eise van elk indien dit ingevolge 'n aparte opdrag uitgevoer was.

2.3.2.1.4 Indien werke op afsonderlike nie-aangrensende terreine onderneem word of waar die aaneenlopendheid van die werke onderbreek word of die werke buitengewoon gefragmenteer of in afsonderlik gedokumenteerde stadiums uitgevoer word ooreenkomstig die vereistes of met die toestemming van die kliënt, kan die gelde bereken word deur regulasie 2.3.1 te beskou as van toepassing op elke terrein, kontrak, of stadium asof hulle afsonderlike werke is of, indien onvanpas, dan sal die kliënt en die professionele ingenieur ooreenkom oor die gelde wat sal lê tussen die

2.3.1.3 MECHANICAL AND ELECTRICAL ENGINEERING SERVICES.

Where the cost of the works—		The fee shall be the sum of the primary fee stated in column 3 and the secondary fee calculated in terms of column 4	
exceeds— (column 1)	but does not exceed— (column 2)	Primary fee (column 3)	Secondary fee: Calculated on the total cost of the works at the following percentages (column 4)
R	R	R	%
—	60 000	200	10,0
60 000	100 000	800	9,0
100 000	150 000	1 300	8,5
150 000	250 000	2 050	8,0
250 000	400 000	3 300	7,5
400 000	700 000	5 300	7,0
700 000	1 000 000	8 800	6,5
1 000 000	1 500 000	13 800	6,0
1 500 000	3 500 000	21 300	5,5
3 500 000	—	38 800	5,0

2.3.2 SERVICES NOT OF NORMAL CHARACTER.

2.3.2.1 WORKS MAKING UNUSUALLY HIGH DEMANDS.

In respect of certain works or parts of works as herein listed which make demands on the professional engineer which are unusually high, the fee shall be calculated as follows:

2.3.2.1.1 UNUSUALLY TIME-CONSUMING WORKS.

2.3.2.1.1.1 For urban freeways, the fee stated in regulation 2.3.1.2.2 shall be increased by up to 25 per cent as agreed with the client.

2.3.2.1.1.2 For water and wastewater treatment works, the fee stated in regulation 2.3.1.1 shall be increased by 25 per cent.

2.3.2.1.1.3 For alterations to existing works, the fee stated in regulation 2.3.1 shall be increased by 25 per cent.

2.3.2.1.2 Where the works comprise more than one of the main categories, i.e. civil (including structural), mechanical and electrical, the fee shall be separately calculated in accordance with regulation 2.3.1 in respect of the total cost of the works in each such category.

2.3.2.1.3 Where the works comprise substantial portions of dissimilar types of work within the main categories stated in regulation 2.3.2.1.2 the client and the professional engineer shall agree the fee which shall lie between the fee as derived in regulation 2.3.1 as applicable to the total cost of the works within such main category and the fee derived taking regulation 2.3.1 as applicable the cost of each of the dissimilar types of work as if they were separate works according to the extent to which the demands on the professional engineer correspond to the demands of each such dissimilar type of work had it been executed under a separate assignment.

2.3.2.1.4 Where the works are undertaken on separate non-contiguous sites or when continuity of the works is interrupted or the works are unusually fragmented or are being constructed as separately documented phases in accordance with the requirements or with the consent of the client, the fee may be calculated taking regulation 2.3.1 as applicable to each site, contract or phase as if they were separate works or, if inappropriate, the client and the professional engineer shall agree the fee which shall lie

gelde soos bepaal in regulasie 2.3.1 as van toepassing op die totale koste van die werke en die gelde bepaal deur regulasie 2.3.1 te beskou as van toepassing op die koste van elk asof hulle afsonderlike werke is.

2.3.2.1.5 Ten opsigte van ander soorte werke of gedeeltes van werke met inbegrip van, onder andere, dié genoem in regulasie 1.5.1 wat buitengewoon hoë eise aan die professionele ingenieur stel, word daar tussen die kliënt en die professionele ingenieur ooreengekom oor die byvoeging wat gedoen moet word tot die gelde gemeld in regulasie 2.3.1 en wat billik is ooreenkomstig die oorsake en omvang van die buitengewoon hoë eise aan die professionele ingenieur: Met dien verstande dat die professionele ingenieur, so gou dit vir hom blyk en gewoonlik nie later as die voltooiing van die verslagstadium nie, die kliënt verwittig dat hy van oordeel is dat die werke van so 'n aard is dat dit 'n verhoging van gelde soos voornoem regverdig: Met dien verstande verder dat indien dit eers later blyk dat die werke van 'n buitengewone aard is, die professionele ingenieur die kliënt onmiddellik daarvan verwittig, in welke geval die gedeelte van die dienste wat reeds deur die professionele ingenieur voltooi is wanneer hy die kliënt aldus verwittig, nie aan die verhoogde gelde onderworpe is nie tensy die kliënt andersins instem.

2.3.2.2 WERKE WAT BUITENGEWOON LAE EISE STEL.

Ten opsigte van werke of gedeeltes van werke wat buitengewoon lae eise aan die professionele ingenieur stel, kom die kliënt en die professionele ingenieur ooreen oor die gelde vir sulke werke wat billik is ooreenkomstig die oorsake en omvang van die buitengewone verlaging van die eise wat aan die professionele ingenieur gestel word.

2.3.3 BYKOMENDE DIENSTE.

2.3.3.1 VERSKAFFING VAN TERREINPERSONEEL.

Die professionele ingenieur se heffing vir die verskaffing van terreinpersoneel kragtens regulasie 2.1.2.1.1 word soos volg bereken:

2.3.3.1.1 Salaris, insluitende gewone bonus, plus 30 persent; plus

2.3.3.1.2 alle ander direkte kostes en toegifte, soos met die kliënt ooreengekom, plus 10 persent.

2.3.3.2 LEIER VAN DIE PROFESSIONELE SPAN.

Die bykomende gelde vir dienste as leier van die professionele span gelewer ooreenkomstig regulasie 2.1.2.2 is 10 persent van die gelde betaalbaar aan die ander lede van die professionele span.

2.3.3.3 BEMIDDELING, ARBITRASIE EN REGSGEDINGE EN SOORTGELYKE DIENSTE.

2.3.3.3.1 ALLERLEI DIENSTE.

Die professionele ingenieur se gelde vir dienste gelewer word op 'n tyd basis bereken soos ooreengekom met die kliënt en is nie minder as die tarief kragtens regulasie 2.3.4 nie: Met dien verstande dat vir verskynings in die hof die gelde bereken word ooreenkomstig regulasie 2.3.3.3.2.2.

2.3.3.3.2 BEMIDDELING OF ARBITRASIE.

2.3.3.3.2.1 Vir optrede as bemiddelaar of arbiter wanneer daar meer as een is of vir optrede as assessor, moet die gelde nie minder wees nie as die gelde gehef op 'n tyd basis vir prinsipale, vennote en direkteure soos in regulasie 2.3.4.1 uiteengesit plus 25 persent, onderworpe aan 'n minimum heffing vir twee ure.

2.3.3.3.2.2 Vir optrede as alleenbemiddelaar, -arbiter of -beoordeelbaar moet die gelde nie minder wees nie as die gelde gehef op 'n tyd basis vir prinsipale, vennote en direkteure soos in regulasie 2.3.4.1 uiteengesit plus 75 persent, onderworpe aan 'n minimum heffing vir twee ure.

between the fee as derived in regulation 2.3.1 as applicable to the total cost of the works and the fee derived taking regulation 2.3.1 as applicable to the cost of each as if they were separate works.

2.3.2.1.5 In respect of other types of works or parts of works including, *inter alia*, those mentioned in regulation 1.5.1 which make demands on the professional engineer which are unusually high, the client and professional engineer shall agree the addition to be made to the fee stated in regulation 2.3.1 which shall be equitable in accordance with the causes and extent of the unusually high demands on the professional engineer: Provided that the professional engineer shall, as soon as it becomes evident to him and generally not later than at the completion of the report stage, inform the client that he considers that the works are of such a nature as to warrant an increase of the fee as aforesaid: Provided further that if it only becomes evident at a later stage that the works are of unusual character, he shall inform the client without delay in which event such portion of the services of the professional engineer as he has already completed when he informs the client shall not be subject to an increased fee unless the client agrees otherwise.

2.3.2.2 WORKS MAKING UNUSUALLY LOW DEMANDS.

In respect of works or parts of works which make demands on the professional engineer which are unusually low, the client and the professional engineer shall agree the fee for such works which shall be equitable in accordance with the causes and extent of the unusual reduction in the demands on the professional engineer.

2.3.3 ADDITIONAL SERVICES.

2.3.3.1 PROVISION OF SITE STAFF.

The professional engineer's charge for the provision of site staff in terms of regulation 2.1.2.1.1 shall be calculated as follows:

2.3.3.1.1 Salary, inclusive of regular bonus, plus 30 per cent; plus

2.3.3.1.2 all other direct costs and allowances, as agreed with the client, plus 10 per cent.

2.3.3.2 LEADER OF THE PROFESSIONAL TEAM.

The additional fee for services performed under regulation 2.1.2.2 as leader of the professional team shall be 10 per cent of the fees payable to the other members of the professional team.

2.3.3.3 MEDIATION, ARBITRATION AND LITIGATION PROCEEDINGS AND SIMILAR SERVICES.

2.3.3.3.1 MISCELLANEOUS SERVICES.

The professional engineer's fee for services performed shall be on a time basis as agreed by the client and shall be not less than the rate in accordance with regulation 2.3.4: Provided that for court appearances the fee shall be determined in accordance with regulation 2.3.3.3.2.1.

2.3.3.3.2 MEDIATION OR ARBITRATION.

2.3.3.3.2.1 For acting as mediator or arbitrator where there is more than one or for acting as assessor, the fee shall be not less than the time charged for principals, partners and directors as set out in regulation 2.3.4.1 plus 25 per cent, subject to a minimum charge for two hours.

2.3.3.3.2.2 For acting as sole mediator, arbitrator or umpire the fee shall be not less than the time charged for principals, partners and directors as set out in regulation 2.3.4.1 plus 75 per cent, subject to a minimum charge for two hours.

2.3.3.3.2.3 Die gelde voorgeskryf by regulasie 2.3.3.3.2.1 en 2.3.3.3.2.2 is van toepassing ten opsigte van die tyd wat bestee word aan die bywoning van bemiddelingsbyeenkomste, die arbitrasiehof, die bestudering van die getuienis en die opstel van die beslissing.

2.3.4 GELDE OP 'N TYDBASIS.

Die geldetarief op 'n tydbasis is soos volg:

2.3.4.1 Prinsipaal, vennoot of direkteur—R45 per uur of gedeelte daarvan;

2.3.4.2 gesalarieerde professionele en tegniese personeel—15c per uur per R100 of gedeelte daarvan van die totale jaarlikse salaris insluitende gewone bonus, as daar is: Met dien verstande dat hierdie tariewe geag word vestigingsheffings en tyd deur klerklike personeel bestee, in te sluit, wat dus nie afsonderlike heffings uitmaak nie.

2.3.5 REISTYD.

'n Bedrag teen die tarief uiteengesit in regulasie 2.3.4 word gehef vir al die tyd gedurende normale werksure, met 'n maksimum van agt uur per dag, wat die professionele ingenieur en lede van sy personeel aan reis bestee: Met dien verstande dat indien die reis na en van sy kantoor nie 50 km oorskry nie, die professionele ingenieur en lede van sy personeel nie vergoed sal word vir die tyd aan reis bestee nie tensy betaling van gelde op 'n tydbasis geskied.

3. STRUKTURELE EN SIVIELE INGENIEURSDIENSTE IN VERBAND MET BOUPROEKE BEHALWE IN DIE GEVAL VAN 'N DIREKTE SIVIELE INGENIEURSOEDRAG, IN WELKE GEVAL REGULASIE 2 VAN TOEPASSING SAL WEES.

3.1 DIENSTE DEUR DIE PROFESSIONELE INGENIEUR VERRIG TE WORD.

3.1.1 NORMALE DIENSTE.

Die normale dienste deur die professionele ingenieur verrig te word, behels:

3.1.1.1 VERSLAGSTADIUM.

Die opstel en voorlegging van 'n verslag met voorlopige voorstelle of gangbaarheidstudies en kosteramings vir ooreweging deur die klient en, indien nodig, met inbegrip van—

3.1.1.1.1 oorlegpleging met die klient of sy gemagtigde verteenwoordiger en enige ander professionele raadgevers deur die klient aangestel in verband met die projek;

3.1.1.1.2 inspeksie van die terrein van die werke;

3.1.1.1.3 voorlopige ondersoek, beplanning en ontwerp waar enige hiervan nodig is om gangbaarheid te bepaal;

3.1.1.1.4 oorlegpleging met plaaslike owerhede;

3.1.1.1.5 raadgeving aan die klient oor die noodsaaklikheid van opmetings, ontledings, toetse en terrein- of ander ondersoeke wat nodig mag wees vir die afhandeling van die verslag, en die tref van reëlins om dit op koste van die klient te laat uitvoer.

3.1.1.2 VOORLOPIGE ONTWERPSTADIUM.

Die ontwikkeling van voorlopige voorstelle of die basiese beplanning van die werke, soos deur die klient verlang en, indien nodig, met inbegrip van—

3.1.1.2.1 voorlegging van 'n basiese beplanningsverslag, indien die klient dit verlang;

3.1.1.2.2 bepaling van finale ontwerpmaatstawwe;

3.1.1.2.3 raadgeving aan die klient oor die noodsaaklikheid van enige verdere opmetings, ontledings, toetse en terrein- of ander ondersoeke waar nodig, en die tref van reëlins om dit op koste van die klient te laat uitvoer;

2.3.3.3.2.3 The fee set out in regulations 2.3.3.3.2.1 and 2.3.3.3.2.2 shall apply to time spent in attending mediation meetings, the arbitration court, in studying evidence and in framing the award.

2.3.4 TIME BASIS FEE.

The scale of fees on a time basis shall be as follows:

2.3.4.1 Principal, partner or director—R45 per hour or part thereof;

2.3.4.2 salaried professional and technical staff—15c per hour per R100 or part thereof of the total annual salary including regular bonus, if any: Provided that these rates shall be deemed to include establishment charges and time expended by clerical staff which shall, therefore, not be chargeable separately.

2.3.5 TRAVELLING TIME.

A charge at the rate set out in regulation 2.3.4 for all time spent by the professional engineer or members of his staff in travelling during normal working hours, such time not exceeding eight hours per day: Provided that when the journey does not exceed 50 km recorded to and from his office, the professional engineer and members of his staff shall not be reimbursed for time spent in travelling unless payment of fees is being made on a time basis.

3. STRUCTURAL AND CIVIL ENGINEERING SERVICES PERTAINING TO BUILDING PROJECTS EXCEPT IN THE CASE OF A DIRECT CIVIL ENGINEERING COMMISSION, IN WHICH CASE REGULATION 2 WILL APPLY.

3.1 SERVICES TO BE PERFORMED BY THE PROFESSIONAL ENGINEER.

3.1.1 NORMAL SERVICES.

The normal services to be performed by the professional engineer are:

3.1.1.1 REPORT STAGE.

The preparation and submission of a report embodying preliminary proposals or feasibility studies and estimates of cost for consideration by the client, including, as may be necessary—

3.1.1.1.1 Consultation with the client or his authorised representatives and any other professional advisers appointed by the client in connection with the project;

3.1.1.1.2 inspection of the site of the works;

3.1.1.1.3 preliminary investigation, planning and design where any of these are required for determination of feasibility;

3.1.1.1.4 consultation with local authorities;

3.1.1.1.5 advice to the client as to the need for surveys, analyses, tests and site or other investigations where such are required for the completion of the report and arranging for these to be carried out at the client's expense.

3.1.1.2 PRELIMINARY DESIGN STAGE.

The development of the preliminary proposals or the basic planning of the works, as may be required by the client, including, as may be necessary—

3.1.1.2.1 submission of a basic planning report if required by the client;

3.1.1.2.2 establishment of final design criteria;

3.1.1.2.3 advice to the client as to the need for any further surveys, analyses, tests and site or other investigations which may be required and arranging for these to be carried out at the client's expense;

3.1.1.2.4 raadgewing aan die klient, na gelang dit nodig is, oor die aanstelling en die omskrywing van die dienste van ander professionele ingenieurs of deskundige raadgewers, en die tref van reëlins vir sodanige aanstellings en oorlegplegings met sodanige raadgewers oor sake rakende die werke;

3.1.1.2.5 opstel en voorlegging van sketsplanne of lyndiagramme en aangesuiwerde ramings.

3.1.1.3 ONTWERP- EN TENDERSTADIUM.

Die ontwikkeling van die voorlopige ontwerpe tot werkstekeninge en, indien nodig, met inbegrip van—

3.1.1.3.1 opstel van algemene uitlegtekeninge en ramings van staal benodig vir hoeveelheidslyste;

3.1.1.3.2 verskaffing van die omskrywende inligting wat nodig mag wees vir die ontwerp van ander dienste;

3.1.1.3.3 verskaffing van voldoende inligting vir die opstel van gedetailleerde werkwinkeltekeninge deur die strukturele staal-vervaardiger;

3.1.1.3.4 opstel of wysiging van uitnodigings om te tender, tendervoorwaardes, tendervorms en kontrakvoorwaardes;

3.1.1.3.5 ontledings van tenders en voorlegging van aanbevelings oor die aanvaarding van tenders.

3.1.1.4 KONSTRUKSIESTADIUM.

Die algemene administrasie van en ander dienste in verband met die uitvoering van die ingenieurswerke en, indien nodig, met inbegrip van—

3.1.1.4.1 plasing van bestellings vir die ingenieurswerke namens die klient;

3.1.1.4.2 raadgewing aan die klient oor die opstel van die kontrakdokumente, of opstel van die kontrakdokumente;

3.1.1.4.3 raadgewing aan die klient oor die aanstelling van terreinpersoneel kragtens regulasie 3.1.2.1;

3.1.1.4.4 opstel van wapeningsdetails, buigskedules en ander inligting wat benodig mag word: Met dien verstande dat hierdie diens by die ontwerp- en tenderstadium ingesluit kan word indien volledige dokumentasie voor die konstruksiestadium benodig word;

3.1.1.4.5 kontrolering van die kontrakteurs se tekeninge vir die permanente werke om seker te maak dat dit aan die ontwerpvereistes voldoen, maar uitgesonderd die gedetailleerde kontrolering van werkwinkeldetails vir oprigtingjuistheid;

3.1.1.4.6 raadgewing aan die klient oor alternatiewe ontwerpe en tenders maar uitgesonderd die gedetailleerde inspeksie, hersiening en kontrolering van alternatiewe ontwerpe en tekeninge wat nie deur die professionele ingenieur opgestel is nie en deur enige kontrakteur of voornemende kontrakteur voorgelê is;

3.1.1.4.7 uitreiking van opdragte aan kontrakteurs, koördinering en algemene inspeksie van die uitvoering van die werke tot nakoming van die kontrak by tussenpose soos deur die professionele ingenieur nodig geag, leidinggewing aan terreinpersoneel maar uitgesonderd gedetailleerde en daaglikse inspeksie van die werke en terreinadministrasie waarvoor in regulasie 3.1.2.1 voorsiening gemaak word;

3.1.1.4.8 bywoning van terreinvergaderings tydens die konstruksie van die ingenieurswerke, gemiddeld eenkeer elke twee weke;

3.1.1.4.9 beslegting van, of bystand aan die klient se hoofagent by die beslegting van geskille of verskille wat tussen die klient en die kontrakteurs mag ontstaan, maar uitgesonderd bemiddeling, arbitrasie of regsgedinge;

3.1.1.4.10 uitreiking van wysigingsopdragte of inligting sodat wysigingsopdragte deur ander uitgereik kan word;

3.1.1.2.4 advice to the client, as may be necessary, upon the appointment and delineation of the services of other professional engineers or specialist advisers and arranging such appointments and consultations with such advisers in matters affecting the works;

3.1.1.2.5 preparation and submission of sketch plans or line diagrams and updated estimates.

3.1.1.3 DESIGN AND TENDER STAGE.

The development of the preliminary designs into working drawings, including, as may be necessary—

3.1.1.3.1 preparation of general arrangement drawings and estimates of steel required for the bills of quantities;

3.1.1.3.2 provision of outline information necessary for the design of other services;

3.1.1.3.3 provision of adequate information to enable the shop detail drawings to be prepared by the structural steel manufacturer;

3.1.1.3.4 drafting or adapting invitations to tender, tender conditions, forms of tender and conditions of contract;

3.1.1.3.5 analyses of tenders and submission of recommendations on the acceptance of tenders.

3.1.1.4 CONSTRUCTION STAGE.

The general administration and other services in connection with the carrying out of the engineering works, including, as may be necessary—

3.1.1.4.1 placing orders for the engineering works on behalf of the client;

3.1.1.4.2 advice to the client as to the preparation of the contract documents or preparation of the contract documents;

3.1.1.4.3 advice to the client as to the appointment of site staff in accordance with regulation 3.1.2.1;

3.1.1.4.4 preparation of reinforcing details, bending schedules and other information as may be necessary: Provided that this service may be included in the design and tender stage if full documentation is required before the construction stage;

3.1.1.4.5 checking contractors' drawings for the permanent works for conformity with design requirements, but excluding detailed checking of shop details for erection fit;

3.1.1.4.6 advice to the client on alternative designs and tenders but excluding detailed inspection, reviewing and checking of alternative designs and drawings not prepared by the professional engineer and submitted by any contractor or potential contractor;

3.1.1.4.7 issuing instructions to contractors, co-ordinating and generally inspecting the execution of the works for compliance with the contract at such intervals as the professional engineer may deem necessary, directing site staff but excluding detailed and day-to-day inspection of the works and site administration as provided for under regulation 3.1.2.1;

3.1.1.4.8 attendance at site meetings during the construction of the engineering works at an average frequency of once per fortnight;

3.1.1.4.9 deciding in or assisting the principal agent of the client to decide in disputes or differences that may arise between the client and the contractors, excepting mediation, arbitration or litigation;

3.1.1.4.10 issuing variation orders or information to enable variation orders to be issued by others;

3.1.1.4.11 raadgewing aan die klient oor die inspeksie en toets van sodanige materiaal en toerusting as wat normaalweg geïnspekteer en getoets word, en die tref van reëlins om sodanige inspeksie en toetsing op koste van die klient te laat uitvoer;

3.1.1.4.12 die tref van reëlins, namens die klient, vir die verskaffing en reproduksie van sodanige tekeninge en dokumente as wat die kontrakteurs en terreinpersoneel nodig mag hê om die ingenieurswerke uit te voer;

3.1.1.4.13 die tref van reëlins om die klient, na voltooiing van die ingenieurswerke van sodanige rekordtekeninge wat nodig is om 'n behoorlike rekord van die ingenieurswerke soos opgerig, te hou, en sodanige handleidings wat nodig is vir die bedryf en instandhouding van die betrokke gedeeltes van die ingenieurswerke, te voorsien.

3.1.2 BYKOMENDE DIENSTE.

Dienste in verband met onderstaande items is bykomend by die normale dienste van die professionele ingenieur, wat die klient se goedkeuring moet verkry vir die verrigting van sodanige dienste:

3.1.2.1 VERSKAFFING VAN TERREINPERSONEEL.

3.1.2.1.1 Indien die klient dit verlang van die professionele ingenieur belas met die dienste omskryf in regulasie 3.1.1.4, stel die professionele ingenieur sodanige bevoegde terreinpersoneel aan as wat nodig mag wees vir die doeltreffende kontroliering van die uitpyn, daaglikse inspeksie van die konstruksie van die werke, die opmeet van werk op die terrein en die vasstelling van die hoeveelheid saam met verteenwoordigers van die kontrakteurs.

3.1.2.1.2 Indien voldoende terreinpersoneel nie aangestel is nie, moet die professionele ingenieur, met die goedkeuring van die klient, sodanige bykomende dienste lewer as wat nodig mag wees om die funksies omskryf in regulasie 3.1.2.1.1 uit te voer.

3.1.2.2 HOOFAGENT VAN DIE KLIENT.

Wanneer die professionele ingenieur as hoofagent van die klient aangestel word, is sy bykomende dienste die volgende:

3.1.2.2.1 Raadgewing oor die aanstelling en die omskrywing van die dienste van ander professionele raadgewers deur die klient;

3.1.2.2.2 leierskap van die professionele span;

3.1.2.2.3 voorlegging van voorlopige en ontwikkelde voorstelle in die vorm van verslae, tekeninge en spesifikasies, tesame met kosteramings vir die projek in die geheel;

3.1.2.2.4 verantwoordelikheid vir die algehele administrasie van alle gedeeltes van die projek met inbegrip van dié wat binne die bestek val van die ander professionele raadgewers in die span;

3.1.2.2.5 verantwoordelikheid vir die algehele koördinerende, programmering van ontwerp en finansiële beheer van die projek;

3.1.2.2.6 beslegting van geskille wat tussen die klient en die kontrakteurs mag ontstaan, uitgesonderd bemiddeling, arbitrasie of regsdinge;

3.1.2.2.7 goedkeuring van sertifikate vir betaling aan kontrakteurs, uitgereik deur die ander professionele raadgewers in die span, voor voorlegging aan die klient vir vereffening;

3.1.2.2.8 die tref van reëlins om die klient na voltooiing van die ingenieurswerke van sodanige rekordtekeninge wat nodig is om 'n behoorlike rekord van die ingenieurswerke soos opgerig, te hou, en sodanige handleidings wat nodig is vir die bedryf en instandhouding van die betrokke gedeeltes van die ingenieurswerke, te voorsien;

3.1.2.2.9 goedkeuring van die finale kontrakrekening vir die projek in die geheel.

3.1.1.4.11 advice to the client regarding the inspection and testing of such materials and plant as are usually inspected and tested and arranging for such inspection and testing to be carried out at the client's expense;

3.1.1.4.12 making arrangements on behalf of the client for the provision and reproduction of such drawings and documents as may be required by contractors and site staff for the execution of the engineering works;

3.1.1.4.13 making arrangements to provide the client, on completion of the engineering works, with such record drawings as may be required for a proper record of the engineering works as constructed and such manuals as may be required for the operation and maintenance of the relevant parts of the engineering works.

3.1.2 ADDITIONAL SERVICES.

Services in connection with the items listed below are additional to the normal services of the professional engineer, who shall obtain the approval of the client for any such services to be carried out:

3.1.2.1 PROVISION OF SITE STAFF.

3.1.2.1.1 Should the client require the professional engineer charged with the services in regulation 3.1.1.4 so to do, the professional engineer shall appoint such competent site staff as is necessary for the efficient checking of setting out, day-to-day inspection of construction of the works, measuring up of work on site and agreeing quantities with contractors' representatives.

3.1.2.1.2 Where adequate site staff are not appointed the professional engineer shall, subject to the approval of the client, provide such additional services as are necessary for carrying out the functions described in regulation 3.1.2.1.1.

3.1.2.2 PRINCIPAL AGENT OF THE CLIENT.

The additional services of the professional engineer when appointed as principal agent of the client shall be as follows:

3.1.2.2.1 Advice as to the appointment and delineation of services of other professional advisers by the client;

3.1.2.2.2 leadership of the professional team;

3.1.2.2.3 submission of preliminary and developed proposals in the form of reports, drawings and specifications together with estimates of costs for the project as a whole;

3.1.2.2.4 responsibility for the overall administration of all sections of the project, including those which fall within the ambit of the other professional advisers in the team;

3.1.2.2.5 responsibility for the overall co-ordination, programming of design and financial control of the project;

3.1.2.2.6 deciding on differences that may arise between the client and the contractors, excepting mediation, arbitration or litigation;

3.1.2.2.7 approval of certificates for payment to contractors issued by the other professional advisers in the team prior to their presentation to the client for settlement;

3.1.2.2.8 making arrangements to provide the client, on completion of the engineering works, with such record drawings as may be required for a proper record of the engineering works as constructed and such manuals as may be required for the operation and maintenance of the relevant parts of the engineering works;

3.1.2.2.9 approval of the final contract account for the project as a whole.

3.1.2.3 BEMIDDELINGS, ARBITRASIE EN REGSGEDINGE EN SOORTGELYKE DIENSTE.

Indien die klient aan die professionele ingenieur opdrag gee om die ondergemelde dienste te onderneem, is die omvang daarvan onderworpe aan ooreenkoms tussen die twee partye:

3.1.2.3.1 Verkryging van parlementêre of ander statutêre goedkeuring, lisensies of permitte;

3.1.2.3.2 bystand by beoogde of werklike bemiddelings-, arbitrasie- of regsverrigtinge;

3.1.2.3.3 optrede by of bywoning van geregshoue en kommissies van ondersoek, gekose komitees en soortgelyke liggame wat by wet, regulasie of verordening ingestel is.

3.1.2.4 DIVERSE BYKOMENDE DIENSTE.

3.1.2.4.1 Onderhandeling met ander owerhede as plaaslike owerhede.

3.1.2.4.2 Opmetings, ondersoeke, koste-analises, en so meer, van bestaande strukture.

3.1.2.4.3 Tref van reëlins vir deurgangsregte, serwitute of onteienings.

3.1.2.4.4 Aanbring van sodanige wysigings as wat nodig mag wees om formele goedkeuring te verkry van die betrokke staatsdepartemente of openbare owerhede, voorspruitende uit besluite deur sodanige departemente of owerhede as gevolg van beleidsveranderings en ander oorsake buite die beheer van die professionele ingenieur.

3.1.2.4.5 Uivoer van spesiale ondersoeke of toetse.

3.1.2.4.6 Opstel of gedetailleerde kontrolering van werk-winkeldetails.

3.1.2.4.7 Gedetailleerde inspeksie, hersiening en kontrolering van ontwerpe en tekeninge wat nie deur die professionele ingenieur opgestel is nie, en deur enige kontrakteur of voornemende kontrakteur voorgelê is as alternatief vir dié wat ingesluit is by die tender of soortgelyke dokumente wat deur die professionele ingenieur opgestel is.

3.1.2.4.8 Bywoning van terreinvergaderings benewens dié bedoel in regulasie 3.1.1.4.8, tensy die professionele ingenieur aangestel is as die hoofagent van die klient.

3.1.2.4.9 Dienste wat aanleiding gee tot buitengewone bykomende kostes vir die professionele ingenieur, insluitende—

3.1.2.4.9.1 dienste wat ontstaan omrede 'n kontrakteur in gebreke bly om sy kontrak te voltooi;

3.1.2.4.9.2 dienste deur die professionele ingenieur verrig wat gebruiklikerwys of kontraktueel die plig van die kontrakteur is, hetsy uit hoofde van spesiale kontraktuele bepalinge wat die kontrakteur onthef van sy gebruikelike verpligtinge of as gevolg daarvan dat die kontrakteur in gebreke bly om sy kontraktuele verpligtinge na te kom;

3.1.2.4.9.3 dienste wat die professionele ingenieur verrig deur remediërende maatreëls te bepaal, bykomende of meer uitgebreide besoeke aan die terrein te bring of om enige geskille te besleg wat die direkte en noodwendige gevolg is van die versuim deur die kontrakteur om aan enige spesifikasies, tekeninge, prosedures, konstruksieprogramme, tydtafel of vasgestelde voltooiingsdatum ooreenkomstig die kontrak te voldoen;

3.1.2.4.10 kontrolering, koördinerende of raadgewing oor enige deel van die projek wat nie deel van die ingenieurswerke uitmaak nie;

3.1.2.4.11 versameling, ondersoek en saamvoeging van die pertinente gegewens genoem in regulasie 3.2.7 en nie aan die professionele ingenieur beskikbaar gestel nie;

3.1.2.3 MEDIATION, ARBITRATION AND LITIGATION PROCEEDINGS AND SIMILAR SERVICES.

Where the client instructs the professional engineer to undertake the services listed below, the extent thereof shall be subject to agreement between the two parties:

3.1.2.3.1 Obtaining Parliamentary or other statutory approval, licences or permits;

3.1.2.3.2 assisting with contemplated or actual mediation, arbitration or litigation proceedings;

3.1.2.3.3 officiating at or attending courts and commissions of inquiry, select committees and similar bodies convened by statute, regulation or decree.

3.1.2.4 DIVERSE ADDITIONAL SERVICES.

3.1.2.4.1 Dealing with authorities other than local authorities.

3.1.2.4.2 Surveys, investigations, cost analyses, etc., of existing structures.

3.1.2.4.3 Making arrangements for wayleaves, servitudes or expropriations.

3.1.2.4.4 Making such revisions as may be required to obtain the formal approval of the appropriate Government departments or public authorities, resulting from decisions of such departments or authorities arising out of changes in policy and other causes beyond the professional engineer's control.

3.1.2.4.5 Carrying out special investigations or tests.

3.1.2.4.6 Preparation or detailed checking of shop details.

3.1.2.4.7 Detailed inspection, reviewing and checking of designs and drawings not prepared by the professional engineer and submitted by any contractor or potential contractor as alternative to those embodied in tender or similar documents prepared by the professional engineer.

3.1.2.4.8 Attendance at site meetings in addition to those referred to in regulation 3.1.1.4.8, unless the professional engineer is appointed as the principal agent of the client.

3.1.2.4.9 Services which give rise to abnormal additional costs for the professional engineer, including—

3.1.2.4.9.1 services arising from the failure of any contractor to perform his contract;

3.1.2.4.9.2 services performed by the professional engineer which it is customarily or contractually incumbent upon the contractor to perform, whether by virtue of special contractual provisions relieving the contractor of customary obligations or in consequence of the contractor's failure to meet contractual obligations;

3.1.2.4.9.3 services performed by the professional engineer in determining any remedial measure, making any additional or more extended site visits or resolving any disputes which are the direct and necessary consequence of any failure by the contractor to comply with any specifications, drawings, procedures, construction programmes, time-table or due completion date with which he is required to comply in terms of the contract;

3.1.2.4.10 checking, co-ordinating or advising upon any part of the project not forming part of the engineering works;

3.1.2.4.11 collection, investigation and collation of the pertinent data listed in regulation 3.2.7 and not made available to the professional engineer;

3.1.2.4.12 bykomende dienste soos omskryf in—
regulasie 3.1.2.1.2—terreinpersoneel nie aangestel nie;

regulasie 3.2.4—skade aan of vernietiging van die werke;

regulasie 3.2.5—uitstel, kansellering of abandonnering van die werke;

regulasie 3.2.6—veranderings of wysigings aan ontwerpe;

3.1.2.4.13 enige bykomende dienste van welke aard ook al uitgesonderd dié spesifiek in regulasie 3.1.2 genoem.

3.2 VERGOEDING VAN EN BASIS VAN BETALING AAN DIE PROFESSIONELE INGENIEUR VIR STRUKTURELE EN SIVIELE INGENIEURSDIENSTE WAT MET BOUPROJEKTE IN VERBAND STAAN.

3.2.1 VERGOEDING.

3.2.1.1 VOLLEDIGE NORMALE DIENSTE.

Behoudens regulasie 3.2.1.1.5 word die vergoeding van die professionele ingenieur vir die normale dienste wat hy ooreenkomstig regulasie 3.1.1 verrig, bereken op die basis en wysé soos in regulasies 3.3.1 en 3.3.2 uiteengesit en is dit as volg aan die professionele ingenieur betaalbaar, tensy anders ooreengekom:

3.2.1.1.1 VERSLAGSTADIUM—REGULASIE 3.1.1.1.

Tien persent van die gelde sodra sodanige dienste as wat vir die verslagstadium nodig is, voltooi is.

3.2.1.1.2 VOORLOPIGE ONTWERPSTADIUM—REGULASIE 3.1.1.2.

'n Verdere 10 persent van die gelde sodra sodanige dienste as wat vir die voorlopige ontwerpstadium nodig is, voltooi is.

3.2.1.1.3 ONTWERP- EN TENDERSTADIUM—REGULASIE 3.1.1.3.

'n Verdere 35 persent van die gelde na voltooiing van die algemene uitlegtekeninge en ander dokumente nodig om die ingenieurswerke op tender uit te bestee, of om deur die kliënt andersins uitbestee te word.

3.2.1.1.4 KONSTRUKSIESTADIUM—REGULASIE 3.1.1.4.

3.2.1.1.4.1 'n Verdere 30 persent (of *pro rata*) van die gelde by voltooiing van alle werkstekeninge en skedules.

3.2.1.1.4.2 'n Verdere 12½ persent van die gelde na gelang die konstruksiewerk vorder in verhouding tot die koste van die werke voltooi.

3.2.1.1.4.3 Die oorblywende 2½ persent van die gelde by afhandeling van die finale kontrakrekening.

3.2.1.1.5 GEDEELTELIKE NORMALE DIENSTE

Indien die professionele ingenieur aangestel word om dienste te verrig wat nie al die stadia uiteengesit in regulasies 3.1.1.1, 3.1.1.2, 3.1.1.3 en 3.1.1.4 bevat nie, word die gelde soos volg toegedeel:

3.2.1.1.5.1 Verslag- en voorlopige ontwerpstadium alleenlik—30 persent van die gelde;

3.2.1.1.5.2 verslag-, voorlopige ontwerp- en die ontwerp- en tenderstadium alleenlik—60 persent van die gelde;

3.2.1.1.5.3 verslag-, voorlopige ontwerp- en die ontwerp- en tenderstadium en die opstel van wapeningsdetails en buigskedules alleenlik—90 persent van die gelde;

3.2.1.1.5.4 konstruksiestadium alleenlik, maar uitgesonderd die opstel van wapeningsdetails en buigskedules—25 persent van die gelde.

3.1.2.4.12 additional services as defined in—
regulation 3.1.2.1.2—site staff not appointed;
regulation 3.2.4—damage or destruction of the works;
regulation 3.2.5—postponement, cancellation or abandonment of the works;

regulation 3.2.6—alterations or modifications to designs;

3.1.2.4.13 any additional services of whatever nature other than those specifically referred to in regulation 3.1.2.

3.2 REMUNERATION AND BASIS OF PAYMENT OF THE PROFESSIONAL ENGINEER IN RESPECT OF STRUCTURAL AND CIVIL ENGINEERING SERVICES PERTAINING TO BUILDING PROJECTS.

3.2.1 REMUNERATION.

3.2.1.1 FULL NORMAL SERVICES.

Subject to regulation 3.2.1.1.5, the remuneration of the professional engineer for the normal services performed by him under regulation 3.1.1 shall be calculated on the basis and in the manner set out in regulations 3.3.1 and 3.3.2 and shall, unless otherwise agreed, become due to the professional engineer as follows:

3.2.1.1.1 REPORT STAGE—REGULATION 3.1.1.1.

Ten per cent of the fee when such services as may be necessary for the report stage have been completed.

3.2.1.1.2 PRELIMINARY DESIGN STAGE—REGULATION 3.1.1.2.

A further 10 per cent of the fee when such services, as may be necessary for the preliminary design stage, have been completed.

3.2.1.1.3 DESIGN AND TENDER STAGE—REGULATION 3.1.1.3.

A further 35 per cent of the fee on completion of the general arrangement drawings and other documents necessary to enable the engineering works to be tendered for or otherwise placed by the client.

3.2.1.1.4 CONSTRUCTION STAGE—REGULATION 3.1.1.4.

3.2.1.1.4.1 A further 30 per cent of the fee (or *pro rata*) on completion of all workings drawings and schedules.

3.2.1.1.4.2 A further 12½ per cent of the fee as and when the construction work proceeds in proportion to the cost of work done.

3.2.1.1.4.3 The remaining 2½ per cent of the fee on completion of the final contract account.

3.2.1.1.5 PARTIAL NORMAL SERVICES.

Where the professional engineer is appointed to perform services not constituting all the stages set out in regulations 3.1.1.1, 3.1.1.2, 3.1.1.3 and 3.1.1.4, the fee shall be apportioned as follows:

3.2.1.1.5.1 Report stage and preliminary design stage only—30 per cent of the fee;

3.2.1.1.5.2 report stage, preliminary design stage and the design and tender stage only—60 per cent of the fee;

3.2.1.1.5.3 report stage, preliminary design stage, and the design and tender stage and preparation of reinforcing details and bending schedules only—90 per cent of the fee;

3.2.1.1.5.4 construction stage only but excluding the preparation of reinforcing details and bending schedules—25 per cent of the fee.

3.2.1.2 BYKOMENDE DIENSTE.

Die gelde of heffings vir bykomende dienste verrig ooreenkomstig regulasie 3.1.2 is soos volg:

3.2.1.2.1 VERSKAFFING VAN TERREINPERSONEEL.

Die heffing vir bykomende dienste wat die professionele ingenieur verrig ter verskaffing van terreinpersoneel kragtens regulasie 3.1.2.1.1 is soos neergelê in regulasie 3.3.3.1.

3.2.1.2.2 HOOFAGENT VAN DIE KLIËNT.

Die gelde vir die bykomende dienste wat die professionele ingenieur verrig as hoofagent van die kliënt ooreenkomstig regulasie 3.1.2.2 is soos neergelê in regulasie 3.3.3.2 en word toegedeel soos vir normale dienste ooreenkomstig regulasie 3.2.1.1.

3.2.1.2.3 BEMIDDELING, ARBITRASIE EN REGSGEDINGE EN SOORTGELYKE DIENSTE.

Die gelde vir die dienste deur die professionele ingenieur verrig kragtens regulasie 3.1.2.3 word bereken op 'n tyd-basis soos in regulasie 3.3.3.3 uiteengesit.

3.2.1.2.4 DIVERSE BYKOMENDE DIENSTE.

Die gelde vir diverse bykomende dienste deur die professionele ingenieur verrig kragtens regulasie 3.1.2.4 word bereken op 'n tydbasis soos in regulasie 3.3.4 uiteengesit.

3.2.1.2.5 TERREINPERSONEEL NIE AANGESTEL NIE.

Indien voldoende terreinpersoneel nie aangestel is nie, hef die professionele ingenieur gelde op 'n tydbasis soos in regulasie 3.3.4 uiteengesit vir die nodige bykomende dienste deur hom of sy personeel gelewer en vir terreinbesoeke bo en behalwe dié in regulasie 3.1.1.4.8 genoem, of soos met die kliënt ooreengekom.

3.2.1.3 GELDE VIR HERGEBRUIK VAN VOLTOOIDE ONTWERPE, EN SO MEER.

Indien 'n kliënt verlang om een of meer duplikasies van 'n bepaalde volledige struktuur of werke op te rig waarvoor die professionele ingenieur ondersoek, ontwerpe, tekeninge, spesifikasies, en so meer, voltooi het is die gelde wat die professionele ingenieur hef vir die hergebruik van sodanige dokumente 'n kwart van die toegedeelde gelde vir die normale en bykomende dienste verrig in die verslag-, voorlopige ontwerp- en ontwerp- en tenderstadium, gegrond op die aangesuiwerde waarde van die werke wat gedupliseer of herhaal word: Met dien verstande dat die professionele ingenieur daarbenewens vergoed word vir sodanige nuwe werk as wat hy noodsaaklikerwys moet verrig, en dat hy betaal word vir alle uitbetalings en uitgawes: Met dien verstande verder dat indien die professionele ingenieur se dienste behou word vir die konstruksiestadium, die gelde wat die professionele ingenieur hef vir sy dienste en enige bykomende dienste wat hy gedurende hierdie stadium uitvoer, die volle toegedeelde gelde vir die konstruksiestadium is, gegrond op die aangesuiwerde koste van die werke wat gedupliseer of herhaal word, plus alle uitbetalings en uitgawes. Hierdie regulasie sal nie van toepassing wees in gevalle waar tipe ontwerpe voorberei is vir hergebruik deur die kliënt op sy eie risiko nie.

3.2.2 TUSSENTYDSE BETALINGS AAN DIE PROFESSIONELE INGENIEUR.

3.2.2.1 Om die tussentydse betalings verskuldig ooreenkomstig regulasie 3.2.1.1 te bepaal, is die koste van die ingenieurswerke, uitgesonderd enige voorlopige toelaes gemaak ter dekking van gebeurlikhede en eskalasie, soos volg:

3.2.2.1.1 Die toepaslike gedeelte van die netto bedrag van die aanvaarde tender; of

3.2.1.2 ADDITIONAL SERVICES.

The fee or charge for additional services carried out under regulation 3.1.2 shall be as follows:

3.2.1.2.1 PROVISION OF SITE STAFF.

The charge for the additional services performed by the professional engineer in providing site staff in terms of regulation 3.1.2.1.1 shall be in accordance with regulation 3.3.3.1.

3.2.1.2.2 PRINCIPAL AGENT OF THE CLIENT.

The fee for the additional services performed by the professional engineer as principal agent of the client under regulation 3.1.2.2 shall be in accordance with regulation 3.3.3.2 apportioned as for normal services under regulation 3.2.1.1.

3.2.1.2.3 MEDIATION, ARBITRATION AND LITIGATION PROCEEDINGS AND SIMILAR SERVICES.

The fee for the services performed by the professional engineer under regulation 3.1.2.3 shall be calculated on a time basis as set out in regulation 3.3.3.3.

3.2.1.2.4 DIVERSE ADDITIONAL SERVICES.

The fee for diverse additional services performed by the professional engineer under regulation 3.1.2.4 shall be calculated on a time basis as set out in regulation 3.3.4.

3.2.1.2.5 SITE STAFF NOT APPOINTED.

Where adequate site staff are not appointed the professional engineer shall charge for the necessary additional services rendered by himself or his staff and for site visits additional to those referred to in regulation 3.1.1.4.8 on a time basis as set out in regulation 3.3.4, or as agreed with the client.

3.2.1.3 FEE FOR RE-USE OF COMPLETED DESIGNS, ETC.

Where the client wishes to erect one or more duplicates of a particular complete structure or works for which the professional engineer has completed investigations, designs, drawings and specification, etc., the fee to be charged by the professional engineer for the re-use of such documents shall be one quarter of the apportioned fee for normal and additional services carried out in the report, preliminary design and design and tender stages based on the updated cost of the works as duplicated or repeated: Provided that the professional engineer shall, in addition, be remunerated for such new work as it may be necessary for him to perform and that he shall be paid for all disbursements and expenses: Provided further that if the professional engineer's services should be retained for the construction stage, the fee to be charged by the professional engineer for services and any additional services carried out during this stage shall be the full apportioned fee for the construction stage based on the updated cost of the works as duplicated or repeated together with all disbursement and expenses. This regulation will not be applicable in the case of type designs prepared for re-use by the client at his own risk.

3.2.2 INTERIM PAYMENTS TO THE PROFESSIONAL ENGINEER.

3.2.2.1 For the purpose of ascertaining the interim payments due under regulation 3.2.1.1, the cost of the engineering works, which shall exclude any provisional allowances made to cover contingencies and escalation, shall be—

3.2.2.1.1 the applicable portion of the net amount of the accepted tender; or

3.2.2.1.2 indien geen tender aanvaar is nie, die netto bedrag van die toepaslike gedeelte van die laagste geskikte tender wat as sulks aanbeveel is deur die hoofagent van die kliënt in ooreenstemming met die professionele ingenieur; of

3.2.2.1.3 indien die kontrak by wyse van onderhandelinge toegeken is, die bedongene prys; of

3.2.2.1.4 indien geen tenders ingewin is of indien geen geskikte tenders ontvang is of indien geen onderhandelinge eindig gevoer is nie, die beraming waarvoor onderling ooreengekom word.

3.2.2.2 Sodanige tussentydse betalings tel alleenlik as gedeeltes van die totale gelde wat uiteindelik betaalbaar is en bereken word op die finale koste van die werke soos in regulasie 3.2.3 omskryf.

3.2.3 KOSTE VAN DIE INGENIEURSWERKE.

3.2.3.1 Om die totale gelde te bereken wat uiteindelik betaalbaar is ooreenkomstig regulasie 3.2.2.2 is die koste van die ingenieurswerke, of enige gedeelte daarvan, die koste van die werke wat ontwerp, gespesifiseer of geadminestreer is deur die professionele ingenieur en word soos volg bereken:

3.2.3.1.1 Die bedrag gesertifiseer vir betaling aan die kontrakteurs ten opsigte van werke, voor aftrekking van gelikwiderde skadevergoeding of boetes indien enige;

3.2.3.1.2 indien die kliënt arbeid, gereedskap, konstruksietoerusting of -materiaal, vervaardigde goedere of masjinerie verskaf vir insluiting in die werke, 'n regstreekse en billike waardasie gegrond op normale tariewe van kontrakteurs vir soortgelyke items met inbegrip van waardevermindering, verspilling en herstelwerk, oorhoofse koste en winste; en

3.2.3.1.3 'n billike ooreengekome waardasie van die verskil tussen die koste van enige tweedehandse materiale, vervaardigde goedere of masjinerie wat in die werke ingesluit is en die markwaarde van sulke materiale, vervaardigde goedere en masjinerie asof hulle nuut aangekoop is.

3.2.3.2 Die koste van die ingenieurswerke sluit die volgende in:

3.2.3.2.1 Alle tydelike werke verbonde aan die gedeeltes van die projek soos in hierdie regulasie 3.2.3.2 uiteengesit;

3.2.3.2.2 alle uitgrawings wat volgens die professionele ingenieur se opdragte uitgevoer is en waarvoor hy verantwoordelik is;

3.2.3.2.3 alle beton, wapeningstaal, strukturele staalwerk, hout, aluminium en enige ander strukturele materiaal aangedui op die professionele ingenieur se tekeninge en waarvoor hy verantwoordelik is;

3.2.3.2.4 bekisting vir beton;

3.2.3.2.5 steenwerk wat deur die professionele ingenieur ontwerp en gedetailleer is en waarvoor hy verantwoordelik is;

3.2.3.2.6 fondamente vir mure deur die professionele ingenieur ontwerp en gedetailleer;

3.2.3.2.7 bekleding wat deur die professionele ingenieur ontwerp en gedetailleer is en waarvoor hy verantwoordelik is;

3.2.3.2.8 invoegsels in of deur strukturele werk wat die professionele ingenieur op sy tekeninge moet aandui;

3.2.3.2.9 bouerswerk en dekoratiewe behandeling van strukturele raamdele wat ontwerp en tekeninge van die professionele ingenieur vereis;

3.2.3.2.10 die koste van enige toetsboorwerk, proefheiwerk, meet van grondweerstand, uitgrawing van skagte, toegangs tunnels, en so meer, waarvoor die professionele ingenieur kontrakdokumente moet opstel en wat hy moet inspekteer of administreer; en

3.2.2.1.2 if no tender is accepted, the net amount of the applicable portion of the lowest suitable tender recommended as such by the principal agent of the client in consultation with the professional engineer; or

3.2.2.1.3 if the contract is awarded by negotiation, the negotiated price; or

3.2.2.1.4 if no tenders are invited or if no suitable tenders are received or if no negotiation is concluded, the mutually agreed estimate.

3.2.2.2 Such interim payments shall rank solely towards the total fee ultimately payable, which shall be calculated on the final cost of the works as defined in regulation 3.2.3.

3.2.3 COST OF THE ENGINEERING WORKS.

3.2.3.1 For the purpose of calculating the total fee ultimately payable in terms of regulation 3.2.2.2 the cost of the engineering works or any part thereof shall be the cost of the works designed, specified or administered by the professional engineer, calculated as follows:

3.2.3.1.1 The amount certified for payment to contractors in respect of the works before deduction of liquidated damages or penalties (if any);

3.2.3.1.2 where the client provides labour, tools, construction plant or materials, manufactured goods or machinery for incorporation in the works, a direct and fair valuation based on normal charges by contractors for similar items including depreciation, waste and repairs, overheads and profit; and

3.2.3.1.3 a fair valuation to be agreed of the difference between the cost price of any second-hand materials, manufactured goods or machinery incorporated in the works and the market value of such materials, manufactured goods and machinery as though they were purchased new.

3.2.3.2 The cost of the engineering works shall include—

3.2.3.2.1 all temporary works associated with the parts of the project as set out in this regulation 3.2.3.2;

3.2.3.2.2 all excavations carried out in accordance with the professional engineer's instructions and for which he is responsible;

3.2.3.2.3 all concrete, reinforcing steel, structural steelwork, timber, aluminium and any other structural material shown on the professional engineer's drawings and for which he is responsible;

3.2.3.2.4 formwork to concrete;

3.2.3.2.5 brickwork designed and detailed by the professional engineer and for which he is responsible;

3.2.3.2.6 wall foundations designed and detailed by the professional engineer;

3.2.3.2.7 cladding designed and detailed by the professional engineer and for which he is responsible;

3.2.3.2.8 inserts in or through structural work which the professional engineer has to indicate on his drawings;

3.2.3.2.9 builder's work and decorative treatment to structural members requiring design and drawings by the professional engineer;

3.2.3.2.10 the cost of any exploratory drilling, test piling, soil resistivity measurement, excavation of shafts, adits, etc., for which the professional engineer is required to prepare contract documents and which he is required to inspect or administer; and

3.2.3.2.11 indien die ingenieurswerke uitgevoer word as 'n gedeelte van 'n kontrak, 'n billike gedeelte van die voorlopige en algemene items wat soos volg bereken sal word:

3.2.3.2.11.1 Die koste van die items vervat in die voorlopige en algemene afdeling van die kontrakhoeveelheidslyste wat uitsluitlik verband hou met die ingenieurswerke, ten volle; en

3.2.3.2.11.2 'n gedeelte van die koste van al die ander items soos vervat in die voorlopige en algemene afdeling van die kontrakhoeveelheidslyste in die verhouding waarin die koste van die ingenieurswerke soos bepaal ooreenkomstig regulasies 3.2.3.1, 3.2.3.2 en 3.2.3.2.11.1 staan tot die totale koste van die projek nadat alle sodanige ander voorlopige en algemene items afgetrek is.

3.2.3.3 Die koste van die ingenieurswerke sluit nie die volgende in nie:

3.2.3.3.1 Administratiewe uitgawes deur die kliënt aangegaan;

3.2.3.3.2 professionele gelde en uitgawes;

3.2.3.3.3 opmetingskoste;

3.2.3.3.4 salarisse, reiskoste en toevallige en kantooruitgawes van die terreinpersoneel;

3.2.3.3.5 finansieringskoste en -heffings aangegaan deur die kliënt;

3.2.3.3.6 die koste van grond, servitude en deurgangs-regte.

3.2.3.4 Indien enige kontrak, ondanks die bepaling van regulasie 3.2.3.1, bepaal dat betalings aan kontrakteurs verhoog of verlaag moet word tydens die duur van die kontrak na gelang van enige skommeling in die werklike koste van gespesifiseerde items of in voorgeskrewe indeksstelsels, moet die waarde van sodanige verhogings of verlaging in die koste, na gelang van die geval, soos volg in ag geneem word by die bepaling van die koste van die werke vir die berekening van die totale gelde uiteindelik betaalbaar:

3.2.3.4.1 Ten opsigte van daardie gedeelte van die totale gelde wat gedurende die konstruksiestadium verskuldig word kragtens regulasie 3.2.1.1.4 die totaal van die verhoging of verlaging in koste wat werklik vir betaling kragtens die kontrakte gesertifiseer word;

3.2.3.4.2 ten opsigte van daardie gedeelte van die gelde wat voor die konstruksiestadium verskuldig word kragtens regulasies 3.2.1.1.1, 3.2.1.1.2 en 3.2.1.1.3 en, waar van toepassing, ten opsigte van enige werkstekeninge wat voltooi is voor die plasing van die werke soos bepaal in regulasie 3.2.1.1.4, die totaal van die verhogings of verlaging in die koste wat werklik vir betaling gesertifiseer is met 'n maksimum van 10 persent van die oorspronklike kontrakbedrag uitsluitende onvoorsiene uitgawes.

3.2.4 SKADE AAN OF Vernietiging van die werke.

Indien enige gedeelte van die werke of die toerusting daarvoor te eniger tyd as gevolg van oorlog, brand, storms, vloedwater of ander oorsake buite die beheer van die professionele ingenieur beskadig of vernietig word voordat die werke voltooi is, betaal die kliënt die professionele ingenieur die toepaslike gelde vir enige bykomende dienste wat van hom verlang word, met inbegrip van ontwerp, inspeksie en administrasie as gevolg van sodanige skade of vernietiging.

3.2.5 UITSTEL, KANSELLERING OF ABANDONNERING VAN DIE WERKE.

3.2.5.1 Indien die werke in die geheel of gedeeltelik uitgestel, gekanselleer of geabandonneer word nadat die kliënt opdrag aan die professionele ingenieur gegee het om voort te gaan met enige van die stadiums genoem in regulasies 3.1.1.1, 3.1.1.2, 3.1.1.3 en 3.1.1.4, word die betaling

3.2.3.2.11 where the engineering works are carried out as a portion of a contract, a fair and reasonable proportion of the preliminary and general items, which shall be calculated as follows:

3.2.3.2.11.1 The cost of the items under the preliminary and general sections of the contract bills of quantities which are uniquely related to the engineering works, in full; and

3.2.3.2.11.2 a portion of the cost of all other items under the preliminary and general section of the contract bills of quantities in the ratio that the cost of the engineering works as determined according to regulations 3.2.3.1, 3.2.3.2 and 3.2.3.2.11.1 bears to the total cost of the project after deducting all such other preliminary and general items.

3.2.3.3 The cost of the engineering works shall not include—

3.2.3.3.1 administrative expenses incurred by the client;

3.2.3.3.2 professional fees and disbursements;

3.2.3.3.3 cost of surveys;

3.2.3.3.4 salaries, travelling, out-of-pocket and office expenses of site staff;

3.2.3.3.5 finance costs and charges incurred by the client;

3.2.3.3.6 cost of land, servitudes and wayleaves.

3.2.3.4 Notwithstanding the provisions of regulation 3.2.3.1, where any contract provides that payment to contractors shall be increased or decreased during the currency of the contract in accordance with any fluctuation in the actual cost of specified items or in prescribed indices, the value of such increases or decreases in cost, as the case may be, shall be brought into account in determining the cost of the works for purposes of calculating the total fee ultimately payable in the following manner:

3.2.3.4.1 In respect of that portion of the total fee becoming due during the construction stage in accordance with regulation 3.2.1.1.4, the total of the increases or decreases in cost actually certified for payment in terms of the contracts;

3.2.3.4.2 in respect of that portion of the fee becoming due prior to the construction stage in accordance with regulations 3.2.1.1.1, 3.2.1.1.2 and 3.2.1.1.3 and, where applicable, in respect of any working drawings completed prior to the placing of the works as provided in regulation 3.2.1.1.4, the total of the increases or decreases in cost actually certified for payment with a maximum of 10 per cent of the original contract amount excluding contingencies.

3.2.4 DAMAGE TO OR DESTRUCTION OF THE WORKS.

If, at any time before the completion of the works, any part of the works or of the equipment therefor is damaged or destroyed by operation of war, fire, storm, flood or other cause beyond the control of the professional engineer, the client shall pay to the professional engineer the appropriate fee for any additional services which may be required of him including design, inspection and administration as a result of such damage or destruction.

3.2.5 POSTPONEMENT, CANCELLATION OR ABANDONMENT OF THE WORKS.

3.2.5.1 If, instructions having been given by the client to the professional engineer to proceed with any of the stages referred to in regulations 3.1.1.1, 3.1.1.2, 3.1.1.3 and 3.1.1.4, the whole or any part of the engineering works is postponed, cancelled or abandoned, the payment to be

aan die professionele ingenieur vir dienste verrig ten opsigte van daardie deel van die werke wat aldus uitgestel, gekanselleer of geabandonneer is, bereken ooreenkomstig regulasie 3.2.1.1, plus 'n toeslag van een tiende, en ooreenkomstig enige ander toepaslike regulasies, in verhouding tot die dienste verrig voordat die werke uitgestel, gekanselleer of geabandonneer is.

3.2.5.2 Indien daar binne twee jaar met die uitgestelde werke, of enige gedeelte daarvan voortgegaan word, is die betaling kragtens regulasie 3.2.5.1 finaal vir dienste alreeds verrig en word betaling vir toekomstige dienste afsonderlik bereken ooreenkomstig die toepaslike bepalinge van hierdie Bylae.

3.2.5.3 Indien bykomende dienste van die professionele ingenieur verlang word ten opsigte van die hervatting van die uitgestelde werke, hef die professionele ingenieur vir sulke verdere dienste gelde op 'n tyd basis soos in regulasie 3.3.4 uiteengesit.

3.2.5.4 Ingeval die werke, of enige gedeelte daarvan, langer as twee jaar uitgestel word, word sodanige werke geag geabandonneer te wees.

3.2.5.5 Vir doeleindes van regulasie 3.2.5 is die koste van die werke die onderling ooreengekome beraming van die koste van die betrokke gedeelte van die werke wat voltooi was ten tyde van die uitstel, kansellering of abandonnering daarvan.

3.2.6 VERANDERINGE OF WYSIGINGS AAN ONTWERPE.

Indien omstandighede hulle voordoen wat redelikerwys nie deur die professionele ingenieur voorsien kon gewees het nie of as die kliënt of sy hoofagent die ontwerpvereistes wysig wat veranderinge aan voltooide ontwerpe noodsaak, of veranderinge aan ontwerpe waaraan gewerk word en wat ook die verandering of heropstel vereis van enige spesifikasie, tekening of ander dokument wat in die geheel of gedeeltelik deur die professionele ingenieur opgestel is, is die algehele koste van enige hersiening, wysiging of reproduksie van sodanige ontwerpe, tekeninge of dokumente om die werk te bring tot die stadium waar dit gewysig is, onderworpe aan bykomende betaling op 'n tyd basis bereken soos in regulasie 3.3.4 uiteengesit: Met dien verstande dat die professionele ingenieur die kliënt van die bykomende koste verwittig wat by wyse van gelde aangegaan mag word.

3.2.7 GEGEWENS WAT AAN DIE PROFESSIONELE INGENIEUR VERSKAF MOET WORD.

Die kliënt moet of regstreeks of deur tussenkoms van sy hoofagent die volgende kosteloos aan die professionele ingenieur verskaf:

3.2.7.1 Alle sodanige planne en deursnitte van die projek en alle sodanige terreinplanne op 'n praktiese skaal met hoogtes en alle sodanige tersaaklike detailtekeninge as wat die professionele ingenieur redelikerwys nodig mag hê;

3.2.7.2 alle tersaaklike gegewens en inligting tesame met sodanige hulp as wat redelikerwys nodig is vir die professionele ingenieur om sy dienste te verrig;

3.2.7.3 afskrifte van alle kontrakdokumente, tekeninge en ondersteunende dokumente wat betrekking het op daardie dele van die projek wat in verband staan met die ingenieurswerke, met inbegrip van die algemene kontrakvoorwaardes waar van toepassing;

3.2.7.4 afskrifte van alle wysigingstekeninge en -opdragte rakende die ingenieurswerke.

3.3 GELDETARIEF VIR STRUKTURELE EN SIVIELE INGENIEURSDIENSTE IN VERBAND MET BOUPROJEKTE.

made to the professional engineer for services performed in respect of that part of the works so postponed, cancelled or abandoned, shall be determined in accordance with regulation 3.2.1.1, plus a surcharge of one tenth, and in accordance with such other regulations as may be applicable, in proportion to the services performed prior to the works being postponed, cancelled or abandoned.

3.2.5.2 If, within two years, the postponed works or any part thereof shall again proceed, the payment defined in regulation 3.2.5.1 shall be final for the services already performed and payment for subsequent services shall be separately determined in accordance with the relevant provisions of this Schedule.

3.2.5.3 Should additional services by the professional engineer be required in connection with resumption of the postponed works, the professional engineer shall charge for such additional services on a time basis as set out in regulation 3.3.4.

3.2.5.4 In the event of the works, or any part thereof, being postponed for a period longer than two years, such works shall be considered as having been abandoned.

3.2.5.5 For the purpose of regulation 3.2.5 the cost of the works shall be the mutually agreed estimate of the cost of the relevant part of the works completed at the time of its postponement, cancellation or abandonment.

3.2.6 ALTERATIONS OR MODIFICATIONS TO DESIGNS.

In the event of circumstances arising which could not have been reasonably foreseen by the professional engineer or in the event of the client or principal agent of the client modifying the design requirements and thus necessitating alterations to completed designs or alterations to designs in progress and which also require the alteration or remaking of any specification, drawing, or other document prepared in whole or in part by the professional engineer, the whole of the cost of revising, amending or reproducing such designs, drawings or documents to bring the work up to the stage at which it was modified shall be the subject of additional payment calculated on a time basis as set out in regulation 3.3.4: Provided that the professional engineer shall inform the client in respect of additional costs which may be incurred by way of fees.

3.2.7 DATA TO BE SUPPLIED TO THE PROFESSIONAL ENGINEER.

The client, either directly or through his principal agent, shall supply free of charge to the professional engineer—

3.2.7.1 all such plans and sections of the project and all such site plans to a practical scale giving levels and all such relevant detail drawings as the professional engineer may reasonably require;

3.2.7.2 all pertinent data and information together with such assistance as shall reasonably be required to enable the professional engineer to perform his services;

3.2.7.3 copies of all contract documents, drawings and supporting documents relating to those parts of the project which are relevant to the engineering works, including the general conditions of contract where applicable;

3.2.7.4 copies of all variation drawings and orders affecting the engineering works.

3.3 TARIFF OF FEES FOR STRUCTURAL AND CIVIL ENGINEERING SERVICES PERTAINING TO BUILDING PROJECTS.

3.3.1 DIENSTE VAN NORMALE AARD.

Ten opsigte van werke wat normale eise aan die professionele ingenieur se tyd stel, is die gelde:

Indien die koste van die werke—		Die gelde is die som van die primêre gelde genoem in kolom 3 en die sekondêre gelde bereken kragtens kolom 4	
meer is as— (kolom 1)	maar nie meer is nie as— (kolom 2)	Primêre gelde (kolom 3)	Sekondêre gelde: Bereken op die totale koste van die werke teen die volgende persentasies (kolom 4)
R	R	R	%
—	60 000	200	10,00
60 000	120 000	800	9,00
120 000	300 000	2 000	8,00
300 000	600 000	3 500	7,50
600 000	1 200 000	6 500	7,00
1 200 000	3 000 000	12 500	6,50
3 000 000	—	27 500	6,00

3.3.2 DIENSTE VAN NIE-NORMALE AARD.**3.3.2.1 WERKE WAT BUITENGEWOON HOË EISE STEL.**

Ten opsigte van sekere werke of gedeeltes van werke soos hierin genoem wat buitengewoon hoë eise aan die professionele ingenieur stel, word die gelde soos volg bereken:

3.3.2.1.1 BUITENGEWOON TYDROWENDE WERKE.

3.3.2.1.1.1 Vir wysigings aan bestaande werke word die gelde soos neergelê in regulasie 3.3.1 met 25 persent verhoog.

3.3.2.1.1.2 Indien werke op afsonderlike nie-aangrensende terreine onderneem word of waar die aaneenlopendheid van die werke onderbreek word of die werke buitengewoon gefragmenteer of in afsonderlik gedokumenteerde stadiums uitgevoer word ooreenkomstig die vereistes of met die toestemming van die kliënt, kan die gelde bereken word deur regulasie 3.3.1 te beskou as van toepassing op elke terrein, kontrak, of stadium asof hulle afsonderlike werke is of, indien onvanpas, dan sal die kliënt en die professionele ingenieur ooreenkom oor die gelde wat sal lê tussen die gelde soos bepaal in regulasie 3.3.1 as van toepassing op die totale koste van die werke en die gelde bepaal deur regulasie 3.3.1 te beskou as van toepassing op die koste van elk asof hulle afsonderlike werke is.

3.3.2.1.1.3 Ten opsigte van ander soorte werke of gedeeltes van werke met inbegrip van, onder andere, dié genoem in regulasie 1.5.1 wat buitengewoon hoë eise aan die professionele ingenieur stel, word daar tussen die kliënt en die professionele ingenieur ooreengekom oor die byvoeging wat gedoen moet word tot die gelde gemeld in regulasie 3.3.1 en wat billik is ooreenkomstig die oorsake en omvang van die buitengewoon hoë eise aan die professionele ingenieur: Met dien verstande dat die professionele ingenieur, so gou dit vir hom blyk en gewoonlik nie later as die voltooiing van die verslagstadium nie, die kliënt verwittig dat hy van oordeel is dat die werke van so 'n aard is dat dit 'n verhoging van die gelde soos voornoem regverdig: Met dien verstande verder dat indien dit eers later blyk dat die werke van 'n buitengewone aard is, die professionele ingenieur die kliënt onmiddellik daarvan verwittig, in welke geval die gedeelte van die dienste wat reeds deur die professionele ingenieur voltooi is wanneer hy die kliënt aldus verwittig, nie aan die verhoogde gelde onderworpe is nie tensy die kliënt andersins instem.

3.3.1 SERVICES OF NORMAL CHARACTER.

In respect of works making normal demands on the time of the professional engineer the fee shall be:

Where the cost of the works—		The fee shall be the sum of the primary fee stated in column 3 and the secondary fee calculated in terms of column 4	
exceeds— (column 1)	but does not exceed— (column 2)	Primary fee (column 3)	Secondary fee: Calculated on the total cost of the works at the following percentages (column 4)
R	R	R	%
—	60 000	200	10,0
60 000	120 000	800	9,0
120 000	300 000	2 000	8,0
300 000	600 000	3 500	7,5
600 000	1 200 000	6 500	7,0
1 200 000	3 000 000	12 500	6,5
3 000 000	—	27 500	6,0

3.3.2 SERVICES NOT OF NORMAL CHARACTER.**3.3.2.1 WORKS MAKING UNUSUALLY HIGH DEMANDS.**

In respect of certain works or parts of works as herein listed which make demands on the professional engineer which are unusually high, the fee shall be calculated as follows:

3.3.2.1.1 UNUSUALLY TIME-CONSUMING WORKS.

3.3.2.1.1.1 For alterations to existing works, the fee stated in regulation 3.3.1 shall be increased by 25 per cent.

3.3.2.1.1.2 Where works are undertaken on separate non-contiguous sites or when continuity of the works is interrupted or the works are unusually fragmented or are being constructed as separately documented phases in accordance with the requirements or with the consent of the client, the fee may be calculated taking regulation 3.3.1 as applicable to each site, contract or phase as if they were separate works or, if inappropriate, the client and the professional engineer shall agree the fee which shall lie between the fee as derived in regulation 3.3.1 as applicable to the total cost of the works and the fee derived taking regulation 3.3.1 as applicable to the cost of each as if they were separate works.

3.3.2.1.1.3 In respect of other types of works or parts of works including, *inter alia*, those mentioned in regulation 1.5.1 which make demands on the professional engineer which are unusually high, the client and professional engineer shall agree the addition to be made to the fee stated in regulation 3.3.1 which shall be equitable in accordance with the causes and extent of the unusually high demands on the professional engineer: Provided that the professional engineer shall, as soon as it becomes evident to him and generally not later than at the completion of the report stage, inform the client that he considers that the works are of such a nature as to warrant an increase of the fee as aforesaid: Provided further that if it only becomes evident at a later stage that the works are of unusual character, he shall inform the client without delay, in which event such portion of the services of the professional engineer as he has already completed when he informs the client shall not be subject to an increased fee unless the client agrees otherwise.

3.3.2.2 WERKE WAT BUITENGEWOON LAE EISE STEL.

Ten opsigte van werke of gedeeltes van werke wat buitengewoon lae eise aan die professionele ingenieur stel, kom die kliënt en die professionele ingenieur ooreen oor die gelde vir sulke werke wat billik is ooreenkomstig die oorsake en omvang van die buitengewone verlaging van die eise wat aan die professionele ingenieur gestel word.

3.3.3 BYKOMENDE DIENSTE.

3.3.3.1 VERSKAFFING VAN TERREINPERSONEEL.

Die professionele ingenieur se heffing vir die verskaffing van terreinpersoneel kragtens regulasie 3.1.2.1.1 word soos volg bereken:

3.3.3.1.1 Salaris, insluitende gewone bonus, plus 30 per sent; plus

3.3.3.1.2 alle ander direkte kostes en toegifte, soos met die kliënt ooreengekom, plus 10 per sent.

3.3.3.2 HOOFAGENT VAN DIE KLIËNT.

Die bykomende gelde vir dienste as hoofagent van die kliënt gelewer ooreenkomstig regulasie 3.1.2.2 is een per sent van die finale koste van die projek.

3.3.3.3 BEMIDDELING, ARBITRASIE EN REGSGEDINGE EN SOORTGELYKE DIENSTE.

3.3.3.3.1 ALLERLEI DIENSTE.

Die professionele ingenieur se gelde vir dienste gelewer, word op 'n tydbasis bereken soos ooreengekom met die kliënt en is nie minder as die tarief kragtens regulasie 3.3.4 nie: Met dien verstande dat vir verskynings in die hof die gelde bereken word ooreenkomstig regulasie 3.3.3.3.2.1.

3.3.3.3.2 BEMIDDELING OF ARBITRASIE.

3.3.3.3.2.1 Vir optrede as bemiddelaar of arbiter wanneer daar meer as een is of vir optrede as assessor, moet die gelde nie minder wees nie as die gelde gehef op 'n tydbasis vir prinsipale, vennote en direkteure soos in regulasie 3.3.4.1 uiteengesit plus 25 per sent, onderworpe aan 'n minimum heffing vir twee ure.

3.3.3.3.2.2 Vir optrede as alleenbemiddelaar, -arbiter of -beoordeelaar, moet die gelde nie minder wees nie as die gelde gehef op 'n tydbasis vir prinsipale, vennote en direkteure soos in regulasie 3.3.4.1 uiteengesit plus 75 per sent, onderworpe aan 'n minimum heffing vir twee ure.

3.3.3.3.2.3 Die gelde voorgeskryf by regulasie 3.3.3.3.2.1 en 3.3.3.3.2.2 is van toepassing ten opsigte van die tyd wat bestee word aan die bywoning van bemiddelingsbyeenkomste, die arbitrasiehof, die bestudering van die getuienis en die opstel van die beslissing.

3.3.4 GELDE OP 'N TYDBASIS.

Die geldetarief op 'n tydbasis is soos volg:

3.3.4.1 Prinsipaal, vennoot of direkteur—R45 per uur of gedeelte daarvan;

3.3.4.2 gesalarieerde professionele en tegniese personeel—15c per uur per R100 of gedeelte daarvan van die totale jaarlikse salaris insluitende gewone bonus, as daar is: Met dien verstande dat hierdie tariewe geag word vestigingsheffings en tyd deur klerklike personeel bestee, in te sluit wat dus nie afsonderlike heffings uitmaak nie.

3.3.5 REISTYD.

'n Bedrag teen die tarief uiteengesit in regulasie 3.3.4 word gehef vir al die tyd gedurende normale werksure, met 'n maksimum van agt uur per dag, wat die professionele ingenieur en lede van sy personeel aan reis bestee: Met dien verstande dat indien die reis na en van sy kantoor nie 50 km oorskry nie, die professionele ingenieur en lede van sy personeel nie vergoed sal word vir die tyd aan reis bestee nie tensy betaling van gelde op 'n tydbasis geskied.

3.3.2.2 WORKS MAKING UNUSUALLY LOW DEMANDS.

In respect of works or parts of works which make demands on the professional engineer which are unusually low, the client and the professional engineer shall agree the fee for such works which shall be equitable in accordance with the causes and extent of the unusual reduction in the demands on the professional engineer.

3.3.3 ADDITIONAL SERVICES.

3.3.3.1 PROVISION OF SITE STAFF.

The professional engineer's charge for the provision of site staff in terms of regulation 3.1.2.1.1 shall be calculated as follows:

3.3.3.1.1 Salary, inclusive of regular bonus, plus 30 per cent; plus

3.3.3.1.2 all other direct costs and allowances, as agreed with the client, plus 10 per cent.

3.3.3.2 PRINCIPAL AGENT OF THE CLIENT.

The additional fee for services performed under regulation 3.1.2.2 as principal agent of the client shall be one per cent of the final cost of the project.

3.3.3.3 MEDIATION, ARBITRATION AND LITIGATION PROCEEDINGS AND SIMILAR SERVICES.

3.3.3.3.1 MISCELLANEOUS SERVICES.

The professional engineer's fee for services performed shall be on a time basis as agreed by the client and shall be not less than the rate in accordance with regulation 3.3.4: Provided that for court appearances the fee shall be determined in accordance with regulation 3.3.3.3.2.1.

3.3.3.3.2 MEDIATION OR ARBITRATION.

3.3.3.3.2.1 For acting as mediator or arbitrator where there is more than one or for acting as assessor, the fee shall be not less than the time charged for principals, partners and directors as set out in regulation 3.3.4.1 plus 25 per cent, subject to a minimum charge for two hours.

3.3.3.3.2.2 For acting as sole mediator, arbitrator or umpire the fee shall be not less than the time charged for principals, partners and directors as set out in regulation 3.3.4.1 plus 75 per cent, subject to a minimum charge for two hours.

3.3.3.3.2.3 The fee set out in regulations 3.3.3.3.2.1 and 3.3.3.3.2.2 shall apply to time spent in attending mediation meetings, the arbitration court, in studying evidence and in framing the award.

3.3.4 TIME BASIS FEE.

The scale of fees on a time basis shall be as follows:

3.3.4.1 Principal, partner or director—R45 per hour or part thereof;

3.3.4.2 salaried professional and technical staff—15c per hour per R100 or part thereof of the total annual salary including regular bonus if any: Provided that these rates shall be deemed to include establishment charges and time expended by clerical staff which shall, therefore, not be chargeable separately.

3.3.5 TRAVELLING TIME.

A charge at the rate set out in regulation 3.3.4 for all time spent by the professional engineer or members of his staff in travelling during normal working hours, such time not exceeding eight hours per day: Provided that when the journey does not exceed 50 km recorded to and from his office, the professional engineer and members of his staff shall not be reimbursed for time spent in travelling unless payment of fees is being made on a time basis.

4. MEGANIESE EN ELEKTRIESE INGENIEURSDIENSTE IN VERBAND MET BOUPROJEKTE.

4.1 DIENSTE DEUR DIE PROFESSIONELE INGENIEUR VERRIG TE WORD.

4.1.1 NORMALE DIENSTE.

Die normale dienste deur die professionele ingenieur verrig te word, behels:

4.1.1.1 VERSLAGSTADIUM.

Die opstel en voorlegging van 'n verslag met voorlopige voorstelle of gangbaarheidsstudies en kosteramings vir ooreenstemming deur die kliënt en, indien nodig, met inbegrip van—

4.1.1.1.1 oorlegpleging met die kliënt of sy gemagtigde verteenwoordiger en enige ander professionele raadgewers deur die kliënt aangestel in verband met die projek;

4.1.1.1.2 inspeksie van die terrein van die werke;

4.1.1.1.3 voorlopige ondersoek, beplanning en ontwerp waar enige hiervan nodig is om gangbaarheid te bepaal;

4.1.1.1.4 oorlegpleging met plaaslike owerhede;

4.1.1.1.5 raadgewing aan die kliënt oor die noodsaaklikheid van opmetings, ontledings, toetse en terrein- of ander ondersoeke wat nodig mag wees vir die afhandeling van die verslag, en die tref van reëlins om dit op koste van die kliënt te laat uitvoer.

4.1.1.2 VOORLOPIGE ONTWERPSTADIUM.

Die ontwikkeling van voorlopige voorstelle of die basiese beplanning van die werke, soos deur die kliënt verlang, en indien nodig, met inbegrip van—

4.1.1.2.1 voorlegging van 'n basiese beplanningsverslag, indien die kliënt dit verlang;

4.1.1.2.2 bepaling van finale ontwerpmaatstawwe;

4.1.1.2.3 raadgewing aan die kliënt oor die noodsaaklikheid van enige verdere opmetings, ontledings, toetse en terrein- of ander ondersoeke waar nodig, en die tref van reëlins om dit op koste van die kliënt te laat uitvoer;

4.1.1.2.4 raadgewing aan die kliënt, na gelang dit nodig is, oor die aanstelling en die omskrywing van die dienste van ander professionele ingenieurs of deskundige raadgewers, en die tref van reëlins vir sodanige aanstellings en oorlegplegings met sodanige raadgewers oor sake rakende die werke;

4.1.1.2.5 opstel en voorlegging van voorlopige ontwerp-tekeninge en aangesuiwerde ramings.

4.1.1.3 ONTWERP- EN TENDERSTADIUM.

Die ontwikkeling van die voorlopige ontwerpe tot werkstekeninge en, indien nodig, met inbegrip van—

4.1.1.3.1 opstel van ontwerpe, tendertekeninge, dokumente en spesifikasies;

4.1.1.3.2 verskaffing van die omskrywende inligting wat nodig mag wees vir die ontwerp van ander dienste;

4.1.1.3.3 opstel of wysiging van uitnodigings om te tender, tendervoorwaardes, tendervorms en kontrakvoorwaardes;

4.1.1.3.4 ontledings van tenders en voorlegging van aanbevelings oor die aanvaarding van tenders en kosteramings van die werke.

4.1.1.4 KONSTRUKSIESTADIUM.

Die algemene administrasie en ander dienste in verband met die uitvoering van die ingenieurswerke en, indien nodig, met inbegrip van—

4.1.1.4.1 plasing van bestellings vir die ingenieurswerke namens die kliënt;

4. MECHANICAL AND ELECTRICAL ENGINEERING SERVICES PERTAINING TO BUILDING PROJECTS.

4.1 SERVICES TO BE PERFORMED BY THE PROFESSIONAL ENGINEER.

4.1.1 NORMAL SERVICES.

The normal services to be performed by the professional engineer are:

4.1.1.1 REPORT STAGE.

The preparation and submission of a report embodying preliminary proposals or feasibility studies and estimates of cost for consideration by the client, including, as may be necessary—

4.1.1.1.1 consultation with the client or his authorised representative and any other professional advisers appointed by the client in connection with the project;

4.1.1.1.2 inspection of the site of the works;

4.1.1.1.3 preliminary investigation, planning and design where any of these are required for determination of feasibility;

4.1.1.1.4 consultation with local authorities;

4.1.1.1.5 advice to the client as to the need for surveys, analyses, tests and site or other investigations where such are required for the completion of the report and arranging for these to be carried out at the client's expense.

4.1.1.2 PRELIMINARY DESIGN STAGE.

The development of preliminary proposals or the basic planning of the works, as may be required by the client, including, as may be necessary—

4.1.1.2.1 submission of a basic planning report if required by the client;

4.1.1.2.2 establishment of final design criteria;

4.1.1.2.3 advice to the client as to the need for any further surveys, analyses, tests and site or other investigations which may be required and arranging for these to be carried out at the client's expense;

4.1.1.2.4 advice to the client, as may be necessary, upon the appointment and delineation of the services of other professional engineers or specialist advisers and arranging such appointments and consultations with such advisers in matters affecting the works;

4.1.1.2.5 preparation and submission of preliminary design drawings and updated estimates.

4.1.1.3 DESIGN AND TENDER STAGE.

The development of the preliminary designs into working drawings, including, as may be necessary—

4.1.1.3.1 preparation of designs, tender drawings, documents and specifications;

4.1.1.3.2 provisions of outline information necessary for the design of other services;

4.1.1.3.3 drafting or adapting invitations to tender, tender conditions, forms of tender and conditions of contract;

4.1.1.3.4 analyses of tenders and submission of recommendations on the acceptance of tenders and estimates of the cost of the works.

4.1.1.4 CONSTRUCTION STAGE.

The general administration and other services in connection with the carrying out of the engineering works, including, as may be necessary—

4.1.1.4.1 placing orders for the engineering works on behalf of the client;

4.1.1.4.2 raadgewing aan die kliënt oor die opstel van die kontrakdokumente, of opstel van die kontrakdokumente;

4.1.1.4.3 raadgewing aan die kliënt oor die aanstelling van terreinpersoneel kragtens regulasie 4.1.2.1;

4.1.1.4.4 verskaffing van sodanige verdere inligting, tekeninge en ontwerpe as wat die professionele ingenieur nodig mag ag om die kontrakteurs in staat te stel om die installasietekeninge op te stel;

4.1.1.4.5 nasiening van kontrakteurs se tegniese voorstelle en kontrolering van kontrakteurs se tekeninge om seker te maak dat dit aan die ontwerp- en spesifikasie-vereistes voldoen, maar uitgesonderd die gedetailleerde kontrolering van tekeninge vir koördinasie, oprigting of installasiejuistheid;

4.1.1.4.6 raadgewing aan die kliënt oor alternatiewe ontwerpe en tenders maar uitgesonderd gedetailleerde inspeksie, hersiening en kontrolering van alternatiewe ontwerpe en tekeninge wat nie deur die professionele ingenieur opgestel is nie en deur enige kontrakteur of voornemende kontrakteur voorgelê is;

4.1.1.4.7 uitreiking van opdragte aan kontrakteurs, koördinerende en algemene inspeksie van die uitvoering van die werke tot nakoming van die kontrak by tussenpose soos deur die professionele ingenieur nodig geag, leidinggewing aan terreinpersoneel maar uitgesonderd gedetailleerde en daaglikse inspeksie van die werke en terreinadministrasie waarvoor in regulasie 4.1.2.1 voorsiening gemaak word;

4.1.1.4.8 bywoning van terreinvergaderings tydens die konstruksie van die ingenieurswerke, gemiddeld eenkeer elke twee weke;

4.1.1.4.9 periodieke waardering van voltooide werk vir die uitreiking van sertifikate vir betaling aan kontrakteurs;

4.1.1.4.10 beslegting van, of bystand aan die kliënt se hoofagent by die beslegting van geskille of verskille wat tussen die kliënt en die kontrakteurs mag ontstaan, maar uitgesonderd bemiddeling, arbitrasie of regsgedinge;

4.1.1.4.11 uitreiking van wysigingsopdragte of inligting sodat wysigingsopdragte deur ander uitgereik kan word;

4.1.1.4.12 opmeet of waardasie van wysigings en onderhandelinge met kontrakteurs oor die koste daarvan;

4.1.1.4.13 kontrolering van kontrakteurs se eise ten opsigte van toelaatbare skommings in die koste van die kontrak;

4.1.1.4.14 raadgewing aan die kliënt oor die inspeksie en toets van sodanige materiaal en toerusting as wat normaalweg geïnspekteer en getoets word, en die tref van reëlins om sodanige inspeksie en toetsing op koste van die kliënt te laat uitvoer;

4.1.1.4.15 kontrolering van kontrakteurs se ingebruiknemingsprosedures en aanwesigheid by werkverrigting- of aanvaardingstoets op die terrein maar uitgesonderd daaglikse roetine-toets;

4.1.1.4.16 die tref van reëlins, namens die kliënt, vir die verskaffing en reproduksie van sodanige tekeninge en dokumente as wat die kontrakteurs en terreinpersoneel nodig mag hê om die ingenieurswerke uit te voer;

4.1.1.4.17 die tref van reëlins om die kliënt, na voltooiing van die ingenieurswerke, van sodanige rekord-tekeninge en handleidings te voorsien as wat vir die bedryf en instandhouding van die ingenieurswerke nodig mag wees en voorbereiding van sodanige dokumente as wat nodig mag wees om die tekeninge en handleidings wat voorsien is, te koördineer;

4.1.1.4.18 opstel van finale kontrakrekening.

4.1.1.4.2 advice to the client as to the preparation of the contract documents or preparation of the contract documents;

4.1.1.4.3 advice to the client as to the appointment of site staff in accordance with regulation 4.1.2.1;

4.1.1.4.4 provision of such further information, drawings and designs as may be necessary in the opinion of the professional engineer to enable the installation drawings to be prepared by the contractors;

4.1.1.4.5 examining contractors' technical proposals and checking contractors' drawings for conformity with design and specification requirements but excluding detailed checking of drawings for co-ordination, erection or installation fit;

4.1.1.4.6 advice to the client on alternative designs and tenders but excluding detailed inspection, reviewing and checking of alternative designs and drawings not prepared by the professional engineer and submitted by any contractor or potential contractor;

4.1.1.4.7 issuing instructions to contractors, co-ordinating and generally inspecting the execution of the works for compliance with the contract at such intervals as the professional engineer may deem necessary, directing site staff but excluding detailed and day-to-day inspection of the works and site administration as provided for under regulation 4.1.2.1;

4.1.1.4.8 attendance at site meetings during the construction of the engineering works at an average frequency of once per fortnight;

4.1.1.4.9 periodic valuation of work completed for the purpose of issuing certificates for payment to contractors;

4.1.1.4.10 deciding in or assisting the principal agent of the client to decide in disputes or differences that may arise between the client and the contractors, excepting mediation, arbitration or litigation;

4.1.1.4.11 issuing variation orders or information to enable variation orders to be issued by others;

4.1.1.4.12 measurement or assessment of variations and negotiation with contractors on the value thereof;

4.1.1.4.13 checking contractors' claims in respect of allowable fluctuations in the cost of the contract;

4.1.1.4.14 advice to the client regarding the inspection and testing of such materials and plant as are usually inspected and tested and arranging for such inspection and testing to be carried out at the client's expense;

4.1.1.4.15 checking contractors' commissioning procedures and witnessing performance or acceptance tests on site but excluding day-to-day routine tests;

4.1.1.4.16 making arrangements on behalf of the client for the provision and reproduction of such drawings and documents as may be required by contractors and site staff for the execution of the engineering works;

4.1.1.4.17 making arrangements to provide the client on completion of the engineering works with such record drawings and manuals as may be required for the operation and maintenance of the engineering works and preparing such documents as may be necessary to co-ordinate the drawings and manuals provided;

4.1.1.4.18 preparation of final contract account.

4.1.2 BYKOMENDE DIENSTE.

Dienste in verband met onderstaande items is bykomend by die normale dienste van die professionele ingenieur, wat die kliënt se goedkeuring moet verkry vir die verrigting van sodanige dienste.

4.1.2.1 VERSKAFFING VAN TERREINPERSONEEL.

4.1.2.1.1 Indien die kliënt dit verlang van die professionele ingenieur belas met die dienste omskryf in regulasie 4.1.1.4, stel die professionele ingenieur sodanige bevoegde terreinpersoneel aan as wat nodig mag wees vir die doeltreffende kontrolering van die uitpyn, daaglikse inspeksie van die konstruksie van die werke, die opmeet van werk op die terrein en die vasstelling van die hoeveelhede saam met verteenwoordigers van die kontrakteurs.

4.1.2.1.2 Indien voldoende terreinpersoneel nie aangestel is nie, moet die professionele ingenieur, met die goedkeuring van die kliënt, sodanige bykomende dienste lewer as wat nodig mag wees om die funksies omskryf in regulasie 4.1.2.1.1 uit te voer.

4.1.2.2 HOOFAGENT VAN DIE KLIËNT.

Wanneer die professionele ingenieur as hoofagent van die kliënt aangestel word, is sy bykomende dienste die volgende:

4.1.2.2.1 Raadgewing oor die aanstelling en die omskrywing van die dienste van ander professionele raadgewers deur die kliënt;

4.1.2.2.2 leierskap van die professionele span;

4.1.2.2.3 voorlegging van voorlopige en ontwikkelde voorstelle in die vorm van verslae, tekeninge en spesifikasies, tesame met kosteramings vir die projek in die geheel;

4.1.2.2.4 verantwoordelikheid vir die algehele administrasie van alle gedeeltes van die projek met inbegrip van dié wat binne die bestek val van die ander professionele raadgewers in die span;

4.1.2.2.5 verantwoordelikheid vir die algehele koördinerende, programmering van ontwerp en finansiële beheer van die projek;

4.1.2.2.6 beslegting van geskille wat tussen die kliënt en die kontrakteurs mag ontstaan, uitgesonderd bemiddeling, arbitrasie, of regsgedinge;

4.1.2.2.7 goedkeuring van sertifikate vir betaling aan kontrakteurs, uitgereik deur die ander professionele raadgewers in die span, voor voorlegging aan die kliënt vir vereffening;

4.1.2.2.8 die tref van reëlins om die kliënt na voltooiing van die ingenieurswerke van sodanige rekordtekeninge wat nodig is om 'n behoorlike rekord van die ingenieurswerke soos opgerig, te hou, en sodanige handleidings wat nodig is vir die bedryf en instandhouding van die betrokke gedeeltes van die ingenieurswerke, te voorsien;

4.1.2.2.9 goedkeuring van die finale kontrakrekening vir die projek in die geheel.

4.1.2.3 HOEVEELHEIDSLYSTE.

Die professionele ingenieur moet die kliënt van raad dien oor die nodigheid vir die opstel van die dokumente bedoel in regulasies 4.1.1.3.1 en 4.1.1.3.3, in die vorm van hoeveelheidslyste ten opsigte van die ingenieurswerke, sodat kontrakte op 'n gemete basis geadministreer kan word en, indien goedgekeur deur die kliënt en uitgevoer deur die professionele ingenieur, word die volgende as bykomende dienste beskou:

4.1.2.3.1 Opstel van elementale en werkverrigtingshoeveelheidslyste vir die ingenieurswerke of, indien die ontwerp van die projek nie ver genoeg gevorder is nie, voorlopige hoeveelheidslyste: Met dien verstande dat waar voorlopige hoeveelhede bereken word hulle weer daarna gemeet moet word;

4.1.2 ADDITIONAL SERVICES.

Services in connection with the items listed below are additional to the normal services of the professional engineer, who shall obtain the approval of the client for any such services to be carried out.

4.1.2.1 PROVISION OF SITE STAFF.

4.1.2.1.1 Should the client require the professional engineer charged with the services in regulation 4.1.1.4 so to do, the professional engineer shall appoint such competent site staff as is necessary for the efficient checking of setting out, day-to-day inspection of construction of the works, measuring up of work on site and agreeing quantities with contractors' representatives.

4.1.2.1.2 Where adequate site staff are not appointed the professional engineer shall, subject to the approval of the client, provide such additional services as are necessary for carrying out the functions described in regulation 4.1.2.1.1.

4.1.2.2 PRINCIPAL AGENT OF THE CLIENT.

The additional services of the professional engineer when appointed as principal agent of the client shall be as follows:

4.1.2.2.1 Advice as to the appointment and delineation of services of other professional advisers by the client;

4.1.2.2.2 leadership of the professional team;

4.1.2.2.3 submission of preliminary and developed proposals in the form of reports, drawings and specifications together with estimates of costs for the project as a whole;

4.1.2.2.4 responsibility for the overall administration of all sections of the project including those which fall within the ambit of the other professional advisers in the team;

4.1.2.2.5 responsibility for the overall co-ordination, programming of design and financial control of the project;

4.1.2.2.6 deciding on differences that may arise between the client and the contractors, excepting mediation, arbitration or litigation;

4.1.2.2.7 approval of certificates for payment to contractors issued by the other professional advisers in the team prior to their presentation to the client for settlement;

4.1.2.2.8 making arrangements to provide the client, on completion of the engineering works, with such record drawings as may be required for a proper record of the engineering works as constructed and such manuals as may be required for the operation and maintenance of the relevant parts of the engineering works;

4.1.2.2.9 approval of the final contract account for the project as a whole.

4.1.2.3 SCHEDULES OF QUANTITIES.

The professional engineer shall advise the client on the need for preparing the documents referred to in regulations 4.1.1.3.1 and 4.1.1.3.3 in the form of schedules of quantities in respect of the engineering works to enable contracts to be administered on a measured basis and, if agreed to by the client and carried out by the professional engineer, the additional services shall be as set out below:

4.1.2.3.1 Preparation of elemental and operational schedules of quantities for the engineering works or, if the design of the project is not sufficiently advanced, provisional schedules of quantities: Provided that where provisional quantities are prepared, these shall subsequently be remeasured;

4.1.2.3.2 meet van die hoeveelhede, opstel en waarder-
ring van die finale kontrakrekening en onderhandeling vir
vereffening met die kontrakteurs;

4.1.2.3.3 die verstrekking van die normale inligting aan
die bourekenaar wat nodig is vir die opstel van hoeveel-
heidslyste indien die kliënt 'n bourekenaar aangestel het om
hierdie funksie ten opsigte van die ingenieurswerke te ver-
rig.

4.1.2.4 BEMIDDELING, ARBITRASIE EN REGSGE- DINGE EN SOORTGELYKE DIENSTE.

Indien die kliënt aan die professionele ingenieur opdrag
gee om die ondergemelde dienste te onderneem, is die
omvang daarvan onderworpe aan ooreenkomste tussen die
twee partye:

4.1.2.4.1 Verkryging van parlementêre of ander statutêre
goedkeuring, lisensies of permitte;

4.1.2.4.2 bystand by beoogde of werklike bemiddelings-,
arbitrasie- of regsverrigtinge;

4.1.2.4.3 optrede by of bywoning van geregshowe en
kommissies van ondersoek, gekose komitees en soortgelyke
liggame wat by wet, regulasie of verordening ingestel is.

4.1.2.5 DIVERSE BYKOMENDE DIENSTE.

4.1.2.5.1 Onderhandeling met ander owerhede as plaas-
like owerhede.

4.1.2.5.2 Opmetings, ondersoeke, koste-analises en so
meer, van bestaande installasies.

4.1.2.5.3 Tref van reëlins vir deurgangsregte, serwitute
en onteienings.

4.1.2.5.4 Onderhandeling oor en tref van reëlins vir die
verskaffing of verskuiwing van utiliteitsdienste wat nie deel
van die ingenieurswerke uitmaak nie.

4.1.2.5.5 Aanbring van sodanige wysigings as wat nodig
mag wees om formele goedkeuring te verkry van die
betrokke staatsdepartemente of openbare owerhede, voort-
spruitende uit besluite deur sodanige departemente of ower-
hede as gevolg van beleidsveranderings en ander oorsake
buite die beheer van die professionele ingenieur.

4.1.2.5.6 Uitvoer van spesiale ondersoeke of toetse.

4.1.2.5.7 Opstel of gedetailleerde kontrolering van teke-
ninge vir terreinkoördinerings, installasietekeninge en werk-
winkeltakeninge vir koördinerings, oprigting of installasie-
juistheid.

4.1.2.5.8 Gedetailleerde inspeksie, hersiening en kontro-
lering van ontwerpe en tekeninge wat nie deur die profes-
sionele ingenieur opgestel is nie en deur enige kontrakteur of
voornemende kontrakteur voorgelê is as alternatief vir dié
wat ingesluit is by die tender of soortgelyke dokumente wat
deur die professionele ingenieur opgestel is.

4.1.2.5.9 Bywoning van terreinvergaderings benewens
dié bedoel in regulasie 4.1.1.4.8, tensy die professionele
ingenieur aangestel is as die hoofagent van die kliënt.

4.1.2.5.10 Dienste wat aanleiding gee tot buitengewone
bykomende kostes vir die professionele ingenieur, inslui-
tende—

4.1.2.5.10.1 dienste wat ontstaan omrede 'n kontrak-
teur in gebreke bly om sy kontrak te voltooi;

4.1.2.5.10.2 dienste deur die professionele ingenieur
verrig wat gebruiklikerwys of kontraktueel die plig van
die kontrakteur is, hetsy uit hoofde van spesiale kontrak-
tuele bepalinge wat die kontrakteur onthef van sy
gebruiklike verpligtinge of as gevolg daarvan dat die kon-
trakteur in gebreke bly om sy kontraktuele verpligtinge
na te kom;

4.1.2.5.10.3 dienste wat die professionele ingenieur
verrig deur remediërende maatreëls te bepaal, byko-
mende of meer uitgebreide besoeke aan die terrein te
bring of om enige geskille te besleg wat die direkte en

4.1.2.3.2 measurement of quantities, preparation and
pricing of the final contract account and negotiation of
settlement with contractors;

4.1.2.3.3 providing the quantity surveyor with the nor-
mal information required for preparing schedules of quanti-
ties if the client has appointed a quantity surveyor to per-
form quantity surveying services in respect of the engi-
neering works.

4.1.2.4 MEDIATION, ARBITRATION AND LITIGA- TION PROCEEDINGS AND SIMILAR SERVICES.

Where the client instructs the professional engineer to
undertake the services listed below the extent thereof shall
be subject to agreement between the two parties:

4.1.2.4.1 Obtaining Parliamentary or other statutory ap-
proval, licences or permits;

4.1.2.4.2 assisting with contemplated or actual medi-
ation, arbitration or litigation proceedings;

4.1.2.4.3 officiating at or attending courts and commis-
sions of inquiry, select committees and similar bodies con-
vened by statute, regulation or decree.

4.1.2.5 DIVERSE ADDITIONAL SERVICES.

4.1.2.5.1 Dealing with authorities other than local auth-
orities.

4.1.2.5.2 Surveys, investigations, cost analyses, etc., of
existing installations.

4.1.2.5.3 Making arrangements for wayleaves, servi-
tudes or expropriations.

4.1.2.5.4 Negotiating and arranging for the provision or
diversion of utility services not forming part of the engi-
neering works.

4.1.2.5.5 Making such revisions as may be required to
obtain the formal approval of the appropriate Government
departments or public authorities, resulting from decisions
of such departments or authorities arising out of changes in
policy and other causes beyond the professional engineer's
control.

4.1.2.5.6 Carrying out special investigations or tests.

4.1.2.5.7 Preparation or detailed checking of site co-
ordination drawings, installation drawings and shop draw-
ings for co-ordination, erection or installation fit.

4.1.2.5.8 Detailed inspection, reviewing and checking of
designs and drawings not prepared by the professional engi-
neer and submitted by any contractor or potential contractor
as alternative to those embodied in tender or similar docu-
ments prepared by the professional engineer.

4.1.2.5.9 Attendance at site meetings in addition to those
referred to in regulation 4.1.1.4.8 unless the professional
engineer is appointed as the principal agent of the client.

4.1.2.5.10 Services which give rise to abnormal addition-
al costs for the professional engineer including—

4.1.2.5.10.1 services arising from the failure of any
contractor to perform his contract;

4.1.2.5.10.2 services performed by the professional
engineer which it is customarily or contractually incum-
bent upon the contractor to perform, whether by virtue of
special contractual provisions relieving the contractor of
customary obligations or in consequence of the contrac-
tor's failure to meet contractual obligations;

4.1.2.5.10.3 services performed by the professional
engineer in determining any remedial measure, making
any additional or more extended site visits or resolving
any disputes which are the direct and necessary

noodwendige gevolg is van die versuim deur die kontrakteur om aan enige spesifikasies, tekeninge, prosedures, konstruksieprogramme, tydtafel of vasgestelde voltooiingsdatum ooreenkomstig die kontrak te voldoen.

4.1.2.5.11 Kontroliering, koördinerende of raadgeving oor enige deel van die projek wat nie deel van die ingenieurswerke uitmaak nie.

4.1.2.5.12 Uitvoering van of die tref van reëlins vir die periodieke kontroliering en aanpassing van die ingenieurswerke om behoorlike funksionering van enige proses of stelsel te optimaliseer of te handhaaf.

4.1.2.5.13 Ondersoek na en verslagdoening oor tariewe of vorderings wat deur die kliënt gehef kan word.

4.1.2.5.14 Vooruitbestelling of reservering van materiale, die verkryging van lisensies en permitte en die kontroliering van werklike arbeidstoerusting- en materiaalopgawes vir die vasstelling of wysiging van die kontrakprys.

4.1.2.5.15 Inspeksie en toets (uitgesonderd dié op die terrein) van materiale en toerusting, met inbegrip van inspeksie en werktuigtoetsing gedurende en na vervaardiging.

4.1.2.5.16 Onderhandelinge met leweransie-owerhede vir spesiale tariewe.

4.1.2.5.17 Versameling, ondersoek en saamvoeging van die pertinente gegewens genoem in regulasie 4.2.7 en nie aan die professionele ingenieur beskikbaar gestel nie.

4.1.2.5.18 Bedinging van enige kontrak met 'n gekose kontrakteur ander as deur mededingende aanbiedinge, met inbegrip van die kontroliering en die bepaling by onderlinge ooreenkoms van die hoeveelhede en netto koste van materiaal en arbeid en die kontroliering en die bepaling by onderlinge ooreenkoms van toegevoegde persentasies ter dekking van oorhoofse koste en winste.

4.1.2.5.19 Bykomende werk as gevolg van die gebruik van tweedehandse materiale of toerusting verskaf deur die kliënt.

4.1.2.5.20 Uitvoering van indiensnemingsprosedures of werkverrigtingstoets.

4.1.2.5.21 Opstel van handleidings en ander dokumente waarin die ontwerp, werkverrigting en instandhouding van die ingenieurswerke, bykomend by dié genoem in regulasie 4.1.1.4.17, beskryf word.

4.1.2.5.22 Die tref van reëlins vir die kontroliering en aanbeveling van instandhoudingskontrakte.

4.1.2.5.23 Bykomende dienste soos omskryf in—
regulasie 4.1.2.1.2—terreinpersoneel nie aangestel nie;

regulasie 4.2.4—skade aan of vernietiging van die werke;

regulasie 4.2.5—uitstel, kansellering of abandonnering van die werke;

regulasie 4.2.6—veranderings of wysigings aan ontwerpe.

4.1.2.5.24 Enige bykomende dienste van welke aard ook al uitgesonderd dié wat spesifiek in regulasie 4.1.2 genoem word.

4.2 VERGOEDING VAN EN BASIS VAN BETALING AAN DIE PROFESSIONELE INGENIEUR VIR MEGANIESE EN ELEKTRIESE INGENIEURSDIENSTE WAT MET BOUPROJEKTE IN VERBAND STAAN.

4.2.1 VERGOEDING.

4.2.1.1 VOLLEDIGE NORMALE DIENSTE.

Behoudens regulasie 4.2.1.1.5 word die vergoeding van die professionele ingenieur vir die normale dienste wat hy ooreenkomstig regulasie 4.1.1 verrig, bereken op die basis

consequence of any failure by the contractor to comply with any specifications, drawings, procedures, construction programmes, time-table or due completion date with which he is required to comply in terms of the contract.

4.1.2.5.11 Checking, co-ordinating or advising upon any part of the project not forming part of the engineering works.

4.1.2.5.12 Executing or arranging for the periodic monitoring and adjustment of the engineering works in order to optimise or maintain proper functioning of any process or system.

4.1.2.5.13 Investigating or reporting upon tariffs or charges leviable by the client.

4.1.2.5.14 Advance ordering or reservation of materials, the obtaining of licences and permits and the checking of actual labour, plant and material returns for the purpose of contract price establishment or adjustment.

4.1.2.5.15 Inspection and testing (other than on site) of materials and plant, including inspection and works testing during and after manufacture.

4.1.2.5.16 Negotiating with supply authorities for special tariffs.

4.1.2.5.17 Collection, investigation and collation of the pertinent data listed in regulation 4.2.7 and not made available to the professional engineer.

4.1.2.5.18 Negotiating any contract with a contractor selected otherwise than by competitive tendering, involving checking and agreeing quantities and net costs of material and labour and checking and agreeing added percentages to cover overheads and profit.

4.1.2.5.19 Additional work arising out of use of second-hand materials or equipment provided by the client.

4.1.2.5.20 Carrying out commissioning procedures or performance tests.

4.1.2.5.21 Preparing manuals and other documents describing the design, operation and maintenance of the works in addition to those referred to in regulation 4.1.1.4.17.

4.1.2.5.22 Arranging for checking and recommending maintenance contracts.

4.1.2.5.23 Additional services as defined in —
regulation 4.1.2.1.2—site staff not appointed;
regulation 4.2.4—damage or destruction of the works;
regulation 4.2.5—postponement, cancellation or abandonment of the works;
regulation 4.2.6—alterations or modifications to designs.

4.1.2.5.24 Any additional services of whatever nature other than those specifically referred to in regulation 4.1.2.

4.2 REMUNERATION AND BASIS OF PAYMENT OF THE PROFESSIONAL ENGINEER IN RESPECT OF MECHANICAL AND ELECTRICAL ENGINEERING SERVICES PERTAINING TO BUILDING PROJECTS.

4.2.1 REMUNERATION.

4.2.1.1 FULL NORMAL SERVICES.

Subject to regulation 4.2.1.1.5, the remuneration of the professional engineer for the normal services performed by him under regulation 4.1.1 shall be calculated on the basis

en wyse soos in regulasies 4.3.1 en 4.3.2 uiteengesit en is dit as volg aan die professionele ingenieur betaalbaar, tensy anders ooreengekom:

4.2.1.1.1 VERSLAGSTADIUM—REGULASIE 4.1.1.1.

Tien persent van die gelde sodra sodanige dienste as wat vir die verslagstadium nodig is, voltooi is.

4.2.1.1.2 VOORLOPIGE ONTWERPSTADIUM—REGULASIE 4.1.1.2.

'n Verdere 10 persent van die gelde sodra sodanige dienste as wat vir die voorlopige ontwerpstadium nodig is, voltooi is.

4.2.1.1.3 ONTWERP- EN TENDERSTADIUM—REGULASIE 4.1.1.3.

'n Verdere 40 persent van die gelde wanneer sodanige dienste as wat vir die ontwerp- en tenderstadium nodig is, voltooi is.

4.2.1.1.4 KONSTRUKSIESTADIUM—REGULASIE 4.1.1.4.

4.2.1.1.4.1 'n Verdere 35 persent van die gelde na gelang die installeringswerk vorder in verhouding tot die koste van die werk voltooi.

4.2.1.1.4.2 Die oorblywende 5 persent van die gelde by afhandeling van die finale kontrakrekening.

4.2.1.1.5 GEDEELTELIKE NORMALE DIENSTE.

Indien die professionele ingenieur aangestel word om dienste te verrig wat nie al die stadia uiteengesit in regulasies 4.1.1.1, 4.1.1.2, 4.1.1.3 en 4.1.1.4 bevat nie, word die gelde soos volg toegedeel:

4.2.1.1.5.1 Verslag- en voorlopige ontwerpstadium alleenlik—30 persent van die gelde;

4.2.1.1.5.2 verslag-, voorlopige ontwerp, en die ontwerp- en tenderstadium alleenlik—70 persent van die gelde;

4.2.1.1.5.3 konstruksiestadium alleenlik—50 persent van die gelde.

4.2.1.2 BYKOMENDE DIENSTE.

Die gelde of heffings vir bykomende dienste verrig ooreenkomstig regulasie 4.1.2 is soos volg:

4.2.1.2.1 VERSKAFFING VAN TERREINPERSOONEL.

Die heffing vir bykomende dienste wat die professionele ingenieur verrig ter verskaffing van terreinpersoneel kragtens regulasie 4.1.2.1.1 is soos neergelê in regulasie 4.3.3.1.

4.2.1.2.2 HOOAGENT VAN DIE KLIËNT.

Die gelde vir die bykomende dienste wat die professionele ingenieur verrig as hoofagent van die kliënt ooreenkomstig regulasie 4.1.2.2 is soos neergelê in regulasie 4.3.3.2 en word toegedeel soos vir normale dienste ooreenkomstig regulasie 4.2.1.1.

4.2.1.2.3 HOEVEELHEIDSLYSTE.

Die gelde vir die bykomende dienste deur die professionele ingenieur verrig ooreenkomstig regulasie 4.1.2.3, word bereken soos neergelê in regulasie 4.3.3.3 en word soos volg toegedeel:

4.2.1.2.3.1 Sewentig persent van die gelde sodra hoeveelheidslyste voltooi is;

4.2.1.2.3.2 'n verdere 10 persent van die gelde na gelang die werke vorder in verhouding tot die koste van die werke voltooi;

4.2.1.2.3.3 die oorblywende 20 persent van die gelde by afhandeling van die finale kontrakrekening.

and in the manner set out in regulations 4.3.1 and 4.3.2 and shall, unless otherwise agreed, become due to the professional engineer as follows:

4.2.1.1.1 REPORT STAGE—REGULATION 4.1.1.1.

Ten per cent of the fee when such services as may be necessary for the report stage have been completed.

4.2.1.1.2 PRELIMINARY DESIGN STAGE—REGULATION 4.1.1.2.

A further 10 per cent of the fee when such services as may be necessary for the preliminary design stage have been completed.

4.2.1.1.3 DESIGN AND TENDER STAGE—REGULATION 4.1.1.3.

A further 40 per cent of the fee when such services as may be necessary for the design and tender stage have been completed.

4.2.1.1.4 CONSTRUCTION STAGE—REGULATION 4.1.1.4.

4.2.1.1.4.1 A further 35 per cent of the fee as and when the installation work proceeds in proportion to the cost of work completed.

4.2.1.1.4.2 The remaining 5 per cent of the fee on completion of the final contract account.

4.2.1.1.5 PARTIAL NORMAL SERVICES.

Where the professional engineer is appointed to perform services not constituting all the stages set out in regulations 4.1.1.1, 4.1.1.2, 4.1.1.3 and 4.1.1.4, the fee shall be apportioned as follows:

4.2.1.1.5.1 Report stage and preliminary design stage only—30 per cent of the fee;

4.2.1.1.5.2 report stage, preliminary design stage and the design and tender stage only—70 per cent of the fee;

4.2.1.1.5.3 construction stage only—50 per cent of the fee.

4.2.1.2 ADDITIONAL SERVICES.

The fee or charge for additional services carried out under regulation 4.1.2 shall be as follows:

4.2.1.2.1 PROVISION OF SITE STAFF.

The charge for the additional services performed by the professional engineer in providing site staff in terms of regulation 4.1.2.1.1 shall be in accordance with regulation 4.3.3.1.

4.2.1.2.2 PRINCIPAL AGENT OF THE CLIENT.

The fee for the additional services performed by the professional engineer as principal agent of the client under regulation 4.1.2.2 shall be in accordance with regulation 4.3.3.2 apportioned as for normal services under regulation 4.2.1.1.

4.2.1.2.3 SCHEDULES OF QUANTITIES.

The fee for the additional services performed by the professional engineer under regulation 4.1.2.3 shall be in accordance with regulation 4.3.3.3 apportioned as follows:

4.2.1.2.3.1 Seventy per cent of the fee when schedules of quantities have been completed;

4.2.1.2.3.2 a further 10 per cent of the fee as the work proceeds in proportion to the cost of the works completed;

4.2.1.2.3.3 the remaining 20 per cent of the fee on completion of the final contract account.

4.2.1.2.4 BEMIDDELINGS, ARBITRASIE EN REGSGEDINGE EN SOORTGELYKE DIENSTE.

Die gelde vir die dienste deur die professionele ingenieur verrig kragtens regulasie 4.1.2.4 word bereken op 'n tyd-basis soos in regulasie 4.3.3.4 uiteengesit.

4.2.1.2.5 DIVERSE BYKOMENDE DIENSTE.

Die gelde vir diverse bykomende dienste deur die professionele ingenieur verrig kragtens regulasie 4.1.2.5, word bereken op 'n tydbasis soos in regulasie 4.3.4 uiteengesit.

4.2.1.2.6 TERREINPERSONEEL NIE AANGESTEL NIE.

Indien voldoende terreinpersoneel nie aangestel is nie, hef die professionele ingenieur gelde op 'n tydbasis soos in regulasie 4.3.4 uiteengesit vir die nodige bykomende dienste deur hom of sy personeel gelewer en vir terrein-besoeke bo en behalwe dié in regulasie 4.1.1.4.8 genoem, of soos met die kliënt ooreengekom.

4.2.1.3 GELDE VIR HERGEBRUIK VAN VOLTOOIDE ONTWERPE, EN SO MEER.

Indien 'n kliënt verlang om een of meer duplikasies van werke op te rig waarvoor die professionele ingenieur ondersoek, ontwerpe, tekeninge, spesifikasies, en so meer, voltooi het, is die gelde wat die professionele ingenieur hef vir die hergebruik van sodanige dokumente 'n kwart van die toegedeelde gelde vir die normale en bykomende dienste verrig in die verslag-, voorlopige ontwerp en ontwerp- en tenderstadiums, gegrond op die aangesuiwerde waarde van die werke wat gedupliseer of herhaal word: Met dien verstande dat die professionele ingenieur daarbenewens vergoed word vir sodanige nuwe werk as wat hy noodsaaklikerwys moet verrig, en dat hy betaal word vir alle uitbetalings en uitgawes: Met dien verstande verder dat indien die professionele ingenieur se dienste behou word vir die konstruksiestadium, die gelde wat die professionele ingenieur hef vir sy dienste en enige bykomende dienste wat hy gedurende hierdie stadium uitvoer, die volle toegedeelde gelde vir die konstruksiestadium is, gegrond op die aangesuiwerde koste van die werke wat gedupliseer of herhaal word, plus alle uitbetalings en uitgawes. Hierdie regulasie sal nie van toepassing wees in die gevalle waar tipe ontwerpe voorberei is vir hergebruik deur die kliënt op sy eie risiko nie.

4.2.2 TUSSENTYDSE BETALINGS AAN DIE PROFESSIONELE INGENIEUR.

4.2.2.1 Om die tussentydse betalings verkskuldig ooreenkomstig regulasies 4.2.1.1 en 4.2.1.2.3 te bepaal, is die koste van die ingenieurswerke, uitgesonderd enige voorlopige toelaes ter dekking van gebeurlikhede en eskalasie, soos volg:

4.2.2.1.1 Die netto bedrag van die aanvaarde tender; of

4.2.2.1.2 indien geen tender aanvaar is nie, die netto bedrag van die laagste geskikte tender aanbeveel as sulks deur die hoofagent van die kliënt in oorleg met die professionele ingenieur; of

4.2.2.1.3 indien die kontrak by wyse van onderhandeling toegeken is, die bedonge prys; of

4.2.2.1.4 indien geen tenders ingewin is of indien geen geskikte tenders ontvang is of indien geen onderhandeling eindig gevoer is nie, die beraming waarvoor onderling ooreengekom word.

4.2.2.2 Sodanige tussentydse betalings tel alleenlik as gedeeltes van die totale gelde wat uiteindelik betaalbaar is en word bereken op die finale koste van die werke soos in regulasie 4.2.3 omskryf.

4.2.1.2.4 MEDIATION, ARBITRATION AND LITIGATION PROCEEDINGS AND SIMILAR SERVICES.

The fee for the services performed by the professional engineer under regulation 4.1.2.4 shall be calculated on a time basis as set out in regulation 4.3.3.4.

4.2.1.2.5 DIVERSE ADDITIONAL SERVICES.

The fee for diverse additional services performed by the professional engineer under regulation 4.1.2.5 shall be calculated on a time basis as set out in regulation 4.3.4.

4.2.1.2.6 SITE STAFF NOT APPOINTED.

Where adequate site staff are not appointed the professional engineer shall charge for the necessary additional services rendered by himself or his staff and for site visits additional to those referred to in regulation 4.1.1.4.8 on a time basis as set out in regulation 4.3.4, or as agreed with the client.

4.2.1.3 FEE FOR RE-USE OF COMPLETED DESIGNS, ETC.

Where the client wishes to erect one or more duplicates of a works for which the professional engineer has completed investigations, designs, drawings and specifications, etc., the fee to be charged by the professional engineer for the re-use of such documents shall be one-quarter of the apportioned fee for normal and additional services carried out in the report, preliminary design and design and tender stages based on the updated cost of the works as duplicated or repeated: Provided that the professional engineer shall, in addition, be remunerated for such new work as it may be necessary for him to perform and that he shall be paid for all disbursements and expenses: Provided further that if the professional engineer's services should be retained for the construction stage, the fee to be charged by the professional engineer for services and any additional services carried out during this stage shall be the full apportioned fee for the construction stage based on the updated cost of the works as duplicated or repeated together with all disbursements and expenses. This regulation will not be applicable in the case of type designs prepared for re-use by the client at his own risk.

4.2.2 INTERIM PAYMENTS TO THE PROFESSIONAL ENGINEER.

4.2.2.1 For the purpose of ascertaining the interim payments due under regulations 4.2.1.1 and 4.2.1.2.3, the cost of the engineering works which shall exclude any provisional allowances made to cover contingencies and escalation, shall be—

4.2.2.1.1 the net amount of the accepted tender; or

4.2.2.1.2 if no tender is accepted, the net amount of the lowest suitable tender recommended as such by the principal agent of the client in consultation with the professional engineer; or

4.2.2.1.3 if the contract is awarded by negotiation, the negotiated price; or

4.2.2.1.4 if no tenders are invited or if no suitable tenders are received or if no negotiation is concluded, the mutually agreed estimate.

4.2.2.2 Such interim payments shall rank solely towards the total fee ultimately payable, which shall be calculated on the final cost of the works as defined in regulation 4.2.3.

4.2.3 KOSTE VAN DIE INGENIEURSWERKE.

4.2.3.1 Om die totale gelde te bereken wat uiteindelik betaalbaar is ooreenkomstig regulasie 4.2.2.2 is die koste van die ingenieurswerke, of enige gedeelte daarvan, die koste van die werke wat ontwerp, gespesifiseer of geadmistreer is deur die professionele ingenieur en word soos volg bereken:

4.2.3.1.1 Die bedrag gesertifiseer vir betaling aan die kontrakteurs ten opsigte van werke, voor aftrekking van gelikwiderde skadevergoeding of boetes (indien enige);

4.2.3.1.2 indien die kliënt arbeid, gereedskap, konstruksietoerusting of -materiaal, vervaardigde goedere of masjinerie verskaf vir insluiting in die werke, 'n regstreekse en billike waardasie gegrond op normale tariewe van kontrakteurs vir soortgelyke items met inbegrip van waardevermindering, verspilling en herstelwerk, oorhoofse koste en winste;

4.2.3.1.3 'n billike ooreengekome waardasie van die verskil tussen die koste van enige tweedehandse materiale, vervaardigde goedere of masjinerie wat in die werke ingesluit is en die markwaarde van sulke materiale, vervaardigde goedere en masjinerie asof hulle nuut aangekoop is;

4.2.3.1.4 een derde, of sodanige ander toepaslike deel waaroor met die kliënt ooreengekom word, van die koste van enige skoorstene en lugreëling- en ventilasieleidings en die isolering daarvan wat deur die professionele ingenieur gespesifiseer of ontwerp word en deel uitmaak van die boustruktuur; en

4.2.3.1.5 die koste van enige toetsboorwerk, meet van grondweerstand, en so meer, waarvoor die professionele ingenieur kontrakdokumente moet opstel en wat hy moet inspekteer of administreer.

4.2.3.2 Indien die ingenieurswerke uitgevoer word as 'n gedeelte van die kontrak hetsy deur die subkontrakteur of andersins dan sluit die koste van die ingenieurswerke die volgende in:

4.2.3.2.1 Voorsiening in die kontrak om bywoning en winste in verband met die ingenieurswerke te dek;

4.2.3.2.2 die koste van items van bouwerk benodig in verband met die ingenieurswerke en gespesifiseer of ontwerp deur die professionele ingenieur;

4.2.3.2.3 die koste van items vervat in die voorlopige en algemene afdeling van die kontrakhoeveelheidslyste wat uitsonderlik verwant is aan die ingenieurswerke, ten volle; en

4.2.3.2.4 behalwe in die geval waar subkontrakteurs benoem is, 'n gedeelte van die koste van al die ander items vervat in die voorlopige en algemene afdeling van die kontrakhoeveelheidslyste in die verhouding waarin die koste van die werke soos bepaal ooreenkomstig regulasies 4.2.3.1, 4.2.3.2.1, 4.2.3.2.2 en 4.2.3.2.3 staan tot die totale koste van die projek nadat alle sodanige ander voorlopige en algemene items afgetrek is.

4.2.3.3 Die koste van die ingenieurswerke sluit nie die volgende in nie:

4.2.3.3.1 Administratiewe uitgawes deur die kliënt aangegaan;

4.2.3.3.2 professionele gelde en uitgawes;

4.2.3.3.3 opmetingskoste;

4.2.3.3.4 salarisse, reiskoste en toevallige en kantooruitgawes van die terreinpersoneel;

4.2.3.3.5 finansieringskoste en -heffings aangegaan deur die kliënt;

4.2.3.3.6 die koste van grond, serwitute en deurgangsregte;

4.2.3.3.7 die koste van permanente beskutting vir toerusting of uitrusting, tensy uitdruklik ontwerp en gedetailleer deur die professionele ingenieur.

4.2.3 COST OF THE ENGINEERING WORKS.

4.2.3.1 For the purpose of calculating the total fee ultimately payable in terms of regulation 4.2.2.2, the cost of the engineering works or any part thereof shall be the cost of the works designed, specified or administered by the professional engineer, calculated as follows:

4.2.3.1.1 The amount certified for payment to contractors in respect of the works, before deduction of liquidated damages or penalties (if any);

4.2.3.1.2 where the client provides labour, tools, construction plant or materials, manufactured goods or machinery for incorporation in the works, a direct and fair valuation based on normal charges by contractors for similar items including depreciation, waste and repairs, overheads and profit;

4.2.3.1.3 a fair valuation to be agreed of the difference between the cost price of any second-hand materials, manufactured goods or machinery incorporated in the works and the market value of such materials, manufactured goods and machinery as though they were purchased new;

4.2.3.1.4 one-third, or such other appropriate proportion as may be agreed with the client, of the cost of any chimneys and airconditioning and ventilation ducts and their insulation specified or designed by the professional engineer and forming part of the building structure; and

4.2.3.1.5 the cost of any exploratory drilling, soil resistivity measurement, etc., for which the professional engineer is required to prepare contract documents and which he is required to inspect or administer.

4.2.3.2 Where the engineering works are carried out as a portion of the contract, whether by subcontract or otherwise, the cost of the engineering works shall include—

4.2.3.2.1 the allowance in the contract to cover attendance and profit relating to the engineering works;

4.2.3.2.2 the cost of items of builders' work required in connection with the engineering works and specified or designed by the professional engineer;

4.2.3.2.3 the cost of items under the preliminary and general section of the contract bills of quantities which are uniquely related to the engineering works in full; and

4.2.3.2.4 except in the case of nominated subcontractors, a portion of the cost of all other items under the preliminary and general section of the contract bills of quantities in the ratio that the cost of the engineering works as determined according to regulations 4.2.3.1, 4.2.3.2.1, 4.2.3.2.2 and 4.2.3.2.3 bears to the total cost of the project after deducting all such other preliminary and general items.

4.2.3.3 The cost of the engineering works shall not include—

4.2.3.3.1 administrative expenses incurred by the client;

4.2.3.3.2 professional fees and disbursements;

4.2.3.3.3 cost of surveys;

4.2.3.3.4 salaries, travelling, out-of-pocket and office expenses of site staff;

4.2.3.3.5 finance costs and charges incurred by the client;

4.2.3.3.6 cost of land, servitudes and wayleaves;

4.2.3.3.7 the cost of permanent accommodation for plant or equipment unless specifically designed and detailed by the professional engineer.

4.2.3.4 Indien enige kontrak, ondanks die bepaling van regulasie 4.2.3.1, bepaal dat betalings aan kontrakteurs verhoog of verlaag moet word tydens die duur van die kontrak na gelang van enige skommeling in die werklike koste van gespesifiseerde items of in voorgeskrewe indekssyfers, moet die waarde van sodanige verhogings of verlaging in die koste, na gelang van die geval, soos volg in ag geneem word by die bepaling van die koste van die werke vir die berekening van die totale gelde uiteindelik betaalbaar:

4.2.3.4.1 Ten opsigte van daardie gedeelte van die totale gelde wat gedurende die konstruksiestadium verskuldig word kragtens regulasie 4.2.1.1.4, die totaal van die verhogings of verlaging in die koste wat werklik vir betaling kragtens die kontrakte gesertifiseer word;

4.2.3.4.2 ten opsigte van daardie gedeelte van die gelde wat voor die konstruksiestadium verskuldig word kragtens regulasies 4.2.1.1.1, 4.2.1.1.2 en 4.2.1.1.3 en, waar van toepassing, ten opsigte van enige gedetailleerde werkstekeninge wat voltooi is voor die plasing van die werke soos bepaal in regulasie 4.2.1.1.4, die totaal van die verhogings of verlaging in die koste wat werklik vir betaling gesertifiseer is met 'n maksimum van 10 persent van die oorspronklike kontrakbedrag uitsluitende onvoorsiene uitgawes.

4.2.4 SKADE AAN OF Vernietiging van die werke.

Indien enige gedeelte van die werke of die toerusting daarvoor te eniger tyd as gevolg van oorlog, brand, storms, vloedwater of ander oorsake buite die beheer van die professionele ingenieur beskadig of vernietig word voordat die werke voltooi is, betaal die klient die professionele ingenieur die toepaslike gelde vir enige bykomende dienste wat van hom verlang word, met inbegrip van ontwerp, inspeksie en administrasie as gevolg van sodanige skade of vernietiging.

4.2.5 UITSTEL, KANSELLERING OF ABANDONNERING VAN DIE WERKE.

4.2.5.1 Indien die werke in die geheel of gedeeltelik uitgestel, gekanselleer of geabandonneer word nadat die klient opdrag aan die professionele ingenieur gegee het om voort te gaan met enige van die stadiums genoem in regulasies 4.1.1.1, 4.1.1.2, 4.1.1.3 en 4.1.1.4, word die betaling aan die professionele ingenieur vir dienste verrig ten opsigte van daardie deel van die werke wat aldus uitgestel, gekanselleer of geabandonneer is, bereken ooreenkomstig regulasie 4.2.1.1, plus 'n toeslag van een tiende, en ooreenkomstig enige ander toepaslike regulasies in verhouding tot die dienste verrig voordat die werke uitgestel, gekanselleer of geabandonneer is.

4.2.5.2 Indien daar binne twee jaar met die uitgestelde werke, of enige gedeelte daarvan, voortgegaan word, is die betaling kragtens regulasie 4.2.5.1 finaal vir dienste alreeds verrig en word betaling vir toekomstige dienste afsonderlik bereken ooreenkomstig die toepaslike bepaling van hierdie Bylae.

4.2.5.3 Indien bykomende dienste van die professionele ingenieur verlang word ten opsigte van die hervatting van die uitgestelde werke, hef die professionele ingenieur vir sulke verdere dienste gelde op 'n tyd basis soos in regulasie 4.3.4 uiteengesit.

4.2.5.4 Ingeval die ingenieurswerke, of enige gedeelte daarvan, langer as twee jaar uitgestel word, word sodanige werke geag geabandonneer te wees.

4.2.5.5 Vir doeleindes van regulasie 4.2.5 is die koste van die werke die onderling ooreengekome beraming van die koste van die betrokke gedeelte van die werke wat voltooi was ten tyde van die uitstel, kansellering of abandonnering daarvan.

4.2.3.4 Notwithstanding the provisions of regulation 4.2.3.1 where any contract provides that payment to contractors shall be increased or decreased during the currency of the contract in accordance with any fluctuation in the actual cost of specified items or in prescribed indices, the value of such increases or decreases in cost, as the case may be, shall be brought into account in determining the cost of the works for purposes of calculating the total fee ultimately payable in the following manner:

4.2.3.4.1 In respect of that portion of the total fee becoming due during the construction stage in accordance with regulation 4.2.1.1.4, the total of the increases or decreases in cost actually certified for payment in terms of the contracts;

4.2.3.4.2 in respect of that portion of the fee becoming due prior to the construction stage in accordance with regulations 4.2.1.1.1, 4.2.1.1.2 and 4.2.1.1.3 and, where applicable, in respect of any working drawings completed prior to the placing of the works as provided in regulation 4.2.1.1.4, the total of the increases or decreases in cost actually certified for payment with a maximum of 10 per cent of the original contract amount, excluding contingencies.

4.2.4 DAMAGE TO OR DESTRUCTION OF THE WORKS.

If, at any time before the completion of the works, any part of the works or of the equipment therefor is damaged or destroyed by operation of war, fire, storm, flood or other cause beyond the control of the professional engineer, the client shall pay to the professional engineer the appropriate fee for any additional services which may be required of him including design, inspection and administration as a result of such damage or destruction.

4.2.5 POSTPONEMENT, CANCELLATION OR ABANDONMENT OF THE WORKS.

4.2.5.1 If, instructions having been given by the client to the professional engineer to proceed with any of the stages referred to in regulations 4.1.1.1, 4.1.1.2, 4.1.1.3 and 4.1.1.4, the whole or any part of the engineering works is postponed, cancelled or abandoned, the payment to be made to the professional engineer for services performed in respect of that part of the works so postponed, cancelled or abandoned, shall be determined in accordance with regulation 4.2.1.1, plus a surcharge of one-tenth, and in accordance with such other regulations as may be applicable, in proportion to the services performed prior to the works being postponed, cancelled or abandoned.

4.2.5.2 If, within two years, the postponed works or any part thereof shall again proceed, the payment defined in regulation 4.2.5.1 shall be final for the services already performed and payment for subsequent services shall be separately determined in accordance with the relevant provisions of this Schedule.

4.2.5.3 Should additional services by the professional engineer be required in connection with resumption of the postponed works, the professional engineer shall charge for such additional services on a time basis as set out in regulation 4.3.4.

4.2.5.4 In the event of the engineering works, or any part thereof, being postponed for a period longer than two years, such works shall be considered as having been abandoned.

4.2.5.5 For the purpose of regulation 4.2.5 the cost of the works shall be the mutually agreed estimate of the cost of the relevant part of the works completed at the time of its postponement, cancellation or abandonment.

4.2.6 VERANDERINGEN OF WYSIGINGS AAN ONTWERPE.

Indien omstandighede hulle voordoen wat redelikerwys nie deur die professionele ingenieur voorsien kon gewees het nie of as die klient of sy hoofagent die ontwerpvereiste wysig wat veranderinge aan voltooide ontwerpe noodsaak, of veranderinge aan ontwerpe waaraan gewerk word en wat ook die verandering of heropstel vereis van enige spesifikasie, tekening of ander dokument wat in die geheel of gedeeltelik deur die professionele ingenieur opgestel is, is die algehele koste van enige hersiening, wysiging of reproduksie van sodanige ontwerpe, tekeninge of dokumente om die werk te bring tot die stadium waar dit gewysig is, onderworpe aan bykomende betaling op 'n tydbasis bereken soos in regulasie 4.3.4 uiteengesit: Met dien verstande dat die professionele ingenieur die klient van die bykomende koste verwittig wat by wyse van gelde aangegaan mag word.

4.2.7 GEGEWENS WAT AAN DIE PROFESSIONELE INGENIEUR VERSKAF MOET WORD.

Die klient moet of regstreeks of deur tussenkoms van sy hoofagent die volgende kosteloos aan die professionele ingenieur verskaf:

4.2.7.1 Alle sodanige planne en deursnitte van die projek en alle sodanige terreinplanne op 'n praktiese skaal met hoogtes en alle sodanige tersaaklike detailtekeninge as wat die professionele ingenieur redelikerwys nodig mag hê;

4.2.7.2 alle tersaaklike gegewens en inligting tesame met sodanige hulp as wat redelikerwys nodig is vir die professionele ingenieur om sy dienste te verrig;

4.2.7.3 afskrifte van alle kontrakdokumente, tekeninge en ondersteunende dokumente wat betrekking het op daardie dele van die projek wat in verband staan met die ingenieurswerke, met inbegrip van die algemene kontrakvoorwaardes waar van toepassing;

4.2.7.4 afskrifte van alle wysigingstekeninge en -opdragte rakende die ingenieurswerke.

4.3 GELDETARIEF VIR MEGANIESE EN ELEKTRIESE INGENIEURSDIENSTE IN VERBAND MET BOUPROEJekte.**4.3.1 DIENSTE VAN NORMALE AARD.**

Ten opsigte van werke wat normale eise aan die professionele ingenieur se tyd stel, is die gelde soos in regulasies 4.3.1.1 en 4.3.1.2 neergelê.

4.3.1.1 BASIESE GELDE.

Indien die koste van die werke—		Die gelde is die som van die primêre gelde aangegee in kolom 3 en die sekondêre gelde bereken kragtens kolom 4	
meer is as— (kolom 1)	maar nie meer is nie as— (kolom 2)	Primêre gelde (kolom 3)	Sekondêre gelde: Bereken op die totale koste van die werke teen die volgende persentasies (kolom 4)
R —	R 30 000	R 150	% 10,0
30 000	60 000	450	9,0
60 000	150 000	1 050	8,0
150 000	300 000	1 800	7,5
300 000	700 000	3 300	7,0
700 000	1 500 000	6 800	6,5
1 500 000	—	14 300	6,0

4.3.1.2 BYKOMENDE GELDE VIR VARIASIES.

Die bykomende gelde vir die meting of waardebeoordeling van alle variasies in 'n kontrak van 'n ronde bedrag word soos volg bereken:

4.3.1.2.1 2,5 persent van die koste van die bykomende werke uitsluitend primêre koste items, maar insluitend die koste van items onder die voorlopige bedrae bestel; en

4.2.6 ALTERATIONS OR MODIFICATIONS TO DESIGNS.

In the event of circumstances arising which could not have been reasonably foreseen by the professional engineer or in the event of the client or principal agent of the client modifying the design requirements and thus necessitating alterations to completed designs or alterations to designs in progress and which also require the alteration or remaking of any specification, drawing, or other document prepared in whole or in part by the professional engineer, the whole of the cost of revising, amending or reproducing such designs, drawings or documents to bring the work up to the stage at which it was modified shall be the subject of additional payment calculated on a time basis as set out in regulation 4.3.4: Provided that the professional engineer shall inform the client in respect of additional costs which may be incurred by way of fees.

4.2.7 DATA TO BE SUPPLIED TO THE PROFESSIONAL ENGINEER.

The client, either directly or through his principal agent, shall supply free of charge to the professional engineer—

4.2.7.1 all such plans and sections of the project and all such site plans to a practical scale giving levels and all such relevant detail drawings as the professional engineer may reasonably require;

4.2.7.2 all pertinent data and information together with such assistance as shall reasonably be required to enable the professional engineer to perform his services;

4.2.7.3 copies of all contract documents, drawings and supporting documents relating to those parts of the project which are relevant to the engineering works, including the general conditions of contract where applicable;

4.2.7.4 copies of all variation drawings and orders affecting the engineering works.

4.3 TARIFF OF FEES FOR MECHANICAL AND ELECTRICAL ENGINEERING SERVICES PERTAINING TO BUILDING PROJECTS.**4.3.1 SERVICES OF NORMAL CHARACTER.**

In respect of works making normal demands on the time of the professional engineer the fee shall be as provided in regulations 4.3.1.1 and 4.3.1.2.

4.3.1.1 BASIC FEE.

Where the cost of the works—		The fee shall be the sum of the primary fee stated in column 3 and the secondary fee calculated in terms of column 4	
exceeds— (column 1)	but does not exceed— (column 2)	Primary fee (column 3)	Secondary fee: Calculated on the total cost of the works at the following percentages (column 4)
R —	R 30 000	R 150	% 10,0
30 000	60 000	450	9,0
60 000	150 000	1 050	8,0
150 000	300 000	1 800	7,5
300 000	700 000	3 300	7,0
700 000	1 500 000	6 800	6,5
1 500 000	—	14 300	6,0

4.3.1.2 ADDITIONAL FEE FOR VARIATIONS.

The additional fee for the measurement or assessment of all variations to a lump sum contract shall be—

4.3.1.2.1 2,5 per cent of the cost of additional works excluding prime cost items, but including the cost of items ordered under the provisional sums; and

4.3.1.2.2 2,5 persent van die koste van die weggelate werke uitsluitend die waarde van enige toevallige-, primêre koste- of voorlopige bedrae: Met dien verstande dat die bykomende gelde nie gehef word nie in gevalle waar hoeveelhedslyste deur die professionele ingenieur opgestel is waarvoor betaling ooreenkomstig regulasie 4.3.3.3 gemaak is.

4.3.2 DIENSTE VAN NIE-NORMALE AARD.

4.3.2.1 WERKE WAT BUITENGEWOON HOË EISE STEL.

Ten opsigte van sekere werke of gedeeltes van werke soos hierin genoem wat buitengewoon hoë eise aan die professionele ingenieur stel, word die gelde soos volg bereken:

4.3.2.1.1 Vir veranderings aan bestaande werke word die gelde soos neergelê in regulasie 4.3.1 met 25 persent verhoog;

4.3.2.1.2 indien die werke meer as een van die hoofkategorieë, naamlik meganiese en elektries behels, word die gelde apart bereken ooreenkomstig regulasie 4.3.1 ten opsigte van die totale koste van die werk in elke sodanige kategorie;

4.3.2.1.3 indien die werke aansienlike gedeeltes van uiteenlopende soorte werk behels binne die hoofkategorieë genoem in regulasie 4.3.2.1.2, sal die kliënt en die professionele ingenieur ooreenkom oor die gelde wat sal lê tussen die gelde soos bepaal in regulasie 4.3.1 as van toepassing op die totale koste van die werke binne sodanige hoofkategorie en die gelde bepaal deur regulasie 4.3.1 te beskou as van toepassing op die koste van elk van die uiteenlopende soorte van werk asof hulle afsonderlike werke is en na gelang van die mate waarin die eise aan die professionele ingenieur ooreenstem met die eise van elk indien dit ingevolge 'n aparte opdrag uitgevoer was;

4.3.2.1.4 indien werke op afsonderlike nie-aangrensende terreine onderneem word of waar die aaneenlopendheid van die werke onderbreek word of die werke buitengewoon gefragmenteer of in afsonderlik gedokumenteerde stadiums uitgevoer word ooreenkomstig die vereistes of met die toestemming van die kliënt, kan die gelde bereken word deur regulasie 4.3.1 te beskou as van toepassing op elke terrein, kontrak of stadium asof hulle afsonderlike werke is of, indien onvanpas, dan sal die kliënt en die professionele ingenieur ooreenkom oor die gelde wat sal lê tussen die gelde soos bepaal in regulasie 4.3.1 as van toepassing op die totale koste van die werke en die gelde bepaal deur regulasie 4.3.1 te beskou as van toepassing op die koste van elk asof hulle afsonderlike werke is;

4.3.2.1.5 ten opsigte van ander soorte werke of gedeeltes van werke met inbegrip van, onder andere, dié genoem in regulasie 1.5.1 wat buitengewoon hoë eise aan die professionele ingenieur stel, word daar tussen die kliënt en die professionele ingenieur ooreengekom oor die byvoeging wat gedoen moet word tot die gelde gemeld in regulasie 4.3.1 en wat billik is ooreenkomstig die oorsake en omvang van die buitengewoon hoë eise aan die professionele ingenieur: Met dien verstande dat die professionele ingenieur, so gou dit vir hom blyk en gewoonlik nie later as die voltooiing van die verslagstadium nie, die kliënt verwittig dat hy van oordeel is dat die werke van so 'n aard is dat dit 'n verhoging van die gelde soos voornoem regverdig: Met dien verstande verder dat indien dit eers later blyk dat die werke van 'n buitengewone aard is, die professionele ingenieur die kliënt onmiddellik daarvan verwittig, in welke geval die gedeelte van die dienste wat reeds deur die professionele ingenieur voltooi is wanneer hy die kliënt aldus verwittig, nie aan die verhoogde gelde onderworpe is nie tensy die kliënt andersins instem.

4.3.1.2.2 2,5 per cent of the value of omitted works excluding the value of any contingency sums, prime cost sums or provisional sums: Provided that the additional fee shall not be charged in cases where schedules of quantities are prepared by the professional engineer for which payment is made under regulation 4.3.3.3.

4.3.2 SERVICES NOT OF NORMAL CHARACTER.

4.3.2.1 WORKS MAKING USUALLY HIGH DEMANDS.

In respect of certain works or parts of works as herein listed which make demands on the professional engineer which are unusually high, the fee shall be calculated as follows:

4.3.2.1.1 For alterations to existing works the fee stated in regulation 4.3.1 shall be increased by 25 per cent;

4.3.2.1.2 where the works comprise more than one of the main categories, i.e. mechanical and electrical, the fee shall be separately calculated in accordance with regulation 4.3.1 in respect of the total cost of the works in each such category;

4.3.2.1.3 where the works comprise substantial portions of dissimilar types or work within the main categories stated in regulation 4.3.2.1.2 the client and the professional engineer shall agree the fee which shall lie between the fee as derived in regulation 4.3.1 as applicable to the total cost of the works within such main category and the fee derived taking regulation 4.3.1 as applicable to the cost of each of the dissimilar types of work as if they were separate works according to the extent to which the demands on the professional engineer correspond to the demands of each such dissimilar type of work had it been executed under a separate assignment;

4.3.2.1.4 where works are undertaken on separate non-contiguous sites or when continuity of the works is interrupted or the works are unusually fragmented or are being constructed as separately documented phases in accordance with the requirements or with the consent of the client, the fee may be calculated taking regulation 4.3.1 as applicable to each site, contract of phase as if they were separate works or, if inappropriate, the client and the professional engineer shall agree the fee which shall lie between the fee as derived in regulation 4.3.1 as applicable to the total cost of the works and the fee derived taking regulation 4.3.1 as applicable to the cost of each as if they were separate works;

4.3.2.1.5 in respect of other types of works or parts of works including, *inter alia*, those mentioned in regulation 1.5.1 which make demands on the professional engineer which are unusually high, the client and professional engineer shall agree the addition to be made to the fee stated in regulation 4.3.1 which will be equitable in accordance with the causes and extent of the unusually high demands on the professional engineer: Provided that the professional engineer shall, as soon as it becomes evident to him and generally not later than at the completion of the report stage, inform the client that he considers that the works are of such a nature as to warrant an increase of the fee as aforesaid: Provided further that if it only becomes evident at a later stage that the works are of unusual character, he shall inform the client without delay in which event such portion of the service of the professional engineer as he has already completed when he informs the client shall not be subject to an increased fee unless the client agrees otherwise.

4.3.2.2 WERKE WAT BUITENGEWOON LAE EISE STEL.

Ten opsigte van werke of gedeeltes van werke wat buitengewoon lae eise aan die professionele ingenieur stel, kom die kliënt en die professionele ingenieur ooreen oor die gelde vir sulke werke wat billik is ooreenkomstig die oorsake en omvang van die buitengewone verlaging in die eise wat aan die professionele ingenieur gestel word.

4.3.3 BYKOMENDE DIENSTE.

4.3.3.1 VERSKAFFING VAN TERREINPERSONEEL.

Die professionele ingenieur se heffing vir die verskaffing van terreinpersoneel kragtens regulasie 4.1.2.1.1 word soos volg bereken:

4.3.3.1.1 Salaris, insluitende gewone bonus plus 30 persent; plus

4.3.3.1.2 alle ander direkte kostes en toegifte, soos met die kliënt ooreengekom, plus 10 persent.

4.3.3.2 HOOFAGENT VAN DIE KLIËNT.

Die bykomende gelde vir dienste as hoofagent van die kliënt gelewer ooreenkomstig regulasie 4.1.2.2 is 1 persent van die finale koste van die projek.

4.3.3.3 HOEVEELHEIDSLYSTE.

Die bykomende gelde bo en behalwe die basiese gelde soos neergelê in regulasie 4.3.1.1 vir dienste verrig ooreenkomstig regulasie 4.1.2.3 word bereken kragtens regulasie 4.3.3.3.1 of 4.3.3.3.2 of 4.3.3.3.3 na gelang van die prosedure wat gevolg is.

4.3.3.1 Vir die opstel van elementale en werkverrigtingshoeveelheidslyste:

Indien die koste van die werke in die skedules—		Die gelde is die som van die primêre gelde in kolom 3 en die sekondêre gelde bereken kragtens kolom 4	
meer is as— (kolom 1)	maar nie meer is nie as— (kolom 2)	Primêre gelde (kolom 3)	Sekondêre gelde: Bereken op die totale koste van die werke teen die volgende persentasies (kolom 4)
R	R	R	%
—	60 000	—	3,000
60 000	300 000	150	2,750
300 000	800 000	900	2,500
800 000	1 600 000	1 900	2,375
1 600 000	2 400 000	3 900	2,250
2 400 000	3 600 000	6 900	2,125
3 600 000	—	11 400	2,000

4.3.3.3.2 Vir die opstel van voorlopige hoeveelheidslyste:

4.3.3.3.2.1 Vir die opstel van voorlopige hoeveelheidslyste en sodanige voorlopige ontwerpdiens as wat nodig mag wees vir die doel om sulke voorlopige hoeveelheidslyste op te stel, is die gelde 1½ persent van die tenderprys;

4.3.3.3.2.2 vir die daaropvolgende hermeting van die hoeveelhede en die opstel van die elementale en werkverrigtingshoeveelheidslyste is die gelde bykomend by dié soos in regulasie 4.3.3.3.2.1 uiteengesit, die gelde vir die opstel van die elementale en werkverrigtingshoeveelheidslyste soos in regulasie 4.3.3.3.1 uiteengesit.

4.3.3.3.3 Indien 'n bourekenaar deur die kliënt aangestel is om bourekenaarsdienste ten behoeve van die ingenieurswerke te lewer moet die gelde vir die verstrekking

4.3.2.2 WORKS MAKING UNUSUALLY LOW DEMANDS.

In respect of works or parts of works which make demands on the professional engineer which are unusually low, the client and the professional engineer shall agree the fee for such works which shall be equitable in accordance with the causes and extent of the unusual reduction in the demands on the professional engineer.

4.3.3 ADDITIONAL SERVICES.

4.3.3.1 PROVISION OF SITE STAFF.

The professional engineer's charge for the provision of site staff in terms of regulation 4.1.2.1.1 shall be calculated as follows:

4.3.3.1.1 Salary, inclusive of regular bonus, plus 30 per cent; plus

4.3.3.1.2 all other direct costs and allowances, as agreed with the client, plus 10 per cent.

4.3.3.2 PRINCIPAL AGENT OF THE CLIENT.

The additional fee for services performed under regulation 4.1.2.2 as principal agent of the client shall be 1 per cent of the final cost of the project.

4.3.3.3 SCHEDULES OF QUANTITIES.

The additional fee, over and above the basic fee in regulation 4.3.1.1, for services performed under regulation 4.1.2.3, shall be based on regulations 4.3.3.3.1 or 4.3.3.3.2 or 4.3.3.3.3 according to the procedure adopted.

4.3.3.3.1 For the preparation of elemental and operation schedules of quantities:

Where the cost of the works in the schedules—		The fee shall be the sum of the primary fee stated in column 3 and the secondary fee calculated in terms of column 4	
exceeds— (column 1)	but does not exceed— (column 2)	Primary fee (column 3)	Secondary fee: Calculated on the total cost of the works at the following percentages (column 4)
R	R	R	%
—	60 000	—	3,000
60 000	300 000	150	2,750
300 000	800 000	900	2,500
800 000	1 600 000	1 900	2,375
1 600 000	2 400 000	3 900	2,250
2 400 000	3 600 000	6 900	2,125
3 600 000	—	11 400	2,000

4.3.3.3.2 For the preparation of provisional schedules of quantities:

4.3.3.3.2.1 For the preparation of provisional schedules of quantities and such preliminary design services as may be necessary for the purpose of preparing such provisional schedules of quantities the fee shall be 1½ per cent of the tender price;

4.3.3.3.2.2 for the subsequent remeasurement of the quantities and the preparation of the elemental and operational schedules of quantities the fee in addition to that set out in regulation 4.3.3.3.2.1 shall be the fee for the preparation of the elemental and operational schedule of quantities as set out in regulation 4.3.3.3.1.

4.3.3.3.3 If a quantity surveyor is appointed by the client to perform quantity surveying services in respect of the engineering works, the fee for providing the quantity

aan die bourekenaar van die normale inligting wat nodig is vir die opstel van hoeveelheidslyste, teen die volgende skale bereken word:

4.3.3.3.1 Op die koste van die ingenieurswerke in die hoeveelheidslyste aldus opgestel—1 persent op die eerste R1 miljoen van die koste en $\frac{1}{4}$ persent op die balans;

4.3.3.3.2 op die koste van die ingenieurswerke in die voorlopige hoeveelheidslyste aldus opgestel— $\frac{1}{4}$ persent op die eerste R1 miljoen van die koste en $\frac{1}{2}$ persent op die balans.

4.3.3.4 BEMIDDELING, ARBITRASIE EN REGSGEDINGE EN SOORTGELYKE DIENSTE.

4.3.3.4.1 ALLERLEI DIENSTE.

Die professionele ingenieur se gelde vir dienste gelewer word op 'n tydbasis bereken soos ooreengekom met die klient en is nie minder nie as die tarief kragtens regulasie 4.3.4: Met dien verstande dat vir verskynings in die hof die gelde bereken word ooreenkomstig regulasie 4.3.3.4.2.1.

4.3.3.4.2 BEMIDDELING OF ARBITRASIE.

4.3.3.4.2.1 Vir optrede as bemiddelaar of arbiter wanneer daar meer as een is of vir optrede as assessor, moet die gelde nie minder wees nie as die gelde gehef op 'n tydbasis vir prinsipale, vennote en direkteure soos in regulasie 4.3.4.1 uiteengesit plus 25 persent, onderworpe aan 'n minimum heffing vir twee ure.

4.3.3.4.2.2 Vir optrede as alleenbemiddelaar, -arbiter of -beoordeelaar moet die gelde nie minder wees nie as die gelde gehef op 'n tydbasis vir prinsipale, vennote en direkteure soos in regulasie 4.3.4.1 uiteengesit plus 75 persent, onderworpe aan 'n minimum heffing vir twee ure.

4.3.3.4.2.3 Die gelde voorgeskryf by regulasies 4.3.3.4.2.1 en 4.3.3.4.2.2 is van toepassing ten opsigte van die tyd wat bestee word aan die bywoning van bemiddelingsbyeenkomste, die arbitrasiehof, die bestudering van die getuienis en die opstel van die beslissing.

4.3.4 GELDE OP 'N TYDBASIS.

Die geldetarief op 'n tydbasis is soos volg:

4.3.4.1 Prinsipaal, vennoot of direkteur—R45 per uur of gedeelte daarvan;

4.3.4.2 gesalarieerde professionele en tegniese personeel—15c per uur per R100 of gedeelte daarvan van die totale jaarlikse salaris insluitende gewone bonus, as daar is: Met dien verstande dat hierdie tariewe geag word vestigingsheffings en tyd deur klerklike personeel bestee, in te sluit, wat dus nie afsonderlike heffings uitmaak nie.

4.3.5 REISTYD

'n Bedrag teen die tarief uiteengesit in regulasie 4.3.4 word gehef vir al die tyd gedurende normale werksure, met 'n maksimum van agt uur per dag, wat die professionele ingenieur en lede van sy personeel aan reis bestee: Met dien verstande dat wanneer die reis na en van sy kantoor nie 50 km oorskry nie, die professionele ingenieur en lede van sy personeel nie vergoed sal word vir die tyd aan reis bestee nie tensy betaling van gelde op 'n tydbasis geskied.

surveyor with the normal information required for preparing the bills of quantities shall be at the following rates:

4.3.3.3.1 On the cost of the engineering works in the bills so prepared 1 per cent on the first R1 million of the cost and $\frac{1}{4}$ per cent on the balance;

4.3.3.3.2 on the cost of the engineering works in provisional bills of quantities so prepared— $\frac{1}{4}$ per cent on the first R1 million of the cost and $\frac{1}{2}$ per cent on the balance.

4.3.3.4 MEDIATION, ARBITRATION AND LITIGATION PROCEEDINGS AND SIMILAR SERVICES.

4.3.3.4.1 MISCELLANEOUS SERVICES.

The professional engineer's fee for services performed shall be on a time basis as agreed by the client and shall be not less than the rate in accordance with regulation 4.3.4: Provided that for court appearances the fee shall be determined in accordance with regulation 4.3.3.4.2.1.

4.3.3.4.2 MEDIATION OR ARBITRATION.

4.3.3.4.2.1 For acting as mediator or as arbitrator where there is more than one or for acting as assessor, the fee shall be not less than the time charged for principals, partners and directors as set out in regulation 4.3.4.1 plus 25 per cent, subject to a minimum charge for two hours.

4.3.3.4.2.2 For acting as sole arbitrator, mediator or umpire the fee shall be not less than the time charged for principals, partners and directors as set out in regulation 4.3.4.1 plus 75 per cent, subject to a minimum charge for two hours.

4.3.3.4.2.3 The fee set out in regulations 4.3.3.4.2.1 and 4.3.3.4.2.2 shall apply to time spent in attending mediation meetings, the arbitration court, in studying evidence and in framing the award.

4.3.4 TIME BASIS FEE.

The scale of fees on a time basis shall be as follows:

4.3.4.1 Principal, partner or director—R45 per hour or part thereof;

4.3.4.2 salaried professional and technical staff—15c per hour per R100 or part thereof of the total annual salary including regular bonus, if any: Provided that these rates shall be deemed to include establishment charges and time expended by clerical staff which shall, therefore, not be chargeable separately.

4.3.5 TRAVELLING TIME.

A charge at the rate set out in regulation 4.3.4 for all time spent by the professional engineer or members of his staff in travelling during normal working hours, such time not exceeding eight hours per day: Provided that when the journey does not exceed 50 km recorded to and from his office, the professional engineer and members of his staff shall not be reimbursed for time spent in travelling unless payment of fees is being made on a time basis.

KOOP NASIONALE SPAARSERTIFIKATE
BUY NATIONAL SAVINGS CERTIFICATES

INHOUD

No.	Bladsy No.	Staats- koerant No.
Gemeenskapsontwikkeling, Departement van Goewermentskennisgewing		
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