REGISTRATION OF ENGINEERS ACT 1967

NOTIFICATION OF SCALE OF FEES FOR HOUSING DEVELOPMENT

IN exercise of the powers conferred by paragraph 4(1)(d) of the Registration of Engineers Act 1967, the Board of Engineers, Malaysia, with the approval of Minister, fixes the following scale of fees to be charged by registered Professional Engineers for professional advice or service rendered in matters relating to housing development.

1. In this Notification, unless the context otherwise requires -

"architect" means the architect appointed by the client to act as architect for the building works;

"builder's work drawings" means the drawings prepared by the contractor for approval by the consulting engineer which show details of work of a structural nature which is required to be carried out by a builder or other party to facilitate the execution of the engineering systems in the building;

"building cost" means -

- (a) the cost of the building works, however incurred, including any payments (before deduction of any liquidated damages or penalties payable by the contractor to the client) made by the client to the contractor by way of bonus, incentive or ex-gratia payments or payments made in settlement of claims;
- (b) a fair valuation of any labour, materials, manufactured goods, machinery or other facilities provided by the client, and of the full benefit accruing to the contractor from the use of construction plant and equipment belonging to the client which the client has required to be used in the construction of the building works;
- (c) the market value, as if purchased new, of any second-hand materials, manufactured goods and machinery incorporated in the building works;
- (d) the cost of geotechnical and other investigations; and
- (e) the apportioned preliminary cost,

but shall not include -

- (aa) administration expenses incurred by the client;
- (bb) costs incurred by the client under an agreement between the consulting engineer and the client:
- (cc) interest on capital during construction and the cost of raising moneys required for carrying out the construction of the building works;
- (dd) the costs of land and wayleaves; and
- (ee) the price variation arising from the escalation of prices;

"building works' means all architectural works, decor and finishes, structural engineering works and engineering systems, and all other work on items forming an integral part of the building to enable it to function fully and to be occupied to its intended standards of comfort and convenience;

"consulting engineer" means any Professional Engineer or body corporate practising as consulting

engineers engaged by the client to provide professional services;

"contractor" means any person, firm or company under a contract with the client to perform any work or to supply goods or services in connection with the building works and includes a sub-contractor;

"engineering systems" means all mechanical and electrical services, plant and equipment installed within the building, and comprises, as may be applicable, the following:

- (a) lighting, power and electrical distribution systems;
- (b) air-conditioning and mechanical ventilation systems;
- (c) fire-fighting and prevention systems;
- (d) stage lighting systems and mechanisms;
- (e) hot and cold water systems;
- (f) gas distribution systems;
- (g) telephone distribution and intercommunication systems;
- (h) lightning protection systems;
- (i) electrical sub-stations within the building;
- (j) public address systems, personal location and call systems;
- (k) radio and television systems;
- (l) security systems;
- (m) lifts, hoists, dumbwaiters and escalators;
- (n) standby generators;
- (o) soil and waste water pipe systems; and
- (p) pumping installations within the building.

"housing development", for the purpose of this Notification, means a single unit or multiple units of houses, shop houses, flats, condominiums and apartments of not more than four storeys high and situated in a single location;

"installation drawings" means the drawings, prepared by the contractor for approval by the consulting engineer, which show details of the contractor's proposals for the execution of the works;

"multiplier" means a factor derived from the elements covering -

- (a) annual salary;
- (b) fringe benefits including benefits from bonuses, the Employee's Provident Fund, Social Security Organisation, staff savings fund, subscriptions to professional institutions, leave, medical aid and insurance, seminars, conferences and workshops;
- (c) office administrative charges and expenses including rentals, telephone, telex, facsimile and

postal charges, stationery, subscriptions to journals, promotion, training and scholarships, transport costs, legal and audit fees, bank charges and idle time; and

(d) profits;

and in the case of site staff recruited especially for the project, the multiplier shall be derived from the elements covering the annual salary, gratuity, benefits from the Employee's Provident Fund, Social Security Organisation, medical aid, insurance, overhead costs and profit only;

"project" means a project of which the building works form a part;

"quantity surveyor" means the quantity surveyor appointed by the client to act as quantity surveyor for the building works;

"record drawings" means drawings prepared by the contractor for approval by the consulting engineer which show clearly the general scheme and the details of the works as completed;

"salary cost" means the annual salary of any person employed by the consulting engineer divided by 1800 (this being deemed to be the average annual total of effective working hours of an employee) and multiplied by the number of working hours spent by such person in performing any of the services in respect of which payment is to be made to the consulting engineer upon the basis of salary cost; and for the purpose of this definition, the annual salary of a person for a period of less than a full year shall be calculated *prorata* to the person's salary for such lesser period;

"structural engineering works" means all works in structural reinforced concrete, prestressed concrete, steel, timber and other materials or a combination of any of these, which are designed to transmit the weight of and the loads on the building to the ground and includes the foundations and excavations connected therewith;

"tender drawings" means the drawings prepared by the consulting engineer in sufficient detail to enable those persons tendering to interpret correctly the design of the works and to submit competitive tenders for the executions of the works;

"the works" means the works in connection with which the client has engaged the consulting engineer to perform the professional services, namely –

- (a) structural engineering works in the building; and/or
- (b) engineering systems in the building.
- 2. Every consulting engineer who is engaged by a client to perform the professional services described in Part A for the works within a housing development shall be paid fees in accordance with the scale of fees as provided in Part B in addition to the other payments provided in Part C.
- 3. (1) The scale of fees shall apply only to the professional services performed in connection with works within the boundaries of the building lots in a housing development.
 - (2) The scale of fees shall not apply to the professional services performed in connection with civil, structural, infrastructural, electrical and mechanical works outside the boundaries provided in subparagraph (1) since the scale of fees as prescribed under *Gazette* Notification P.U. (B) 346/1982 shall apply in such cases.

PART A

PROFESSIONAL SERVICES

1. BASIC PROFESSIONAL SERVICES (STRUCTURAL ENGINEERING WORKS IN THE BUILDING)

The professional services to be rendered by the consulting engineer in this paragraph comprise the provision of all technical advice and skills which are normally required for the works for which the consulting engineer has been engaged.

(a) Preliminary Stage

- (i) investigating data and information relevant to the works and considering any reports relating to the works;
- (ii) advising the client on making any further topographical survey of the proposed site of the works which may be necessary to supplement available topographical information;
- (iii) advising the client on the need to carry out any geotechnical investigation which may be necessary to supplement the available geotechnical information, arranging for such investigation, certifying the amount of any payments to be made by the client to the persons, firms or companies carrying out such investigation under the consulting engineer's direction, and advising the client on the results of such investigation;
- (iv) advising the client on the need for arrangements to be made, in accordance with paragraph 2 of this Part, for the carrying out of special surveys, special investigations or model tests and advising the client of the results of any such surveys, investigations or tests carried out;
- (v) consulting any local or other approving authorities on matters of principle in connection with the works;
- (vi) consulting the architect appointed by the client in connection with the architectural treatment of the works:
- (vii) providing sufficient structural information to enable the architect to produce his sketch plans; and
- (viii) preparing such reports and documents as are reasonably necessary to enable the client to consider the consulting engineer's proposals, including alternative proposals, for the construction of the works in the light of the investigations carried out by him at this stage, and to enable the client to apply for approval in principle from the appropriate authorities for the execution of the works in accordance with such proposals.

(b) Design Stage

The professional services to be provided by the consulting engineer at this stage comprise all or any of the following as may be necessary in a particular case:

- (i) developing the design of the works in collaboration with the architect and preparing calculations, drawings and specifications for the works to enable a bill of quantities to be prepared by others, consulting any local or other approving authorities in connection with the design of the works, and preparing typical details and typical calculations; and
- (ii) preparing such calculations and details relating to the works as may be required for submission to any appropriate authority, preparing all other drawings in sufficient details to enable construction to be carried out, preparing bar bending schedules if required, and advising on conditions of contract and specifications relevant to the works and on forms of tender and invitations to tender as they relate to the works.

(c) Tender Stage

The professional services to be provided by the consulting engineer at this stage comprise advising the client as to the suitability for carrying out the works of the persons, firms or companies tendering and as to the relative merits of tenders, including relative merits of alternative tenders, prices and estimates received for carrying out the works.

(d) Construction Stage

- advising on the preparation of contract documents relating to accepted tenders for the works;
- (ii) advising the client on the appointment of site staff in accordance with paragraph 5 of this Part;
- (iii) preparing any further designs, specifications and drawings, including bar bending schedules, if necessary, to enable the contractor to carry out the works but shall not include the preparation of any shop details relating to the works or any part thereof;
- (iv) examining and approving the contractor's proposals and working drawings relating to the works;
- (v) checking shop details for general dimensions and adequacy of members and connection;
- (vi) approving the contractor's testing procedures and inspecting the works on completion;
- (vii) advising the client or the architect as to the need to vary any part of the works;
- (viii) making such visits to site as the consulting engineer considers necessary to satisfy himself as to the performance of any site staff appointed pursuant to paragraph 5 of this Part and to satisfy himself that the works are executed generally according to contract or otherwise in accordance with good engineering practice;
- (ix) giving all necessary instructions relating to the works to the contractor;

- (x) advising on certificates of payment to the contractor;
- (xi) inspecting and testing during manufacture and installation such materials supplied for incorporation in the works as are necessary where such inspection and test are within the technical competence of the consulting engineer, and arranging and witnessing acceptance tests;
- (xii) performing any duties which the consulting engineer may be required to carry out in any contract which he has prepared for the execution of the works;
- (xiii) advising the client on the need for special inspection or test other than that referred to in sub-subparagraph (xi);
- (xiv) delivering to the client on completion of the works such records and manufacturer's manuals as are reasonably necessary to enable the client to operate and maintain the works; and
- (xv) deciding any dispute or difference which may arise between the client and the contractor, provided that this professional service shall not extend to advising the client following the taking of any step in or towards any arbitration or litigation in connection with the works.

2. ADDITIONAL PROFESSIONAL SERVICE NOT INCLUDED IN BASIC SERVICES (STRUCTURAL ENGINEERING WORKS IN THE BUILDING)

The additional professional services to be provided by the consulting engineer, if so required by the client, include the following:

- (a) (i) preparing any report or other additional documents required for consideration of proposals for the carrying out of alternative works;
 - (ii) carrying out work consequent upon a decision by the client to seek or comply with amendments to existing laws affecting the works;
 - (iii) carrying out work in connection with any application made by the client for any order, sanction, licence, permit or other consent, approval (not including the normal approval required from the relevant technical authorities such as building authorities, waterworks authorities, electricity authorities and telecommunications authorities) or authorisation necessary to enable the works to proceed;
 - (iv) checking and advising on any part of the project not designed by the consulting engineer;
 - carrying out work arising from the failure of the client to award a contract in due time;
 - (vi) carrying out work consequent upon any abandonment of a contract by the contractor or upon the failure of the contractor to properly perform any contract or upon delay by the client in fulfilling his obligations or in taking any other steps necessary for the due performance of the works;
 - (vii) advising the client and carrying out work following the taking of any step in or towards any litigation or arbitration relating to the works;
 - (viii) preparing interim or other reports or detailed valuations, including estimates or cost

analysis based on measurement or forming an element of a cost planning service;

- (ix) carrying out work in conjunction with any other persons employed to provide any of the services specified in subparagraph 2(b) of this Part;
- (x) preparing preliminary estimates for the works which are normally prepared by others;
- (xi) providing project management services;
- (b) (i) obtaining specialist technical advice on any abnormal aspects of the works;
 - (ii) carrying out such other additional services, if any, as are specified in the Memorandum of Agreement;
 - (iii) surveying the site or existing works and installations;
 - (iv) providing investigation on the nature and strength of existing works and the making of model tests or special investigations;
 - (v) providing services in connection with the valuation, purchase, sale or leasing of lands and the obtaining of way-leaves;
 - (vi) carrying out marine, air and land surveys and making model tests or special investigations; and
 - (vii) carrying out special inspection or tests advised by the consulting engineer under subsubparagraph 1(d)(xiii) of this Part.

3. BASIC PROFESSIONAL SERVICES (ENGINEERING SYSTEMS IN THE BUILDING)

The professional services to be rendered by the consulting engineer in this paragraph comprise the provision of all technical advice and skills which are normally required for the works for which the consulting engineer has been engaged:

(a) Preliminary Stage

- consulting any local or other approving authorities on matters of principle in connection with the design of the works;
- (ii) providing sufficient preliminary information and approximate estimates (based on unit volume, unit surface area or similar bases of estimation) regarding the works to enable the client or the architect to prepare architectural sketch plans and budget estimates for the project;
- (iii) investigating data and information relevant to the works and considering any reports relating thereto;
- (iv) consulting the architect appointed by the client in connection with the architectural treatment of the works; and
- (v) preparing such reports and documents as are necessary to enable the client to consider the consulting engineer's proposals, including alternatives, for the installation of the works in the light of investigations carried out by him at this stage, and to enable the

client to apply for approval in principle from the appropriate authorities for the execution of the works in accordance with such proposals.

(b) Design Stage

The professional services to be provided by the consulting engineer at this stage comprise all or any of the following as may be necessary in a particular case:

- (i) preparing designs and tender drawings, and providing information as to plant rooms, main service ducts and other similar elements incorporated in the building structure, and information as to the approximate weights of items of heavy plant and equipment which are to be incorporated in the works; and
- (ii) advising on conditions of contract, preparing specifications and schedules as may be necessary to enable the client to obtain tenders or otherwise award a contract for carrying out the works and preparing such calculations and details relating to the works as may be required for submission to any appropriate authorities.

(c) Tender Stage

The professional services to be provided by the consulting engineer at this stage comprise advising the client as to the suitability for carrying out the works of the persons, firms or companies tendering and as to the relative merits of tenders, including relative merits of alternative tenders, prices and estimates received for carrying out the works.

(d) Construction Stage

- (i) advising on the preparation of formal contract documents relating to accepted tenders for carrying out the works or any part thereof;
- (ii) advising the client on the appointment of site staff in accordance with paragraph 5 of this Part;
- (iii) providing the contractor with such further information as are necessary, in the opinion of the consulting engineer, to enable the installation drawings to be prepared;
- (iv) examining the contractor's proposals;
- (v) making such visits to the site as the consulting engineer considers necessary to satisfy himself as to the performance of any site staff appointed pursuant to paragraph 5 of this Part and to satisfy himself that the works are executed generally according to his designs and specifications or otherwise in accordance with good engineering practice;
- (vi) checking shop details and installation drawings;
- (vii) giving all necessary instructions to the contractor;
- (viii) advising the client or the architect as to the need to vary any part of the works;
- (ix) approving the contractor's commissioning procedures and performance tests and inspecting the works on completion;

- (x) advising on interim valuation, issuing certificates for payment to the contractor where appropriate and advising on the settlement of the contractor's final accounts;
- (xi) performing any services which the consulting engineer may be required to carry out under any document which he has prepared in relation to the works;
- (xii) delivering to the client, on completion of the works, copies of record drawings, contractor's operating instructions, manufacturer's manuals, and where appropriate, the certificate of work tests, and arranging for the delivery of spares and tools, if necessary;
- (xiii) deciding any dispute or difference which may arise between the client and the contractor, provided that this professional service shall not extend to advising the client following the taking of any step in or towards any arbitration or litigation in connection with the works:
- (xiv) inspecting and testing during manufacture and installation such materials and equipment supplied for incorporation in the works where such inspection and test are within the technical competency of the consulting engineer, and arranging and witnessing acceptance tests; and
- (xv) advising the client on the need for special inspection or testing other than that referred to in sub-subparagraph (xiv).

4. ADDITIONAL PROFESSIONAL SERVICES NOT INCLUDED IN BASIC SERVICES (ENGINEERING SYSTEMS IN THE BUILDING)

The additional professional services to be provided by the consulting engineer, if so required by the client, include the following:

- (a) (i) preparing any report or other additional documents required for consideration of proposals for the carrying out of alternative works;
 - (ii) carrying out work consequent upon a decision by the client to seek or comply with amendments to existing laws affecting the works;
 - (iii) carrying out work in connection with any application made by the client for any order, sanction, licence, permit or other consent, approval (not including the normal approval required from the relevant technical authorities such as building authorities, water-works authorities, electricity authorities and telecommunications authorities) or authorisation necessary to enable the works to proceed;
 - (iv) checking and advising upon any part of the project not designed by the consulting engineer.
 - (v) negotiating and arranging for the provision or diversion of utility services;
 - (vi) negotiating any contract or sub-contract with a contractor selected otherwise than by competitive tendering including checking and agreeing on the quantities and net costs of materials and labour, arithmetical checking and agreeing on the added percentages to cover overhead costs and profit;
 - (vii) carrying out work arising from the failure of the client to award a contract in due time:
 - (viii) carrying out work consequent upon any abandonment of a contract by the contractor

- or upon the failure of the contractor to properly perform any contract or upon delay by the client in fulfilling his obligations or in taking any other step necessary for the due execution of the works:
- (ix) carrying out special cost investigations or detailed valuations including estimates or cost analysis based on measurement or forming an element of a cost planning service;
- (x) providing manuals and other documents describing the design, operation and maintenance of the works;
- (xi) advising the client and carrying out work following the taking of any step in or towards any litigation or arbitration relating to the works;
- (xii) carrying out work in conjunction with any other persons employed to provide any of the services specified in subparagraph 4(b) of this Part;
- (xiii) providing project management services;
- (xiv) preparing builder's work drawings, record drawings or any detailed schedules where necessary;
- (b) (i) obtaining specialist technical advice on any abnormal aspects of the works;
 - (ii) obtaining architectural, legal, cost consultancy, financial and other professional services;
 - (iii) carrying out such other additional services, if any, as are specified in the Memorandum of Agreement;
 - (iv) surveying the site or existing works and installations;
 - (v) providing services in connection with the valuation, purchase, sale or leasing of land and the obtaining of way-leaves;
 - (vi) making model tests or special investigations;
 - (vii) carrying out special inspection or tests advised by the consulting engineer under subsubparagraph 3(d)(xv); and
 - (viii) carrying out commissioning procedures or performance tests.

5. SUPERVISION ON SITE

- (1) Unless otherwise agreed to by the approving authorities concerned, the consulting engineer shall be in full control of and be responsible for supervision of the works on site.
- (2) Where in the opinion of the consulting engineer the nature of the work including the carrying out of any geotechnical and other investigations pursuant to sub-subparagraph 1(a)(iii) of Part A warrants full-time or part-time supervision on site in addition to the site visits made by the consulting engineer pursuant to sub-subparagraph 1(d)(viii) and/or sub-subparagraph 3(d)(v) of Part A, he shall advise the client to appoint adequate and suitable site staff to carry out the full-time or part-time supervision of the works on site pursuant to sub-subparagraph 1(d)(ii) and/or sub-subparagraph 3(d)(iii) of Part A.

PART B

SCALE OF FEES

1. SCALE OF FEES FOR BASIC PROFESSIONAL SERVICES

The consulting engineer in performing the professional services described in paragraphs 1 and 3 of PART A shall be paid the fees provided in this Part.

SCALE OF FEES FOR ALL STAGES OF BASIC PROFESSIONAL SERVICES FOR THE FIRST UNIT

	Fee Expressed As Percentage Of Building Cost			
Building Cost In RM1,000	For Structure Works In T	For Engineering		
	Where Bar Bending Schedule Is Required	Where Bar Bending Schedule Is Not Required	Systems In The Building	
10	4.73	4.42	1.49	
15	4.73	4.42	1.49	
20	4.73	4.42	1.49	
25	4.73	4.42	1.49	
30	4.73 4.73 4.73 4.73	4.42 4.42 4.42 4.42 4.42 4.42 4.42 4.42	1.49 1.49 1.49 1.49 1.49 1.49 1.49	
40				
50				
60				
70	4.73			
80	4.73			
90	4.73			
100	4.73			
50	4.60	4.29	1.49	
200	4.54	4.23	1.49	
250 4.50		4.19	1.49	
300 4.43		4.13	1.49	
350	4.39	4.08	1.47	
400	4.35	4.04	1.44	

	Fee Expressed As Percentage Of Building Cost			
Building Cost In RM1,000	For Structure Works In T	E - E - in - min		
	Where Bar Bending Schedule Is Required	Where Bar Bending Schedule Is Not Required	For Engineering Systems In The Building	
450	4.32	4.02	1.42	
500	4.30	3.99	1.40	
600	4.23	3.92	1.38	
700	4.17	3.87	1.36	
800	4.13	3.83	1.34	
900	4.10	3.79	1.32	
1,000	4.08	3.77	1.30	
1,250	3.98	3.67	1.26	
1,500	3.90	3.60	1.24	
1,750	3.81	3.52	1.22	
2,000	3.74	3.46	1.19	
2,500	3.59	3.32	1.16	
3,000	3.49	3.23 3.17 3.12 3.08 3.05	1.14	
3,500	3.42		1.12 1.10 1.08 1.07	
4,000	3.37			
4,500	3.33			
5,000	3.30			
6,000	3.20	2.96	1.05	
7,000	3.14	2.90	1.03	
8,000	3.07	2.84	1.01	
9,000	3.02	2.79	0.99	
10,000	2.97	2.75	0.98	
12,000 2.89		2.67	0.96	
14,000	2.82	2.62	0.95	
16,000	2.76	2.56	0.94	
18,000	2.70	2.51	0.92	
20,000	2.66	2.48	0.91	
22,000	2.62	2.44	0.90	
24,000	2.58	2.40	0.89	

- 2. Where the housing development is to be carried out in more than one phase and, as a consequence, the services which the consulting engineer is required to perform under paragraphs 1 and 3 of Part A have to be undertaken by the consulting engineer separately in respect of each phase, then these provisions of payment shall apply separately to each phase as if the words "the works" as used in this Notification mean the works comprised in each phase.
- 3. (1) Where the design of any unit is adopted again in the construction of subsequent units by the same client under one works contract or under other works contracts at the same site or other sites under the same consultancy agreement, and the consulting engineer's same drawings, specifications and other documents are used with or without modifications of foundations to suit site conditions, the fees shall be reduced for each of the second and subsequent units in accordance with the following scale:

Unit Concerned	Fees A For Structural Engineering Works (As % of fee for 1 st Unit)	Fees B For Engineering Systems (As % of fee for 1 st Unit)
1 st Unit	100	100
Each of the 2 nd to 5 th Units	75	75
Each of the 6 th to 10 th Units	50	50
Each of the 11 th to 20 th Units	40	40
Each of the 21 st & Subsequent Units	30	30

- (2) The scale of fees for repetitive work mentioned in subparagraph 3(1) of this Part shall be applied subject to the following conditions:
 - (a) a detached house shall be considered as a unit;
 - (b) a block of terrace houses or shop houses shall be considered as a unit;
 - (c) a pair of semi-detached houses shall be considered as a unit;
 - (d) a block of flats, apartments or condominium shall be considered as a unit;
 - (e) the building cost of a single unit shall be computed by including the apportioned preliminaries;
 - (f) where it is necessary to modify the design of the standard unit to accommodate the ground level for the substructure of any repetitive unit or part of any repetitive unit due to variation in site conditions or other reasons, the modified unit shall still be considered as a repetitive unit provided that the additional work involved in modifying the design and preparation of additional drawings is paid for by the client to the consulting engineer on a time basis (i.e. salary cost times a multiplier) together with relevant disbursements as provided in paragraphs 2 and 3 of Part C; and

(g) where a housing development has units comprising different numbers of houses, shop houses, flats, condominiums or apartments of similar designs in each unit (i.e. the intermediate houses, shop houses, flats, condominiums or apartments of the units having identical or mirror plans each to each, and the end houses, shop houses, flats, condominiums or apartments of the units also having identical or mirror plans each to each), then for the purpose of application of the scale for repeated works described in subparagraph 3(1) of this Part, the building cost of every one of the units shall be taken as equal to the average cost of all such units of similar design including apportioned preliminaries.

4. Stages of Payment of Fees

	Stages of Work	Fees Payable (expresses as percentage of total fee for all units in the housing development)
a.	Preliminary Stage	20%
b.	Design Stage (i) Design Stage (ii)	35% 20%
c.	Tender Stage	5%
d.	Construction Stage	20%

In the event of multi-stage tendering, the fees payable for stages 3 and 4 shall be in proportion to the cost of buildings actually tendered out.

PART C

OTHER PAYMENTS

1. PAYMENTS FOR SITE SUPERVISION

- (1) In addition to any other payments to be made by the client to the consulting engineer under Part B, the consulting engineer shall be:
 - (a) reimbursed in respect of all salary costs made by the consulting engineer to his own staff seconded to the site in the discharge of the consulting engineer's responsibilities pursuant to paragraph 5 of Part A times a multiplier; and
 - (b) reimbursed in respect of all salaries and wage payments made by the consulting engineer to site staff specially recruited by the consulting engineer in the discharge of his responsibilities pursuant to paragraph 5 of Part A times a multiplier, and in respect of all other expenditures actually incurred by the consulting engineer in connection with the selection, engagement and employment of such site staff.
- (2) The consulting engineer shall also in all cases be reimbursed for the actual cost of providing such site office accommodation, furniture, telephones, equipment and transport as shall be reasonably necessary for the use of the consulting engineer's site staff, the actual running cost of such site accommodation and cost of other facilities including stationery, telephone calls, telegrams, telex, facsimile, courier service and postage unless they are provided by the client.

2. **DISBURSEMENTS**

The consulting engineer shall in all cases be reimbursed by the client for the disbursements actually incurred in connection with:

- (a) printing, reproduction and purchase of all documents, drawings, maps and records;
- (b) telegrams, telex, facsimile, courier service and telephone calls other than local calls;
- (c) travelling, hotel expenses and other similar disbursements;
- (d) advertising for tenders and for site staff; and
- (e) the provision of additional professional services to the client under paragraphs 2 and 4 of Part A.

3. PAYMENTS FOR ALTERATION OR MODIFICATION TO DESIGN

If after the completion by the consulting engineer of his professional services under subparagraph 1(a) or 3(a) of Part A, as the case may be, any design whether completed or in progress or any specification, drawing or other document prepared in whole or in part by the consulting engineer is required to be modified or revised by him by reason of instructions received by him from the client, or by reason of circumstances which could not reasonably have been foreseen, the consulting engineer shall be paid an additional fee by the client on a time basis (i.e. salary cost times a multiplier) together with any disbursements as provided for in paragraph 2 of this Part for making any such necessary modification or revision and for any consequential reproduction of documents.

4. PAYMENTS WHEN WORKS ARE DAMAGED OR DESTROYED

If at any time before completion of the works, any part of the works or any materials, plant or equipment whether incorporated in the works or not, are damaged or destroyed resulting in additional work being required by the client to be carried out by the consulting engineer, then the consulting engineer shall be paid by the client on a time basis (i.e. salary cost times a multiplier) for the additional work together with any disbursements as provided in paragraph 2 of this Part.

5. PAYMENTS FOLLOWING TERMINATION OR SUSPENSION BY THE CLIENT

- (1) In the event of a termination or suspension by the client of the works, or of the consulting engineer's services (unless, in the case of the latter, the termination or suspension had been occasioned by default or negligence of the consulting engineer), the consulting engineer shall be paid the following sums (less the amount of payments previously made to the consulting engineer):
 - (a) a sum deducible from the stage of the professional services until the time of termination or suspension;
 - (b) a disruption charge equal to one sixth of the difference between the sum which would have been payable to the consulting engineer under paragraphs 1 and 3 of Part B for the whole of the housing development, but for the termination or suspension, and the sum payable under sub-subparagraph (a) provided that the professional services have advanced beyond the preliminary stage; and
 - (c) any other amounts due to the consulting engineer under this Part and Part B.

(2) In the event that the consulting engineer is required to recommence his professional services for the works suspended by the client, the consulting engineer shall be paid for the performance of his professional services the sum payable to the consulting engineer under paragraph 1 of Part B and any relevant paragraphs of this Part, if any, and in any such event any payment made under sub-subparagraphs 5(1)(a) and (c) of this Part shall be treated as payment on account:

Provided that the consulting engineer shall retain as an additional payment the disruption charge referred to in sub-subparagraph 5(1)(b) of this Part.

- (3) Where tendering for the building works (or any part thereof) is or is likely to be delayed for more than nine months or postponed at the request of the client, the consulting engineer shall be paid according to the scale of fees provided in paragraph 1 of Part B but the cost of building works applicable shall be the building cost (or any relevant part thereof) estimated by the quantity surveyor or, in his absence, by the architect or consulting engineer, at the time of completion of the design.
- (4) Where the building works are suspended or postponed after tenders have been called, the fees payable to the consulting engineer shall be as follows:
 - (a) for the preliminary stage, design stage and tender stage the fees shall be computed on the lowest acceptable tender for the building works provided that where no acceptable tender is received the fees shall be computed on the estimate made by the quantity surveyor or, in his absence, by the architect or consulting engineer, of the cost of the building works at the date of calling for tenders;
 - (b) where the building works are subsequently resumed and tenders recalled, the fees payable to the consulting engineer shall be as follows:
 - (i) for the preliminary stage, design stage and tender stage the fees shall be as computed in sub-subparagraph (a); and
 - (ii) for the construction stage the fees shall be computed on the final contract sum of the building works at the time of completion of the building works.
- (5) If the consulting engineer is required to perform any additional services in connection with the resumption of his professional services in accordance with subparagraph 5(2) of this Part the consulting engineer shall be paid in respect of the performance of such additional professional services on a time basis (i.e. salary cost times a multiplier) together with disbursements in accordance with paragraph 2 of this Part.

6. PAYMENTS FOLLOWING TERMINATION BY THE CONSULTING ENGINEER

In the event of a termination by the consulting engineer of his professional services, unless such termination had been occasioned by the default or negligence of the consulting engineer, the consulting engineer shall be entitled to be paid the sums specified in sub-subparagraphs 5(1)(a) and (c) of this Part less the amount of payments previously made to the consulting engineer.

7. PAYMENT ON TIME BASIS

- (1) Payment on a time basis (i.e. salary cost times a multiplier) shall only be allowed in respect of the time spent by partners, directors, consultants and technical supporting staff.
- (2) The consulting engineer shall not be entitled to any payment in respect of time spent by secretarial staff engaged on general accountancy or administration duties in the consulting engineer's office.

(3) Time spent by the consulting engineer's partners, directors, consultants and technical supporting staff in travelling in connection with additional professional services shall be chargeable.

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> DATO' IR. HAJI OMAR BIN IBRAHIM, President, Board of Engineers Malaysia

Approved 24 June 1997. [KKR/U/26/1; PN. (PU²) 47/VI.]

> DATO' SERI S. SAMY VELLU, Minister of Works