

SUMMARY OF TENDER

CADANGAN MENDIRIKAN SEBUAH HAB KOMUNITI YANG MENGANDUNGI:-

- i) 1 BLOK HAB KOMUNITI BERSERTA KEMUDAHAN 2 TINGKAT
- ii) 1 UNIT PONDOK PENGAWAL
- iii) 1 UNIT RUMAH SAMPAH BERSERTA RUANG KITAR SEMULA
- iv) 1 UNIT RUMAH PAM
- v) 1 UNIT PENCAWANG PADAT

DI ATAS LOT 66832, JALAN INDAH 5/8, TAMAN BUKIT INDAH, MUKIM PULAI, DAERAH JOHOR
BAHRU, JOHOR DARUL TA'ZIM UNTUK MAJLIS BANDARAYA ISKANDAR PUTERI

FINAL SUMMARY

Bil.	Description	From page No.	Amount (RM)
1.0	PRELIMINARIES AND GENERALLY	B1/54	
2.0	PILING WORKS	B2/S	
3.0	<u>BUILDING WORKS</u>		
	3.1 BLOK HAB KOMUNITI	B3.1/S	
	3.2 PONDOK PENGAWAL	B3.2/S	
	3.3 RUMAH SAMPAH	B3.3/S	
	3.4 RUMAH PAM	B3.4/S	
4.0	MECHANICAL & ELECTRICAL WORKS	B4/S	
5.0	EXTERNAL WORKS	B5/S	
6.0	LANDSCAPING WORKS	B6/S	
7.0	PROVISIONAL SUM	B7/S	1,490,000.00
<u>COMPLETION PERIOD</u> Based on the execution and completion of the Works described hereunder this Tender within a fixed completion period of _____ () Months from the date of commencement of works (CARRIED TO FORM OF TENDER)			

Signature :

Witness's Signature :

Official Stamp :

Official Stamp :

Date :

Date :

BILL NO. 1 – PRELIMINARIES AND GENERALLY

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>PRELIMINARY ITEMS & GENERALLY</u></p> <p>The Preliminary items as set out hereunder are deemed to apply to the whole of the Works all as shown on the Drawings and/or as described in this Bills of Quantities and the Contractor shall allow for complying with the same and for any cost in connection therewith.</p>	
b.	<p><u>DEFINITIONS</u></p> <p>“Employer” Shall mean Majlis Bandaraya Iskandar Puteri Jalan Medini Sentral 9, Bandar Medini Iskandar, 79250 Iskandar Puteri, Johor Darul Ta'zim.</p> <p>“Contractor” Shall mean The person or persons, firm or company referred to as such in the Form of Agreement and shall include his or its heirs, personal representatives, successors and permitted assigns.</p> <p>“Superintending Officer (SO)” Shall mean Datuk Bandar Majlis Bandaraya Iskandar Puteri Jalan Medini Sentral 9, Bandar Medini Iskandar, 79250 Iskandar Puteri, Johor Darul Ta'zim.</p> <p>“Architect” Shall mean Messrs ERA 3 ARCHITECTS SDN. BHD. 15-01, Jalan Padi Emas 3/2, Bandar Baru Uda, 81200 Johor Bahru, Johor Darul Ta'zim Tel : +607 - 2371824 Fax : +607 - 2364884</p> <p>“Civil & Structural Engineer” Shall mean Messrs IRFA CONSULAT SDN BHD No. 18-02, Jalan Perjiranan 2, Bandar Dato' Onn, 81100, Johor Bahru, Johor Darul Ta'zim Tel : +607 - 3517313 Fax : -</p> <p>“Mechanical & Electrical Engineer” Shall mean Messrs PERUNDING INFINITI No. 66-01, Jalan Putra 1, Taman Sri Putra, 81200 Johor Bahru, Johor Darul Ta'zim Tel : +607 - 5952456 Fax : +607 - 5506542</p> <p>“Quantity Surveyor” Shall mean Messrs EZ QS CONSULT No. 7, Jalan Sejahtera 11, Taman Desa Skudai, 81300 Skudai, Johor Darul Ta'zim Tel : +607-5953657 Fax : +607-5953765</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>DEFINITION</u> (Cont'd)</p> <p>“Works” Shall mean the works to be executed in accordance with the Contract</p> <p>“Contract” Shall mean the Agreement executed between the Employer and the Contractor together with the documents forming part thereof</p> <p>“Month” Shall mean calendar month</p> <p>“Approved”, “Selected” “Directed” Shall mean to be approved, selected or directed by the Superintending Officer (SO)</p> <p> The term “Architect” whenever used shall be taken also to read as “Superintending Officer (SO)”</p> <p>“As Described” The words “As Described” in the General Specification and/or Bills of Quantities</p> <p>a. <u>METHOD OF BILLING</u></p> <p>The Contractor’s attention is drawn towards the fact that these Bills of Quantities have been written in an <u>ELEMENTAL FORM</u> i.e. the items are grouped under Elements and within each Element, the items have been set out, as far as possible in Trade Order.</p> <p>b. <u>ABBREVIATIONS</u></p> <p>The following abbreviations where used in the Specification shall read in full (as given in brackets) as follows :-</p> <p>M.S. : Malaysian Standards published by the Scientific And Industrial Research Institute of Malaysia (SIRIM).</p> <p>B.S. : British Standard Specification as issued by the British Standards House, London. The latest issue published is implied in all cases used.</p> <p>C.P. : British Standard Code of Practice issued by the Council of Code of Practice in Britain. The latest issue published is implied in all cases used.</p> <p>P.K.K. : Pusat Khidmat Kontraktor.</p> <p>L.P.I.P.M. : Lembaga Pembangunan Industri Pembinaan Malaysia</p> <p>J.K.R. : Jabatan Kerja Raya.</p> <p>P.W.D. : Public Works Department.</p> <p>MBIP : Majlis Bandaraya Iskandar Puteri</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>ABBREVIATIONS (Cont'd)</u></p> <p>The following abbreviations where used in the Specification shall read in full (as given in brackets) as follows :-</p> <p>M : Linear Metre</p> <p>M2 : Square Metre</p> <p>M3 : Cubic Metre</p> <p>MM : Millemetre</p> <p>No : Number</p> <p>Prs : Pairs</p> <p>Kg : Kilogram</p> <p>Tonne : Metric Tonne</p> <p>b. <u>METRICATION</u></p> <p>The quantities and the dimensions represented in this Bills of Quantities are in Metric and whenever any imperial dimension appears herein shall comply to nearest metric equivalent. The Contractor shall forthwith give notice to the Superintending Officer/Architect in the event that any materials cannot be procured in the Metric size given. Under no circumstances will the Contractor will be allowed to replaced any material, with imperial equivalent until the Superintending Officer's/Architect's approval is first obtained.</p> <p>As soon as practicable after the receipt of any such notice under the proceeding sub-clause the Superintending Officer/Architect shall given an order to the Contractor which shall either :</p> <p>i) Direct the Contractor to supply the materials to the dimensions stated in his said notice to the procurable instead of the dimensions described in the Contract or originally ordered by the Superintending Officer/Architect,</p> <p>or</p> <p>ii) Direct the Contractor to make some other variation whereby the need to supply such materials to the dimensions described in the Contract or originally ordered by the Superintending Officer/Architect will be avoided.</p> <p>The Contractor shall note that any extra costs, expense and time involved in pursuant to this clause shall be borne solely by the Contractor. The provisions of this clause shall apply irrespective of whether the materials in question are to be supplied in accordance with the Contract directly by the Contractor or indirectly by a Nominated Sub-Contractor or Nominated Supplier.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>SCOPE AND GENERAL DESCRIPTION OF WORKS</u></p> <p>The works covered by this contract comprises the construction and completion of the following :-</p> <ul style="list-style-type: none"> i) The building works <ul style="list-style-type: none"> a) Building Works <ul style="list-style-type: none"> i) Blok hab komuniti berserta kemudahan 2 tingkat ii) Pondok pengawal iii) Rumah sampah berserta ruang kitar semula iv) Rumah pam v) Pencawang padat b) Mechanical & Electrical Works <p>The internal and external finishes and the fittings for the building works shall be as indicated in the attached schedule of finishes, schedule of sanitary wares and fittings and schedule of ironmongeries.</p> ii) The external infrastructure works comprising of :- <ul style="list-style-type: none"> a) External Works b) Landscaping Works <p>The Contractor shall take every precaution to protect the existing completed works during the progress of his own works. No claim by the contractor for additional costs and expense and extension of time arising out of his neglect of this Clause will be entertained.</p> <p><u>WORK TO BE EXECUTED TO ENTIRE SATISFACTION OF SUPERINTENDING OFFICER</u></p> <p>All works shall be executed to the entire satisfaction of the Superintending Officer.</p> <p><u>SITE</u></p> <p>The site of the proposed works is at di atas Lot 66832, Jalan Indah 5/8, Taman Bukit Indah, Johor Bahru, Johor as shown in the "Pelan Lokasi Dan Pelan Kunci" which forms one of the Tender Table Drawings.</p> <p>The Contractor shall be deemed to have visited the site of the Work and thoroughly acquainted himself with the location, facilities of access, type of soil and materials to be excavated, levels and variations of the strata therein, the requirement of any the extent, levels and quantity of water to be dealt with, local conditions as to supply of labour, materials, services, existing neighboring structure and other site conditions which may effect their tenders. No claim will be allowed on the grounds of ignorance of the conditions under which the works will be executed.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>WORKING WITH OTHER CONTRACTORS</u></p> <p>The Contractor has to share the site with other Contractors engaged by the Employer and shall exercise due care in carrying out his work without causing inconvenience to others. He shall also co-operate with other Contractors employed by the Employer including sharing of common access, etc and agreeing on work program so that the progress of his work or other Contractor's are not adversely hindered. No claims will be considered on grounds of hindrance/obstruction experienced due to the presence of other Contractors being employed or ground the site.</p> <p>The Contractor shall allow for his share of the cost of maintenance of drainage system and all roads, tracks used by him for access to and from the site. The cost of maintenance of the drainage system and the common accesses shall be borne by all Contractors using them and the right is reserved to the Superintending Officer to apportion such costs at his sole discretion and judgment. The Contractors share of the cost of maintenance of the drainage system and accesses shall be deducted from his progress payment or from any sums that may become due to him under this Contract.</p> <p><u>TENDER TABLE DOCUMENTS</u></p> <p>Tender Table Documents, which include the Form of Tender, Form of Contract, Bills of Quantities and principal drawings, may be inspected at the offices of the Majlis Bandaraya Iskandar Puteri, Jalan Medini Sentral 9, Bandar Medini Iskandar, 79250 Iskandar Puteri, Johor Darul Ta'zim during normal working hours or any working day up till the time appointed for receiving tenders.</p>	
	TO COLLECTION	-

ITEM	DESCRIPTION	AMOUNT
<p>a. <u>ORDER OF WORKS</u></p> <p>The Contractor shall carry out the works in such order as the Superintending Officer may direct.</p> <p>The Contractor shall not be entitled to claim any expenses if the Superintending Officer may direct to reorganize his work force so as to complete the project within the contract period.</p> <p>b. <u>PREPARATION AND SUBMISSION OF TENDER</u></p> <p>Each tenderer will be provided with one (1) copy of each of the following for the purpose of submission of his tender :-</p> <ul style="list-style-type: none"> i) Form of Tender (bound together with the Bills of Quantities), ii) Bills of Quantities iii) Drawings and Specification <p>The completed, signed and witnessed Tender Form together with the Bills of Quantities fully priced, signed and witnessed shall be delivered in sealed envelope within the time, specified in the published tender notice or as advised in the invitation to tender. Both the Tender Form and Bills of Quantities shall be filled in ink. Tender submitted not accompanied by a priced Bills of Quantities are liable to be disqualified.</p> <p>The Contractor is advised to examine the drawings and other tender documents and make himself thoroughly acquainted with all relevant details as no claims due to lack of acknowledge of detail will be entertained.</p> <p>The priced Bills of Quantities of any Contractor whose tender is being considered for acceptance will be checked for arithmetical errors in extensions, casts, etc and his rates will be scrutinized by the Quantity Surveyors who will submit a report to the Employer before any tender is accepted. An adverse report may affect the Employer's decision in awarding the Contract. Tenderers are therefore urged to ensure that all extensions and casts are efficiently checked and that the rates are fair and consistent.</p> <p>The Employer does not bind himself to accept the lowest or any tender and in no case will any expense incurred by the Contractors in the preparation to their tenders be allowed.</p> <p>c. <u>BILLS OF QUANTITIES</u></p> <p>This Bills of Quantities have been measured in accordance with the general principles of the "Standard Method of Measurement of Building Works for use in Malaysia" (Metric Edition) published by the Institution of Surveyor's (Malaysia). Where the express provision of the Standard Method of Measurement have been departed from, the method of measurement used in these Bills of Quantities shall be adhered to for the purpose as ascertaining the value of all variations or remeasurement. Any departure from the basis of measurement as defined by the Standard Method of Measurement will in no way vitiate this Contract.</p>		
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>BILLS OF QUANTITIES</u> (Cont'd)</p> <p>The rate set down by the Contractor against each item in these Bills of Quantities, unless expressly provided to the contrary, shall be held to include for the provision of all labour, materials, conveyance and delivery, unloading, storing, cutting and waste on materials, hoisting, setting and fixing in position, return of packings, use of all tools, plant and machinery, all duties and taxes where applicable, established charges and profit and all other labour and everything else necessary for the due and proper completion of each item. The amount of the Tender shall truly represent the total sum of all times in the Bills of Quantities. All the works described in the Bills of Quantities are to be taken as new (unless otherwise distinctly stated).</p> <p>All quantities in these Bills are taken absolutely nett and are firm except where described as "Provisional" only Provisional Quantities and Variations will be measured and valued in accordance with the Conditions of the Contract. The Employer will not be liable for any cost incurred by the Contractor in connection with the measurement of additional works, etc., extra or omissions and variations from the Contract or in the adjustment and settlement of accounts.</p> <p>Provisional Quantities and Sums shall be used as directed by the Superintending Officer and deducted wholly or in part if not required. The Employer shall reserve the right to amend any rates, which are found unreasonable with the concurrence of the Contractor and the amended rates shall be used for measuring of variations.</p> <p>The Contractor shall not make any alteration to the text of the Bills of Quantities. If any alteration, addition or note is made by him, such alteration, addition or note will not be recognized and the text of the Bills of Quantities as originally prepared will be strictly adhered to.</p> <p>Each item in the Bills of Quantities shall be individually priced. Bulk prices for section, trade or groups of items will not be accepted.</p> <p>Where any clause or items in these Bills of Quantities is not priced, it shall be deemed that the cost of such clause or item has been allowed elsewhere within these Bills of Quantities. No subsequent claims against such item or clause will be considered.</p> <p>The Contractor is requested to check the number of each page in the Bills of Quantities and if any is missing or duplicated or if any figure or description is indistinct he is to notify at once the Quantity Surveyor who will rectify the matter. No claims for loss consequent upon the Contractor's failure to observe this clause will be considered.</p> <p>Any error or omission in the rates and calculations of the Contractor in the Bills of Quantities submitted by him shall, before the signing hereof, be so rectified and adjusted that when correctly calculated, the total amount shall represent the same amount as that entered by the Contractor on the Form of Tender.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>BILLS OF QUANTITIES</u> (Cont'd)</p> <p>The nett aggregate amount of errors is moneying-out items in the Bills of Quantities, whether a nett deduction or a nett addition, will be calculated as a percentage of the corrected total of the Bills of Quantities and all unit rates throughout the Bills of Quantities shall be subjected to such percentage adjustment. Provided always that Provisional or Prime Cost Sums shall be excluded from the calculation and shall not be subjected to such percentage adjustment.</p> <p>Whenever the term "Allow" is used in these Bills of Quantities, the item so designated shall be at the Contractor's sole risk.</p> <p>The amount appearing as the total of the General Summary at the end of these Bills and marked "Carried to Form of Tender" shall be transferred to the Tender Form without any alteration or rounding off.</p> <p>a. <u>DRAWING</u></p> <p>The drawing as listed at the end of this document have been used in the preparation of these Bills of Quantities and may be inspected at the office of the Quantity Surveyor during normal office hours on any working day up till the time appointed for receiving tender.</p> <p>The drawing used in the preparation of these Bills of Quantities shall not be taken as final and are not to be considered as limiting or extending the amount of work to be executed our materials to be supplied from time to time as construction progresses or as the Contractor request after giving notice in adequate the (minimum two (2) weeks in advance) to the Superintending Officer the scope or extent of the works or materials to be supplied are to be ascertained from the construction drawings.</p> <p>The Contractor shall be deemed to have examined the drawings prior to submission of tenders, no claim for extras consequent upon non examination of drawings will be considered.</p> <p>Upon award the contract and from time to time thereafter the contractor shall submit to the Superintending Officer a schedule of "Request for Information" starting the information required and the date such information is due. Provided that any 'Request For Information' shall have been given to the Superintending Officer at least two (2) weeks before such information is due.</p> <p>b. <u>DISCREPANCIES IN DRAWINGS</u></p> <p>The contractor shall be responsible for checking all drawings issued to him and if he finds discrepancies in the Drawings (including discrepancies between the Architectural and other Consultant Drawings) he shall, before proceeding with the Works, inform the Superintending Officer of such discrepancies and the Superintending Officer's ruling shall be taken as final.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>DISCREPANCIES IN DRAWINGS</u> (Cont'd)</p> <p>Before commencing work on any position of the works, the Contractor shall check all details and dimension shown in the construction drawing sufficiently well ahead of physical construction and in the event of any discrepancy, shall be immediately notify the Superintending Officer and obtain the necessary construction on the correct details and dimension to be followed.</p> <p>Figured dimensions on the drawings shall be followed in all cases. Where dimensions are omitted or in doubt, the Contractor shall seek the advice of the Superintending Officer.</p> <p>No claim by the contractor for any extra costs and time lost result of discrepancies in drawings will be entertained if he fails to inform the Superintending Officer of such discrepancy before proceeding with the works.</p> <p>a. <u>FORM OF CONTRACT</u></p> <ul style="list-style-type: none"> i) The Form of Contract to be used shall be the 'Standard Form of Contract to be used Where Bills of Quantities Form Part of The Contract PWD 203A - (Rev 2010) with addendums. ii) This is a firm price contract with no exemption for prices of cement, steel, aggregates, sand, bricks, timbers, glass, ceiling materials, roofing materials, steel and metal sections, plumbing materials, floor and wall tiles, sanitary fittings, ironmongery and paint hereinafter specified. iii) The Conditions of Contract shall be read conjointly with the Bills of Quantities. A copy of the Standard Form of Contract is available for inspection in the Tender Table Document previously mentioned. iv) The tenderer shall refer to the full documents of the Standard Form of Contractor for full information. v) The clause numbers and titles of the Conditions of Contract, together with any amendments, additional conditions, information etc are given below. The tenderer shall allow here or in his prices for expenses involved in complying with these Conditions. <p>b. <u>SCHEDULE OF CONTRACT CONDITIONS</u></p> <p><u>Clause No</u></p> <ul style="list-style-type: none"> 1 <u>Definitions and Interpretation</u> 2 <u>Contract Period</u> 3 <u>The of Superintending Officer and Superintending Officer's Representatives</u> 4 <u>Superintending Officer's Right To Take Action</u> 5 <u>S.O.'S Instructions</u> 	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SCHEDULE OF CONTRACT CONDITIONS (Cont'd)</u></p> <p><u>Clause No</u> (Cont'd)</p> <p>6 <u>Scope of Contract</u></p> <p>7 <u>Contract Sum</u></p> <p>8 <u>Contract Documents</u></p> <p>9 <u>Representations, Warranties and Undertakings of the Contractor</u></p> <p>10 <u>Obligations Of The Contractor</u></p> <p>11 <u>Inspection Of Site</u></p> <p>12 <u>Programme Of Work</u></p> <p>13 <u>Performance Bond/ Performance Guarantee Sum</u></p> <p> (a) The Contractor shall as a Conditions precedent to the commencement of any work under this Contract, deposit with the Employer a Performance Bond in the form of an approved Banker's Guarantee equal to five percent of the Contract Sum for the due observance and performance of this Contract.</p> <p> (b) The Performance Bond shall be held or shall remain valid and affective for such period as is provided in the approved Banker's Guarantee</p> <p> (c) If the Contractor fails to execute the Contract or commits any breach of his obligations under the Contract, the Employer or the Superintending Officer on its behalf may utilize and make payment out of or deductions from the said Performance Bond or any part thereof in accordance with the terms of this Contract.</p> <p> (d) The Performance Bond (or any balance thereof remaining for the credit of the Contractor) may be released or refunded to the Contractor on issuance of the Certificate of Practical Completion.</p> <p>14 <u>Indemnity In Respect Of Personal Injuries And Damage To Property</u></p> <p>15 <u>Insurance Against Personal Injuries And Damage To Property</u></p> <p> Shall be taken up by the Contractor.</p> <p>16 <u>Indemnities To Government in Respect Of Claims by Workmen</u></p> <p> Shall be taken up by the Contractor.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SCHEDULE OF CONTRACT CONDITIONS (Cont'd)</u></p> <p><u>Clause No</u> (Cont'd)</p> <p>17 <u>Employees` Social Security ACT,1969</u></p> <p> (a) Notwithstanding anything to the contrary contained elsewhere in the Contract Documents, the Contractor shall cause all Sub-Contractors whether nominated or otherwise to comply with the requirements of the Employees Social Security Act, 1969 as described under Clause 35 of the Conditions of Contract. The Contractor shall be responsible to submit to the Superintending Officer whether demanded or not, the Employer's Code Numbers of the Sub-Contractors and Social Security Numbers, or copies of Form 2 or Form 3 if the Social Security Numbers are not yet available of all 'employees' employed by them.</p> <p>18 <u>Insurance Of Works</u></p> <p>19 <u>Setting Out</u></p> <p> (a) As-Built drawing for Earthwork platform level shall be given to the Contractor on Site Possession date. However, immediately after taking possession of the Site and before commencing work, the Contractor shall employ a licensed land surveyor to check the actual levels and dimension against those shown on the drawings and in the event of any discrepancy the contractor shall immediately notify the Superintending Officer within 14 (fourteen) days. The Contractor shall be responsible for and shall entirely at his own cost amend any errors arising from his own inaccurate setting out.</p> <p> (b) Where existing levels are relevant to the measurement of any part of the Works, the Contractor shall take and record such levels before such part of the Works is commenced. The taking and recording of such levels shall be carried out under the direction and in the presence of the Superintending Officer's Representative. Two copies of the recorded levels when checked and signed by the Superintending Officer's Representative and by the Contractor shall be supplied to the Superintending Officer's Representative and shall be used as a basis of measurement for payment.</p> <p> (c) The Contractor shall allow here for a check survey on Practical Completion and for submitting to the Superintending Officer a certificate signed by the Licensed Land Surveyor stating that the Works are wholly within the titled boundaries.</p> <p> (d) The contractor shall prepare and supply "As-Built" Survey Drawing showing all proposed building and infrastructure, prepared by a licensed Land Surveyor.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SCHEDULE OF CONTRACT CONDITIONS (Cont'd)</u></p> <p><u>Clause No</u> (Cont'd)</p> <p>20 <u>Unfixed Materials And Goods</u></p> <p>21 <u>Compliance With The Law</u></p> <p>22 <u>Design</u></p> <p>22.1 If Contractor undertake the design of any part of the IBS components, he shall submit all drawings, specifications, calculations and any other information for S.O's approval.</p> <p>22.2 Contractor to price a Design Guarantee Bond for the said part of the works design by contractor amounting 5% of the said part of the Works and shall be issued by an approved licensed bank or financial institution.</p> <p>23 <u>Employment Of Workmen</u></p> <p>(a) (i) The Contractor shall maintain and furnish to the Superintending Officer a full list of all his workmen employed by sub-contractors or in connection with the works and giving particulars of each workman as required.</p> <p>(ii) A further copy of the particulars of the workmen above shall be kept and maintained at the Works site at all times for inspection.</p> <p>23.3 <u>Days And Hours Of Working</u></p> <p>(a) The Contractor shall not carry out any work outside the permissible working hours between 8.00am - 5.00pm except with the written permission of the Superintending Officer.</p> <p>23.4 <u>Wages Books And Time Sheets</u></p> <p>(a) The Contractor shall keep and shall cause his sub-contractors and Nominated Sub-Contractors to keep proper wage books and time sheets showing wages paid to and the time worked, for the performance of this Contract.</p> <p>24 <u>Variations</u></p> <p>25 <u>Valuation Of Variation</u></p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SCHEDULE OF CONTRACT CONDITIONS (Cont'd)</u></p> <p><u>Clause No</u> (Cont'd)</p> <p>26 <u>Bill Of Quantities</u></p> <p> (a) If the Superintending Officer has reason to believe that any quantity of work as stated in the Bills of Quantities has been inaccurately measured, he may order a remeasurement of the same to be carried out and with the agreement of the Contractor have the error rectified and the Contract Sum adjusted accordingly.</p> <p> (b) If the Contractor has reason to believe that any quantity of work as stated in the Bills of Quantities has been inaccurately measured, he shall furnish proof of the same to the Superintending Officer by way of detailed measurement certified Quantity Surveyor, in which event sub-clause (a) above shall apply.</p> <p>27 <u>Measurement Of Works</u></p> <p>28 <u>Payment To Contractor And Interim Certificates</u></p> <p> (a) The Contractor shall make application for progress payment for work done in accordance with the Contract at the intervals to be agreed between the Contractor and the Superintending Officer. All such application for progress payment shall be accompanied by detailed list of work done including detail measurements thereof and for materials delivered on site. The Employer shall not be responsible for any delay in payment if any application for progress payment is not properly substantiated with the requisite details and documents.</p> <p> (b) To facilitate approval of applications for progress payments the Contractor shall submit to the Quantity Surveyor a copy of the delivery orders of all material delivered to site so as to enable the Quantity Surveyor to check and verify the material supplied.</p> <p> (c) The Superintending Officer may by any certificate make any correction or modification of any previous certificate, which shall have been issued by him and the Superintending Officer shall have power to withhold any certificate if the works or any part thereof are not being carried out to his satisfaction.</p> <p> (d) "Materials and goods" shall mean material and goods, which will be incorporated into the Works. Only 90% of the total value of all material and goods on site will be approved for progress payment.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SCHEDULE OF CONTRACT CONDITIONS (Cont'd)</u></p> <p><u>Clause No</u> (Cont'd)</p> <p>28 (e) Materials and goods placed off site shall not be payable unless with the permission and written approval of the Superintending Officer.</p> <p>(f) No interest will be paid by the Employer on any sums of money retained neither by him nor on any sums of money claimed by the Contractor on account of extra works for which the Consultants have not yet ascertained the amounts.</p> <p>Final Completion and the act of making final payment of the balance of the contract price shall in no way be interpreted as complete exoneration of the Contractor from any defects that may arise due to causes attributable to negligence of the Contractor or interior material or workmanship provided by him.</p> <p>29 <u>Adjustment Of Contract Sum</u></p> <p>30 <u>Fluctuation Of Price</u></p> <p>31 <u>Final Account And Payment Certificate</u></p> <p>32 <u>Effect Of S.O`S Certificates</u></p> <p>33 <u>Deduction From Money Due To Contractor</u></p> <p>34 <u>Prime Cost/Provisional Sums</u></p> <p>35 <u>Materials, Goods, And Workmanship</u></p> <p>(a) Materials and Workmanship are to be the best of their respective kinds and by 'best' shall be understood that no superior class of specified materials or workmanship is available in Malaysia.</p> <p>(b) (i) Materials and workmanship shall comply with the Malaysian Standard and/or British Standard and Codes of Practice wherever applicable and shall be approved by the Superintending Officer. The Contractor shall not alter or amend any of the description of materials in the Bills of Quantities and except where expressly provided to the contrary, <u>any offers of alternative materials will render the tender liable to disqualification</u>. Whenever in the Bills of Quantities any goods or materials are specified, such are to be considered as being the minimum standard acceptable.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SCHEDULE OF CONTRACT CONDITIONS (Cont'd)</u></p> <p><u>Clause No</u> (Cont'd)</p> <p>(b) (i) In the event of the Superintending Officer allowing the substitution of any of the materials during the course of the Contract, such substitution shall be accompanied by a corresponding deduction in cost unless the Superintending Officer otherwise directs.</p> <p>(ii) The Contractor shall, at his own cost and expenses, submit samples of materials and fittings for approval as and when required by the Superintending Officer. All samples, which are approved, shall be the measure of the standard to be maintained in the execution of works.</p> <p>(iii) The ironmongery and sanitary appliances as indicated in the Schedule of General Specifications and Schedule of Sanitary Ware and Fittings, respectively, shall be obtained from approved manufacturers. The Contractor shall submit together with his tender all relevant technical brochures and other data, of the ironmongery and sanitary appliances, which he proposed to use.</p> <p>The brand and model of ironmongery and sanitary appliances proposed by the Contractor to be used shall not be subsequently substituted without the prior written consent of the Superintending Officer allowing the substitution of any of the brand and/or model of the ironmongery and sanitary appliances proposed by the Contractor, such substitution shall be accompanied by a corresponding deduction in cost unless the Contractor can show to the satisfaction of the Superintending Officer that the brand and or/and model of ironmongery and sanitary appliances substituted cost less than the substitute.</p> <p>(c) (i) The Contractor shall place his orders for specified materials at the earliest possible date after notification of the acceptance of tender or at such times as may be specifically stated elsewhere herein for any particular materials.</p> <p>(ii) If the Contractor fails for any reason to supply any materials which he has contracted to supply or if he fails to supply any such materials in sufficient time to enable the Contract to be completed by the date fixed for completion, then in either event the Employer may supply any portion of all such materials. If the Employer supplies such materials, then the cost in respect thereof which shall be borne by the Contractor shall be :</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SCHEDULE OF CONTRACT CONDITIONS (Cont'd)</u></p> <p><u>Clause No</u> (Cont'd)</p> <p>35 <u>Materials And Workmanship</u> (Cont'd)</p> <p>(c) (ii) EITHER The current market rates</p> <p>OR The actual cost to the Employer at the date of supply, plus 15% for overheads and other charges,</p> <p>WHICHEVER IS THE GREATER</p> <p>(iv) The cost to be borne by the Contractor as detailed above shall be deducted from any money due or to become due to the Contractor under this Contract and the Contract Sum shall be adjusted accordingly; provided that any variation order issued by virtue of this clause shall not be taken into account when computing the final amount of this Contract and no claim for loss of profit under Clause 44 of the Conditions of Contract shall be deemed to have arisen. No action by the Superintending Officer under this Clause shall be deemed in any way to affect or modify the right of the Employer to claim for damages in the event of the Contractor's failure to complete the Works by the date fixed for completion.</p> <p>(d) The Contractor's attention is also drawn to the provision that the importation of mild steel bars is subject to Customs Prohibitive Order (Import). Approval of import licenses from the Ministry of Commerce and Industry must be obtained before placing orders with overseas manufacturers and the Contractor shall be solely responsible for complying with this procedure.</p> <p>36 <u>Inspection And Testing Of Materials, Goods And Equipment</u></p> <p>The Contractor shall provide and bear all the incurred cost for officer to visit the assembly / manufacturing plant as per request by the Clients.</p> <p>37 <u>Contructional Plant, Equipment,Vehicles And Machineries</u></p> <p>38 <u>Possession Of Site</u></p> <p>39 <u>Completion Of Works</u></p> <p>40 <u>Damages For Non-Completion</u></p> <p>41 <u>Sectional Completion</u></p> <p>42 <u>Partial Occupation/ Taking Over By Government</u></p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SCHEDULE OF CONTRACT CONDITIONS (Cont'd)</u></p> <p><u>Clause No</u> (Cont'd)</p> <p>43 <u>Delay And Extension Of Time</u></p> <p>44 <u>Claims For Loss And Expense</u></p> <p>45 <u>Investigation by The Government And Other Persons In Case Of Accident, Failure Or Other Event</u></p> <p>46 <u>Access For Works,etc.</u></p> <p>47 <u>Sub-Contract Or Assignment</u></p> <p>48 <u>Defects After Completion</u></p> <p>49 <u>Unfulfilled Obligation</u></p> <p>50 <u>Suspension Of Works</u></p> <p>51 <u>Events And Consequences Of Default By The Contractor</u></p> <p>52 <u>Termination On National Interest</u></p> <p>53 <u>Termination On Corruption</u></p> <p>54 <u>Payments Upon Termination</u></p> <p>55 <u>Events and consequences of default by the Government</u></p> <p>56 <u>Certificate Of Termination Costs</u></p> <p>57 <u>Surviving Rights</u></p> <p>58 <u>Effect Of Force Majeure</u></p> <p>59 <u>Site Agents And Assistants</u></p> <p>Unless otherwise provided elsewhere in this Contract, the Contractor shall keep constantly on the Site a competent, efficient, suitability qualified with five (5) years working experience works and be a qualified member of the professional group (viz. Engineer, Architect or Quantity Surveyor) having a comprehensively theoretical background, suitable qualification minima is Diploma or Degree. He must capable of receiving instructions in English and/or Bahasa Malaysia and in default it shall be the responsibility of the Contractor to provide replacement for them and all wages and other expenses in connection with the employment of such replacement site agent and assistants. Any directions, explanations or instructions given to such site agent by the S.O. shall be deemed to have been given to the Contractor under this Contract.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SCHEDULE OF CONTRACT CONDITIONS (Cont'd)</u></p> <p><u>Clause No</u> (Cont'd)</p> <p>60 <u>Nominated Sub-Contractors And/Or Nominated Suppliers</u></p> <p>61 <u>Payment To Nominated Sub-Contractor Or Supplier</u></p> <p>62 <u>No Liability Of Government To Nominated And/Or Sub-Contractor Or Supplier</u></p> <p>63 <u>Responsibilities Of Contractor To Nominated And/Or Sub-Contractors Or Suppliers</u></p> <p> (a) The Contractor shall be fully responsible for all sub-contractor for any delays or damage thereby occasioned and shall be responsible for the supervision and administration of all sub-contractors in accordance with the Conditions of Contract and shall be required to schedule the execution of the Work with each of the Nominated Sub-Contractors. The schedules shall be subject to the approval of the Superintending Officer.</p> <p> (b) The Contractor is to price where indicated later in the Bills of Quantities for the following attendance and facilities upon Nominated Sub-Contractors in the execution of Sub-Contract Works:</p> <p> (i) Ascertaining for Nominated Sub-Contractors all particulars relating to their work in regard to sites and positions in which chases, holes, mortices etc are required to be formed or left. The Contractor shall be responsible for any additional cost incurred as a result of any omission on his part in this respect;</p> <p> (ii) Making good of wall, ceiling, floors, roofs etc and finishes thereto including touching up of all paint work necessitated, damaged or disturbed by the Nominated Sub-Contractor's work;</p> <p> (iii) Supplying all setting out information;</p> <p> (iv) Giving all necessary dimensions and taking responsibility for their accuracy;</p> <p> (v) Affording free and full use of standing scaffolding hoisting it remains erected on the Site;</p> <p> (vi) Affording free and full use of storage accommodation for materials, equipment and plant, which are for incorporation into the Works and require protection against weather and deterioration, mess rooms, sanitary accommodation and welfare facilities;</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SCHEDULE OF CONTRACT CONDITIONS (Cont'd)</u></p> <p><u>Clause No</u> (Cont'd)</p> <p>(b) (vii) Providing SITE SPACE ONLY for Nominated Sub-Contractor's temporary office, workshops, workmen's accommodation and storage of materials, tools, plant and equipment which are not for incorporation into the Works and not requiring protection against weather or deterioration.</p> <p>(viii) Providing temporary water supply, electric power supply, artificial lighting and paying all fees and charges for fuel, water and electricity consumed;</p> <p>(ix) Liasing with the relevant supply/service authorities for the expeditious installation of the connections for permanent water and electricity supplies in the Works and making such supplies readily available to the Nominated Sub-Contractors. Paying on behalf of the Employer, all fees and charges including deposits for such installation and for water and electricity consumed by the Nominated Sub-Contractor for the test running and commissioning of Sub-Contract Works;</p> <p>(x) Providing competent personnel in compliance with the Electrical Inspectorate Regulations 1984 to take responsibility for the operation of electrical installation from the time the permanent electricity supply is made available until testing, commissioning and handing over of the works;</p> <p>(xi) Protecting, covering, watching and taking full responsibility for all Nominated Sub-Contractor's work and unfixed materials and good intended for use thereon;</p> <p>(xii) Removing rubbish and debris off the Site and cleaning the Works internally and externally.</p> <p>(c) The under mentioned items fall within the ambit of the Nominated Sub-Contractor and he shall includes in the Sub-Contractor Sum, inter alia, the costs in connection with the same:-</p> <p>(i) Unloading, getting in, storing and all handling and hoisting of his materials, plant and tools into required positions;</p> <p>(ii) Providing, erecting, maintaining and removing of all his temporary office, workshops and workmen's accommodation including paying all assessment and other charges;</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SCHEDULE OF CONTRACT CONDITIONS (Cont'd)</u></p> <p><u>Clause No</u> (Cont'd)</p> <p>(c) (iii) Connecting to temporary water and power supplies made available by the Contractor for the execution of the Works, supplying and running distribution pipes, hoses, cable, leads, electrical gear etc but EXCLUDING payment for water and electricity consumed;</p> <p>(iv) Provision of fuel, gas, steam, oil, lubricants, chemicals and everything else necessary (other than water and electricity) for the test running and commissioning of the Sub-Contract Works;</p> <p>(v) Any scaffolding, staging etc those are required for the Sub-Contract Works not covered by paragraph (b) (v) above;</p> <p>(v) Any scaffolding, staging etc those are required for the Sub-Contract Works not covered by paragraph (b) (v) above;</p> <p>(vi) Taking full responsibility for any loss or damage to his plant, tools, equipment and other property not for use or incorporation in the Sub-Contract Work.</p> <p>(d) Where attendance additional to that described above is required in connection with any Sub-Contract Work contained in the Bills of Quantities, such is to be separately priced where indicated.</p> <p>(e) The words "FIX ONLY", where used in the Bills in connection with any materials or goods supplied by Nominated Suppliers shall be understood to include :-</p> <p>(i) Taking delivery;</p> <p>(ii) Unloading, getting in, storing and protecting;</p> <p>(iii) Taking from store and placing in position including all hoisting etc required;</p> <p>(iv) Assembling and fixing;</p> <p>(v) Returning all chargeable packing, carriage paid and recovering all appropriate credits.</p> <p>64 <u>Intellectual Property Rights</u></p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SCHEDULE OF CONTRACT CONDITIONS (Cont'd)</u></p> <p><u>Clause No</u> (Cont'd)</p> <p>65 <u>Antiquities</u></p> <p> (a) The Contractor shall take reasonable precautions to prevent his workmen or any other persons from removing or damaging fossils, antiquities and other objects of interest discovered on the Site of the Works prior to the Superintending Officer's instruction as to their disposal.</p> <p>66 <u>Arbitration</u></p> <p>67 <u>Notice,etc.</u></p> <p>68 <u>Safety at the site</u></p> <p>69 <u>Advance Payment</u></p> <p>70 <u>Amendment</u></p> <p>71 <u>Confidentiality</u></p> <p>72 <u>Stamp Duty</u></p> <p>73 <u>Severability</u></p> <p>74 <u>Waiver</u></p> <p>75 <u>Laws Applicable</u></p> <p>76 <u>Successors Bound</u></p> <p>77 <u>Epidemics And Medical Attendance</u></p> <p>78 <u>Technology Transfer</u></p> <p>79 <u>General Duties And Performance Standard</u></p> <p>80 <u>Restriction And Procedure On Use Of Imported Material And Goods</u></p> <p>81 <u>Time</u></p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>APPENDIX TO CONTRACT CONDITIONS</u></p> <p>The Appendix to the Conditions of Contract shall be completed as follows:-</p> <p><u>Clause No</u></p> <p>4.1 (a) <u>Officer(s) empowered to take action on behalf of MBIP in respect of Clauses 40, 43,</u> Datuk Bandar Majlis Bandaraya Iskandar Puteri</p> <p><u>Officer(s) empowered to take action on behalf of MBIP in respect of Clauses 51, 52, 53, 57 and 65</u> Datuk Bandar Majlis Bandaraya Iskandar Puteri</p> <p>4.1 (b) <u>Officer Empowered to Approve Variations According to the Limits as Set Out In Treasury's Instruction no. 202 As Amended.</u> If the Contract Sum not more than RM10million and the total of variation propose not exceeding 10% of the original Contract Sum is more than RM10million and the the total of variation propose not exceeding RM1.0milion - A committee chaired by the S.O named in the Contract</p> <p>If the Contract Sum not more than RM20million and the total of variation propose not exceeding 20% of the original Contract Sum is more than RM20million and the the total of variation propose not exceeding RM4.0milion - Lembaga Perolehan MBIP</p> <p><u>Others</u> - Ketua Setiausaha Perbendaharaan or Pegawai Kewangan Negeri (Whichevever applicable)</p> <p>11(d) <u>Date of Tender</u> As stipulated in the Tender Notice.</p> <p>13 <u>Amount Of Guarantee For Performance Bond</u> For the due observance and performance of this contract, the contractor may option for performance bond in the form of performance gurantee sum in lieu in cash, Tresury's Deposit, Banker Draft or Banker's as stipulated under clause 13 of condition of contract. If the contractor opts for performance bond in the form of performance guarantee sum, the relavant clause under this condition of contract shall be deem and agreed to have been amended as follow:</p> <p> a) Delete the word "or Insurance Guarantee" in the second line clause 13.2</p> <p><u>RM (5% of Contract Sum)</u> Policy No : To be inserted Period of Insurance : Contract Period + Defect Liability Period + 3 Months + 14 Days</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>APPENDIX TO CONTRACT CONDITIONS</u> (Cont'd)</p> <p><u>Clause No</u> (Cont'd)</p> <p>15 <u>Minimum insurance cover for any one accident for series of accidents arising out of one event</u> - Policy No : To be inserted Period of Insurance : Contract Period + Defect Liability Period + 3 Months + 14 Days</p> <p>15.1(b) <u>Amount of excess clause</u> Nil</p> <p>17 <u>SOCSSO Scheme Registration member</u> To be submitted by Contractor.</p> <p>18 <u>Amount To Be Added To Full Value Of Contract Sum As The Insured Sum</u> - RM (5% of Contract Sum) Policy No : To be inserted Period Contract Period + Defect Liability Period + 3 Months + 14 Days</p> <p>18(b) <u>Amount of Excess Clause</u> Not Applicable</p> <p>28.1 <u>Value Of Work To Be Executed Including Materials And Goods To Be Delivered Before First Interim Certificate Will Be Issued</u> Ringgit Malaysia : One Thousand Only (RM 1,000.00)</p> <p>28.2 <u>Value Of Work To Be Executed Including Materials And Goods To Be Delivered Before Each Subsequent Interim Certificate Will Be Issued</u> Ringgit Malaysia : One Thousand Only (RM 1,000.00)</p> <p>28.6 <u>Period Of Honouring Payment Certificate</u> Thirty (30) Days</p> <p>34.4 <u>Work covered by P.C. Sum for which the Contractor will be permitted to tender</u> Not applicable</p> <p>38.2 <u>'Date For Possession' Of The Site</u> To be inserted.</p> <p>39 <u>Date for Completion for The Whole of Works</u> To be inserted.</p> <p>40 <u>Liquidated and Ascertaining Damages At The Rates Of :-</u> <u>Base Landing Rate</u> x Contract Sum 365 Days</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>APPENDIX TO CONTRACT CONDITIONS</u> (Cont'd)</p> <p><u>Clause No</u> (Cont'd)</p> <p>41 <u>Sectional Completion</u></p> <p>48.1 <u>Defects Liability Period (if not stated, then the period is Twelve (12) months)</u> Twelve (12) Months</p> <p>5.3, <u>Percentage of on-cost charges</u> 5.4, To be confirm later 15.3 17.3 8.2</p> <p>48.2, <u>Percentage of on-cost charges</u> 55.2 To be confirm later</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
<p>a. <u>SITE MEETING</u></p> <p>The Contractor and his representatives shall arrange and attend the site meetings arranged at fortnightly or at intervals as directed by the Superintending Officer. The Superintending Officer shall record the proceeding of these meetings and arrange for the making and distribution of copies of the minutes to all interested parties.</p> <p>b. <u>MATERIALS AND WORKMANSHIP</u></p> <p>Description of Materials and Workmanship in these Bills of Quantities shall be read in conjunction with the Preambles and Materials and Workmanship incorporated in these Bills of Quantities. Materials and Workmanship shall be the best of their respective kinds and by 'test' shall be understood that no superior class of specified materials of workmanship is available in Malaysia. A certificate of origin for any material shall be produced on the demand by the Superintending Officer.</p> <p>Materials and workmanship shall comply with the British Standards and Codes of Practice whenever applicable and shall be approved by the Superintending Officer. The Contractor is not to alter or amend any of the description of materials in these Bills of Quantities and except where expressly provided to the contrary, any offers of alternative materials will render the tender liable to disqualification. Wherever in these Bills of Quantities any goods or materials are specified such are to be considered as being the minimum standard acceptable.</p> <p>The letter B.S. refers to the British Standards Specifications as issued by the British Standards institution, British Standards House, London. The letters C.P. refer to the British Standards Code of Practice issued by the Council for Codes of Practice. The latest amendment is implied in each case.</p> <p>The term 'as described' shall mean as described in the Preambles and Materials and Workmanship with reference to schedules provided in this document. The terms 'Approved', 'Selected' and Directed shall mean approved, selected or directed by the Superintending Officer.</p> <p>Samples of materials and fittings and workmanship shall be submitted for approval as and when directed. All samples, which are approved shall indicate the standard to be maintained in the execution of the works.</p> <p>The Contractor shall provide and bear all the incurred cost for officer to visit the assembly / manufacturing plant as per request by the Clients.</p> <p>The Contractor shall place his orders for specified materials at the earliest possible date after notification of acceptance of tender or at such times as may be specifically stated elsewhere herein for any particular materials.</p> <p>The successful Contractor's attention is also drawn to the provision that the importation of mild steel bars is subject to Customs Prohibitive order (Import). Approval of import licenses from the Ministry of Commerce and Industry must be obtained before placing orders with overseas manufacturers and the Contractor shall be solely responsible for complying with this procedure.</p> <p>Figured dimensions are to be followed in preference to scaled dimensions and all dimensions and particulars are to be taken from the actual work where possible.</p>		
	TO COLLECTION	-

ITEM	DESCRIPTION	AMOUNT
	<p><u>MATERIALS AND WORKMANSHIP (Cont'd)</u></p> <p>The Contractor shall take note that the Bill of Quantities are not to be used as a basis for ordering any materials and there shall be no liability for any expenses incurred by the Contractor in connection with wrong items or abortive works which would have been apparent had the drawings and/or site measurements been checked.</p> <p>a. <u>SPECIALIST AND TRADEMEN'S WORK</u></p> <p>In the event of any specialist firm or firms being employed by employer, or by the Contractor, under the terms of this Contract the Contractor shall take full responsibility for any damage or delay which may be occasioned by them and shall hold Employer exempt from the consequences of anything that may eventuate in connection with their employment.</p> <p>The Contractor shall at all times attend upon other Tradesmen and make good any of his work which may become disturbed or damaged during the installation of other trades and leave in perfect condition to the satisfaction of the Superintending Officer.</p> <p>b. <u>STAMPING OF CONTRACT DOCUMENT INCLUDING SUB-CONTRACT DOCUMENTS</u></p> <p>The Main Contractor shall arrange for all Contract Documents to be stamped and shall bear all expenses in respect to the stamping of the said documents including Sub-Contract Document between him and all Sub-Contractors and Suppliers.</p> <p>c. <u>CLAIMS FOR PROGRESS PAYMENTS</u></p> <p>The Contractor shall submit priced detailed statements in support of his claims for progress payments and there shall be lodged with the Superintending Officer with copies to the Quantity Surveyor not later than seven days before the progress payments are due.</p> <p>Such detailed statement in support of the claims for progress payments shall include:-</p> <ul style="list-style-type: none"> i) The total value of work executed set out by trades or elements, and ii) The total value of materials delivered to site supported by delivered vouchers. In no consequences that premature materials on site be included in the claims. <p>d. <u>WORKING WITH OTHER CONTRACTORS</u></p> <p>The Contractor has to share the site with other Contractors engaged by the Employer and shall exercise due care in carrying out his work without causing inconvenience to others. He shall also co-operate with other Contractors employed by the Employer including sharing of common access, etc. and agreeing on work programmes so that the progress of his work or other Contractors are not adversely hindered. No claims will be considered on grounds of hindrance/obstruction experienced due to the presence of other Contractors being employed or around the site.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>WORKING WITH OTHER CONTRACTORS</u> (Cont'd)</p> <p>The Contractor shall allow for his share of the cost of maintenance of drainage system and all roads, tracks used by him for access to and from the site. The cost of maintenance of the common drainage system and the accesses shall be borne by all Contractor by using them.</p> <p>In the event that the Contractors failed to settle the apportionment, the Architect and/or Employers reserved the right to derive to the costs at his sole discretion and judgement. Henceforth, the share of the cost of maintenance of the drainage system and accesses shall be deducted from his progress payment or from any sums that may become due to him under this Contract.</p> <p>The Contractor shall also work together with roof Sub-Contractor and other Sub-Contractor engaged by the Employer. No claims will be considered on ground of hindrance/obstruction experienced due to the presence of other Contractor being employed.</p> <p>a <u>TEMPORARY ACCESS ROADS</u></p> <p>Form access to the site with all temporary roads, hardstanding, culverts, crossing within the site and temporary access point to site including protection to existing premix road, maintain in good condition, clear, and make good all damage done. Remove same when no longer required and reinstate of ground disturbed.</p> <p>The Contractor shall ensure that none of the aforesaid temporary works shall obstruct or impede existing or proposed drainage system.</p> <p>The Contractor will have to share the access and agrees points with other Contractor engaged by the Employer.</p> <p>No claim will be entertained in respect of any inconvenience or hindrance met by the Contractor due to the sharing of the access and egress points with other Contractors.</p> <p>b. <u>RESTRICTION OF PERSONS TO SITE</u></p> <p>The Contractor shall be responsible for keeping all persons and workmen (including those employed by all Sub-Contractors and suppliers) within the boundaries of the site and shall take all precautions to prevent trespass into adjoining properties and keep unauthorised persons off the site.</p> <p>He shall be liable for and shall indemnify the Employer in respect of any claims or proceedings arising out of his neglect of this Clause.</p> <p>c. <u>PROTECTION OF EXISTING PUBLIC AND PRIVATE SERVICES</u></p> <p>Protect, uphold and maintain all existing pipes, ducts services mains, overhead cables, etc during the execution of the Works. The Contractor shall make good any damage due to any cause within his control at his own expense and pay any costs and charges in connection therewith. In cases where the services are to be temporarily terminated or diverted, the Contractor is to give the necessary notice to the appropriate Authority and arrange for the work to be carried out and pay all costs and charges in connection therewith.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>PROTECTION OF EXISTING PUBLIC AND PRIVATE SERVICES (Cont'd)</u></p> <p>The Contractor must make every effort to check and verify the existence and discover all underground services in and about the site. Any breakage of electrical cables, water services, sewers, telephone cables, etc due to the execution of works will be at risk and expense of the Contractor: such risk is to be extended to include any penalty or fine which the electrical or any appropriate authority deems fit to impose.</p> <p>a. <u>KEEPING SITE DRY</u></p> <p>The Contractor shall be responsible for keeping the whole of the Works well drained and free from all water (including rain, storm, spring and running water and water below the Water Table Levels and the Contractor is to ascertain for himself the water level as no claims will be entertained on the ground that these levels are not known or water arising from any other source) at all times to ensure that, so far as practicable all work is carried out in the 'dry'.</p> <p>He shall employ whatever means that may be necessary to keep the site dry including baling, pumping (including power pumping) provision of temporary earth drains (including precast concrete drains where they are deemed necessary by the Superintending Officer), drainage pits, water courses and any other means which the Superintending Officer may direct.</p> <p>The Contractor shall ensure that the water drained from the site shall be kept reasonably free from earth, debris etc. He shall be responsible for finding outlets for the discharge of the water drained from the site to the public drains, he shall be responsible for making arrangements with the Authorities to do so including paying all necessary fees and making good damages to the roads, drains etc.</p> <p>The Contractor shall be solely held responsible for the sufficiency of the arrangements made for the exclusion of water from the Works and shall be held responsible for keeping the Works safe and dry at all times including periods of heavy rainfall and for any loss or any damage which may result from the Contractor's neglect of his obligations.</p> <p>b. <u>SILTING</u></p> <p>The Contractor shall be deemed to have visited the site and to have ascertained the extent of desilting to be done to the existing monsoon drains so as to keep all the drains free of mud and other obstruction before commencement of works.</p> <p>The Contractor is also to keep all drains, streams and waterways free from mud, silt and other obstructions and make good where necessary to the satisfaction of the Superintending Officer during the currency of the Contract.</p> <p>c. <u>PERMITS AND LICENCES</u></p> <p>The Contractor shall allow for and obtain all necessary permits and licenses, etc required from the relevant authorities in connection with the carrying out of the works and pay all fees, royalties in connection therewith.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>DAMAGE TO EXISTING STRUCTURES, BUILDING, ROADS, CULVERTS</u></p> <p>The Contractor shall arrange for the conveyance of his materials, plant, carrying out of the works etc so as to cause a minimum of damage to existing structures, buildings, TNB Sub-Station, roads, culverts, drains, footpath, steps, retaining wall etc. He shall be held responsible for any damage caused by his carriers or workmen to any of these from whatsoever cause arising and shall maintain repair and reinstate same to their original conditions to the satisfaction of the Superintending Officer or alternatively shall bear the cost if such maintenance and reinstatement as a deduction from monies due or to become due to the Contractor under this Contract.</p>	
b.	<p><u>AREA OF OPERATIONS</u></p> <p>Provide for taking reasonable precautions to prevent workmen including those employed by Sub-Contractors from trespassing on adjoining owner's property.</p> <p>The Contractor may have to share the site with other Contractors to be engaged by the Employer and the existing market trader and shall exercise care in carrying out his works without causing inconvenience to others. He shall also co-operate with other Contractors engaged by the Employer and co-ordinate their program.</p> <p>Previous Contractors who have carried out and completed the existing Earthwork, Substructure and Structure Works may be recalled to execute, maintenance or repair work during the construction of the works under this Contract. The Contractor shall give access and liaison with the previous Contractor and provide necessary attendance and assistance for purposes of executing such maintenance or repair works.</p> <p>No claims will be entertained in respect of any inconvenience, hindrance met by the contractor due to the presence of other contractors on site.</p>	
c.	<p><u>POLLUTION, FLOODING, ETC.</u></p> <p>The Contractor shall be responsible for taking immediate steps to make good and shall bear on cost of remedying the effects of pollution, flooding and other nuisance caused by the commissioning of his works under this contract, to neighboring properties, roads, drains etc all to the satisfaction of Local Authorities and the Superintending Officer.</p> <p>The Contractor shall take measures as the Superintending Officer may require to prevent the entry of oil or other deleterious materials from the works into any new or existing drainage system or natural watercourse. Nevertheless, should any drainage system or watercourse be fouled by such material the Contractor shall clean the drainage or watercourse at his expense to the satisfaction of Superintending Officer.</p>	
d.	<p><u>COPIES OF PRICES</u></p> <p>The Contractor shall permit the requisite number of copies of his prices, extension and cost to be made for the purpose of administering this Contract.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
<p>a. <u>SUSPENSION OF WORK</u></p> <p>The Contractor shall on the written order of the Superintending Officer suspend the progress of the Works or any part thereof for such time or times and in such manner as the Superintending Officer may consider necessary for :-</p> <ul style="list-style-type: none"> i) the proper execution of the Works or by reason of weather conditions affecting the safety or quality of the Works or by some default on the part of the Contractor. ii) the safety of the Works or any part thereof. <p>The Contractor shall, during such suspension properly protect and secure the work so far as it is necessary in the opinion of the Superintending Officer.</p> <p>No claim will be allowed for whatever extra cost incurred by the Contractor in giving effect to the Superintending Officer's instruction under this clause.</p> <p>b. <u>SUBMISSION OF SAMPLE</u></p> <p>The Contractor is required to submit within 30 days samples of materials and manufacturer's brochures on the materials they propose to use to the Superintending Officer for approval.</p> <p>The Superintending Officer reserves the right to reject the samples and/or the finished installation on site, if in his opinion the material and installation on site do not conform to the approved/submitted samples, brochures and required method.</p> <p>c. <u>INVOICES, RECEIPTS ETC.</u></p> <p>The Contractor shall at all times give every reasonable assistance to the Superintending Officer. When requested the Contractor shall produce for inspection/retention all time sheets, delivery notes, invoices, accounts, receipts, test certificates and such other vouchers and record as the Superintending Officer may require in connection with the Contract in the preparation of the Final Account.</p> <p>d. <u>SHOP DRAWINGS</u></p> <p>The Contractor shall provide and shall caused all Sub-contractors or Suppliers to provide the Superintending Officer with full, complete and sufficient Shop Drawings for any structural work, mechanical and power equipment, other services, pressed metalwork, aluminium and glazing works, waterproofing system etc. and all other specialized work and services as required in accordance with this Contract.</p> <p>Such drawings or details shall in the first instance be checked and verified by the Contractor before submitting to the Superintending Officer for approval.</p> <p>The Contractor shall also submit shop drawings and details for all temporary works, system formwork etc. to the Superintending Officer before any erection of such temporary works.</p>		
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>SHOP DRAWINGS</u> (Cont'd)</p> <p>Such drawings shall be submitted in sample time for checking and for resubmission for any amendment described so as not in any way to jeopardise the time for completion of the Contract. No works shall be carried out until the Superintending Officer has approved the relevant shop drawings.</p> <p>It should be clearly understood that the approval of shop drawings by the Superintending Officer is solely approval of subject matters in principle and does not constitute checking of detail dimensions or acceptance of auxiliary units or materials unless specifically mentioned in writing by the Superintending Officer. The Contractor shall prepare all co-ordinate shop drawings for Superintending Officer's approval.</p> <p>a. <u>AS BUILT DRAWINGS, OPERATING AND MAINTENANCE INSTRUCTION</u></p> <p>The Contractor and his Nominated Sub-Contractors shall prepare, agree and supply the Superintending Officer drawing as specified for recording 'As Built' all works and services installed or complete and their locations. The Contractor shall supply the original together with four (4) sets of all as-built drawings.</p> <p>Obtain and handover to the Superintending Officer upon completion of two (2) copies of the following :-</p> <ul style="list-style-type: none"> i) Operating and maintenance instructions provided by the manufacturer's suppliers or sub-contractors. ii) List of spare parts and their respective suppliers. iii) List of consumables and their respective suppliers. <p>All as built drawings and operating and maintenance instructions for the various mechanical and electrical services installed are to be submitted to the Superintending Officer within six (6) months before the completion or any extended time thereof.</p> <p>b. <u>ORDERING OF MATERIALS</u></p> <p>Place orders for specified materials and equipment at the earliest possible date. Produce on the Superintending Officer's request records confirming orders had been placed. Make every effort to ensure adequate supply of materials for each stage of the works.</p> <p>Immediately inform the Superintending Officer on possible delays in delivery. The Contractor shall be responsible to seek alternative sources of supply where necessary.</p> <p>The Bills of Quantities are not to be used as the basis for ordering any materials.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>ORDERING OF MATERIALS</u> (Cont'd)</p> <p>If the Contractor fails for any reason to supply any material, which he had contracted to supply or if he fails to supply any such material in sufficient time to enable the contract to be completed by the agreed date for completion then in either event the Employer may supply any portion, or all of such material. If the Employer supplies such material the cost in respect thereof to be borne by the Contractor shall be</p> <p>EITHER the current market rates</p> <p>OR the actual cost to the Employer at the date of supply, including overhead and any other charges</p> <p>WHICHEVER IS THE GREATER</p> <p>The cost to be borne by the Contractor as above detailed shall be deducted from money due or to become due to the Contractor under this Contract and the Contract Sum shall be adjusted accordingly.</p> <p>In no consequences that premature materials delivered to site be included in the progress payment.</p> <p>In no way will the material ordered or supplied by the Employer relieve the Contractor of any of his duties or responsibilities under the Contract.</p> <p>a. <u>SUBSTITUTE MATERIALS</u></p> <p>If during the course or the Contract certain material required for use in the Works should be unobtainable despite the efforts of the Contractor, then he may offer substitute material for the approval of the Superintending Officer. These substitute materials although not complying fully with the specification must nevertheless be suitable and appropriate for use in the Works. Acceptance or rejection of such substitute material shall be at the discretion of the Superintending Officer.</p> <p>In the event of acceptance of the substitute material a suitable price reduction shall be made in respect of decrease in quality or value, but no price addition shall be made in respect of increase in quality or value. In the event of rejection of the substitute material the Contractor shall not relieve of any of his obligations under this contract and he shall be solely liable for any delay or loss occasioned by his failure to provide material as specified.</p> <p>b. <u>AVOIDING NUISANCE</u></p> <p>The Contractor shall carry out the works in such manner so as to cause as a little inconvenience of noise nuisance to persons living in neighboring properties and to the public.</p> <p>He shall not obstruct, as far as possible, the normal rights of way of the user of the public roads and where this is necessary and unavoidable. He shall provide barriers, road signs, warning lights, etc required for proper traffic control including getting the necessary permits from the Police Department and other Local Authorities and paying all fees in connection therewith.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>AVOIDING NUISANCE</u> (Cont'd)</p> <p>He shall be liable for and shall indemnify the Employer in respect of any claims or proceedings arising out of his neglect in taking care to avoid creating a nuisance when carrying out the works.</p> <p>a. <u>EXISTING OVERHEAD AND UNDERGROUND SERVICES CABLES, PIPES ETC</u></p> <p>Before commencing any excavation, etc, the Contractor shall enquire from the various authorities whether any underground pipes, cables, etc, are present on the site and if so, he shall make arrangement for the disconnection, removal and, if necessary for the reconnection of such services and pay all necessary fees in connection therewith.</p> <p>If during excavation, the Contractor come across any underground cables, etc. he shall stop work immediately and report to the Superintending Officer who shall give the necessary instructions to the Contractor who shall then arrange for the disconnection, etc as stated in the last paragraph. The Contractor shall be responsible for making good all damage to cables, etc and shall indemnify the Employer against any claim as a result of such damage.</p> <p>b. <u>PRESERVATION OF EARTH SLOPES</u></p> <p>The Contractor shall take all necessary precaution to preserve all earth slopes, both existing i.e slopes already existing on the site at the time of the site being handed over to the Contractor and new i.e slopes formed and constructed by the Contractor under the Contract. He shall construct adequate temporary water courses and drains and take other necessary steps to prevent slips from occurring.</p> <p>Should slips occur due to the Contractor's neglect to preserve the earth slopes, he shall, at his own expenses, make good such slips to the entire satisfaction of the Superintending Officer.</p> <p>The Contractor shall make daily inspection of the earth slopes and more often if he deems it necessary or if so instructed by the Superintending Officer. He shall record the results of his inspections in the Site Book. In the event if slips occurring or in the opinion of the Contractor may possibly occur, the Contractor shall immediately report to the Superintending Officer who shall give the necessary instructions to the Contractor.</p> <p>The Contractor shall be held solely responsible for the sufficiency the precautions taken by him to preserve the earth slopes and shall be liable for and shall indemnify the Employer in respect of any claims or proceedings arising out of his neglect of this Clause.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>SAFETY MEASURES</u></p> <p>Allow for complying with Acts of Parliament, Statutory Regulations, etc relating to safety of persons on or about the site.</p> <p>The Contractor is responsible for the adequacy of safety provisions including safety nettings/screens, etc. throughout the contract period of the approval of the Superintending Officer. The Superintending Officer approval of any safety measures shall not relieve the Contractor from this responsibility. Ensure that all tools, tackle, gear, staging, scaffolding, ladders, equipment, etc used in connection with works are adequate and safe for use.</p> <p>The Contractor's responsibility and liabilities whether under the foregoing or any other provision of the Contract, shall not in any way be neglected, reduced or limited by reason of any instruction, variation order, approval advice given by the Superintending Officer or by any Public or other Authorities.</p>	
b.	<p><u>MAINTENANCE OF PUBLIC AND PRIVATE ROADS AND FOOTPATHS ETC.</u></p> <p>Maintain public and private roads, footpaths, kerbs, drain etc and keep the approaches to the site clear of mud earth etc. The Contractor shall make good any damage caused by his own or any Sub-Contractor's or Suppliers' transport and plants at his own expense and keep the Employer indemnified against all losses, costs, damages, expenses, claims and demands incurred or sustained. In the event of such occurrences, the Contractor shall carry out the cleaning work immediately, within twenty-four (24) hours upon receiving instruction from the Superintending Officer, failure of which the employer have the right to employ others to carry out the work without any further notice to the Contractor and the cost incurred will be deducted from the Contract Sum.</p> <p>Notwithstanding leaving the site with are found to be dirtied with mud shall be hosed down with water to ensure that they are clean before leaving the site. Provide all accessories for cleaning as follows :-</p> <p>a) 1 nos - Water Jet Pump complete with nozzle b) 1 nos - Water tank 200Gal c) power supply d) maintenance for the above equipment</p>	
	TO COLLECTION	-

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>PLANT AND MACHINERY</u></p> <p>The Contractor shall provide all necessary temporary plant and machineries to ensure smooth running of the job and to achieve the accepted date of completion, maintain them during the currency of the Contract and remove at completion of the works.</p> <p>Particular attention is to be given to the use of proper and modern plant and other labour and time saving devices to ensure that the work will be carried out expeditiously.</p> <p>The Contractor shall from time to time during the construction stage, provide the Superintending Officer with up-to-date list of all the mechanical plant on site such lists is to be signed and date. Unserviceable plant shall be removed expeditiously from the site.</p>	
b.	<p><u>WATER</u></p> <p>The Contractor shall provide at his own risk and cost including temporary plumbing and for storage all water required for use in the Works and shall pay all costs and fees in connection therewith. All water shall be fresh, clean and pure. On completion, clear away all plumbing and water tank, etc.</p>	
c.	<p><u>PROTECTING THE WORKS</u></p> <p>The Contractor is to cover up, protect the Works from the weather, and suspend all operations during the weather conditions, which in the Superintending Officer's opinion, will detrimental to the Works. The Contractor shall be responsible for protecting the whole of the works including those of Sub-Contractor until they are handed over to the Employer.</p> <p>The Contractor shall take necessary measures to safeguard the works, materials and plant against damage and theft and shall indemnify the Employer against any loss, theft or damage.</p>	
d.	<p><u>WORKING HOURS</u></p> <p>All working hours are to be in accordance with the regulations of the relevant authorities. Unless permission of the Superintending Officer is given, no work shall be done outside the normal working hours.</p> <p>The normal working hours of the Resident Engineer/Resident Superintending Officer and the Resident Supervisory Staff are as follows :-</p> <ul style="list-style-type: none"> i) Sunday to Thursday - 8.00 am - 5.00 pm (with 1 hour break lunch) ii) Saturday - 8.00 am - 1.00 pm <p>Fridays and Public Holidays are not working days. If the Contractor's work requires the supervision of the Resident Engineer/Resident Superintending Officer and/or the Resident Supervisory Staff outside the normal working hours then the Contractor shall reimburse all overtime supervision cost incurred by the Employer due to such working outside normal working hours. Payment for overtime supervision cost shall be made monthly through the Employer and/or the respective Consultants</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>WORKING HOURS (Cont'd)</u></p> <p>If the Superintending Officer shall so permit the Contractor to work before or after the hours stated, no claim for overtime will be incurred.</p> <p>The Contractor shall pay all expenses for the Employer's Supervisory staff required to be present during the approved overtime works.</p> <p>If the Superintending Officer is in an opinion that the progress of the work is behind schedule, the Superintending Officer shall have the right to instruct the Contractor to increase his plant and labour force and/or to continue work beyond normal working hours, including night work or to mitigate delays to his satisfaction. The Contractor shall bear the extra cost for complying with the Superintending Officer instruction to perform such work necessary to adhere to the agreed Work Program. No claim for extra payment for additional Labour or for working beyond normal working hours will be entertained.</p> <p>a. <u>SITE MANAGEMENT AND SUPERVISION</u></p> <p>Provide for all on-and off-site management and supervision including Site Agent and all necessary clerical and supporting personnel.</p> <p>Submit within two (2) weeks of the notification of acceptance of tender a list of site management personnel together with their resume who will be directly involved and responsible for this project. The site management personnel shall not be changed without prior approval from the Superintending Officer.</p> <p>The organization chart together with CV of the company's supervisors who will be employed for the project must be forwarded to the Employer for agreement prior to acceptance of any contract.</p> <p>Once agreed upon, these numbers of staff are to be maintained throughout the duration of the project. Should any of the staff be taken out from the project or resign, the equivalent experienced staff must be replaced within a month. If the contractor fails to replace this staff, the Employer is at liberty to source for a similar experienced staff or allow consultant to appoint a similar experienced staff to take over. The cost of this replacement shall be at the Contractor's expense.</p> <p>b. <u>WORK PROGRAMME</u></p> <p>Within two (2) weeks of the award of the contract, the Contractor shall submit as soon as possible, copies of an approved work programme to all the consultants, clearly setting out the proposed commencing and completion dates of the various operations, construction method base on four (4) phase as per S.O approval, trades and Sub-Contractors works as related to the completion time of the whole of the Contract.</p> <p>A current copy of the work programme shall be available at the site office at all times for inspection by all persons concerned with the work.</p> <p>The work programme shall be in the form of a critical path for the analysis accompanied by all the necessary schedules and shall show the programmed dates for the commencement and completion on stage-by-stage basis of the work in sequence. The Contractor shall also present a summary of the Work programme in the form of bar chart for reporting purposes.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>WORK PROGRAMME</u> (Cont'd)</p> <p>The work programme schedule shall incorporated all activities for the execution of the works including all works of domestic and nominated subcontractor, specialist contractors, artists or tradesmen employed by the employer. The work programme shall also incorporate activities for completion of designated area in advance of others i.e mock up unit area to be handed over to the nominated sub-contractor etc.</p> <p>The work programme shall be sufficient detailed to permit week-by-week precise comparison between the work/time as programmed and the actual progress of work/time and shall show practical completion by the due date or earlier.</p> <p>The Contractor shall increase his work force and plant as and when required by the Superintending Officer in order to adhere to the work programme.</p> <p>The Superintending Officer shall have the right to instruct the Contractor to continue work beyond normal working hours, including night work in order to maintain the progress of the work to his satisfaction. The Contractor is to allow here for the extra costs (which shall include all additional expenses connected with the Consultant's supervisions of the Works) for complying with the Superintending Officer's instruction to perform such work necessary to adhere to the agreed work programme as no claim for extra payment for additional labour or for working beyond normal working hours will be entertained. In no case shall any night work be allowed without the written permission of the Superintending Officer.</p> <p>Notwithstanding the submission and approval of the time schedule. The Contractor is in no way relieved from his responsibility to complete the works by the Date of completion or within any extension of time granted in accordance with the condition of Contract. The Contractor shall remain fully responsible and liable to the Employer with regard to his time performance.</p> <p>a. <u>FIRST AID KITS</u></p> <p>The Contractor shall provide first aid kits at suitable location on the site and at the site office and shall be adequate to facilities the number of person on site.</p> <p>b. <u>WATCHING AND SECURITY</u></p> <p>Provide two (2) person for the employment of efficient watchmen of services of a security patrol group as may considered reasonable or necessary on the works by day and night and provide all necessary lighting, warning lamps, guard, barriers and all safeguards for the prevention of fire, accidents and losses for the whole period of works in hand.</p> <p>The Contractor shall solely be held responsible for the safety from damage or theft of all fixed and unfixed materials, goods, etc. delivered and stored on the site. However, the Contractor shall not be responsible for Nominated Sub-Contractors' plant, tool, equipment and the like.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>TEMPORARY LIGHTING AND POWER</u></p> <p>The Contractor shall provide and maintain adequate temporary lighting and electric power for the execution of the works.</p> <p>The temporary electrical supply shall be in accordance with the requirements of the Tenaga Nasional Berhad (TNB), from whom approval is to be sought. The supply shall have <u>sufficient capacity</u> to meet the power requirements of the whole of the works including testing of mechanical and electrical installations included in the works.</p> <p>The Contractor shall also provide adequate Generator Sets to meet any emergency circumstances such as failure in power supply and the like. The installation and operating of generator sets shall be subject to the approval of TNB and Chief Electrical Inspectorate of Malaysia.</p> <p>The temporary lighting shall be at a reasonable level of illumination at all areas where works are being executed and at all routes and passages leading thereto so as to provide safe and convenient access for Supervisory Personnel in the pursuit of their duties.</p> <p>The Contractor shall pay for all charges and fees in connection with this provision and clear away on completion.</p>	
b.	<p><u>TEMPORARY TOILET FOR PUBLIC</u></p> <p>The Contractor shall provide and maintain temporary 4 Nos. portable toilet or other approved equivalent by the S.O (in the ratio of one bucket for every 20 men) together with all necessary water and drainage facilities, in accordance with Local Authorities' requirements and pay all costs and charges in connection therewith. Keep clean, deodorise and alter, adapt and shift when necessary from time to time and remove same on completion.</p>	
c.	<p><u>WARNING SIGNS AND LAMPS</u></p> <p>Provide all necessary warning signs and lamps for the whole period the Works in hand and dismantle and remove on completion.</p>	
d.	<p><u>LOADING IN EXCESS OF DESIGN LOAD</u></p> <p>No loading in excess of the design loading shall be placed on any portion of the structure without the written permission of the Superintending Officer. If such permission is granted, all structural members subjected to loading other than the design loading shall be strengthened and supported to the satisfaction of the Superintending Officer and the Contractor will bear all additional expenditure.</p> <p>Notwithstanding the written permission of the Superintending Officer the Contractor shall bear all costs arising out of the making good of any damage to the permanent structure caused by excess loading.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>TEMPORARY WORKS</u></p> <p><u>Contractor's Storage Welfare And Site Accommodation</u></p> <p>The Contractor shall erect and maintain on the site in areas designated by the S.O.; adequate, secure and watertight temporary buildings for use during the entire duration of the Contract. All temporary buildings shall be constructed and maintained according to the requirements of Local and other Authorities and the Contractor is to pay all charges in connection therewith :-</p> <ul style="list-style-type: none"> i) Construct and maintain temporary office and store for the Contractor's site staff and proper watertight sheds for the storage of materials, plants, tools and tackle and for the use of workmen on site. Cement stores shall have floor raised at least 305mm above ground level. Alter, adapt and shift all temporary structures when necessary from time to time and remove same on completion. ii) Accommodation for workmen including Sub-Contractor's workmen is to be provided where required in the ratio of 9.29m² per man. Alter, adapt and shift all temporary structures when necessary from time to time and remove same on completion. iii) Provide and maintain 6 Nos. portable toilet (in the ratio of one bucket for every 20 men) together with all necessary water and drainage facilities, in accordance with Local Authorities' requirements and pay all costs and charges in connection therewith. Keep clean, deodorise and alter, adapt and shift when necessary from time to time and remove same on completion. <p>All areas outside the site shall be out of bound to all workmen. Any workmen found in out of bound areas shall be dealt with by the proper Authorities and shall be removed from the site.</p> <p>On completion of the Works and within one (1) week of the S.O. so instructing, reinstate all areas disturbed to its original position after removal of temporary buildings.</p> <p>If upon instruction by the S.O. that the temporary buildings cannot be dealt within the project site, the Contractor shall allow herein and pay all deposit, rentals, monthly charges and other expenses in connection therewith to have to construct the temporary buildings outside the project site for the duration of the Contract and remove on completion of the work.</p> <p>On completion of this Contract, unless otherwise stated, the site office with all furnitures and fittings shall become the property of the Contractor and shall be removed from the site.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT												
a.	<p><u>TEMPORARY WORKS</u> (Cont'd)</p> <p><u>Office For S.O.</u></p> <p>The Contractor shall provide of a new temporary site office for the sole use of Majlis Bandaraya Iskandar Puteri site supervisory staff. The office shall be completed with sanitary and plumbing installation, temporary septic tank, air-conditioning unit, light fittings and electrical installation, adequate furnitures and equipments for meeting room and site supervisory staff and assistants, magnetic white board, softboard, curtains, lockable filing cabinets, racks for drawings, metal cabinet, stationaries and etc. to the satisfaction of the S.O.. The S.O's Office shall be 1 units of 40' x 8' "Transcamps" or other equal portable cabin and the Contractor is also to allow for meeting room for a minimum capacity of 20 persons.</p> <p>Unless otherwise shown in the drawings, the office is to be sited, positioned and constructed as approved by the S.O.</p> <p>The Contractor shall make proper arrangements for and pay all charges in connection with conservancy. The site office shall comply with local building by-laws. It shall be erected or provided by the Contractor and approved by the S.O. within 4 weeks from the date of possession of the site, deodorise and keep clean, shift and adapt from time to time as necessary to S.O.'s requirements.</p> <p>On completion of the works, unless otherwise stated, the site office with all furnitures and fittings become the property of the Contractor and shall be remove from the site forthwith and the area where they stood reinstated to its original condition.</p> <p><u>Office Equipment And Facilities</u></p> <p>Provide new sets of the following equipment of a standard to be approved by the S.O.:-</p> <p><u>Equipment Etc. For S.O.</u></p> <p>The Contractor shall provide the following items according to standard approve by the S.O. and must comply with OE and OSA requirement for the sole use of the S.O. and his repersentatives, all consultants and authorized visitors throughout the duration of the Contarct :-</p> <table data-bbox="300 1576 1034 1711"> <tr> <td>i)</td><td>Safety Helmets</td><td>15 Nos.</td></tr> <tr> <td>ii)</td><td>Safety Boots</td><td>15 Pairs</td></tr> <tr> <td>iii)</td><td>Walking Measure</td><td>1 Nos.</td></tr> <tr> <td>iv)</td><td>Measuring Tape</td><td>1 Nos.</td></tr> </table> <p>The Contractor shall provide for the sole use of the S.O. and his staff all such instruments, equipment and chainmen as may be required to check the accuracy of the setting out. The Contractor shall be responsible throughout the construction period of the Works for all such instruments, equipment and chainmen and shall ensure that all instruments and equipment at all times maintain in good working conditions.</p>	i)	Safety Helmets	15 Nos.	ii)	Safety Boots	15 Pairs	iii)	Walking Measure	1 Nos.	iv)	Measuring Tape	1 Nos.	
i)	Safety Helmets	15 Nos.												
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	TO COLLECTION													

ITEM	DESCRIPTION	AMOUNT
b.	<p><u>TEMPORARY WORKS</u> (Cont'd)</p> <p><u>CLOSED CIRCUIT TELEVISION (CCTV) - 4 NOS</u></p> <p>The contractor shall install, set up and configure the HD quality day and night closed circuit television (CCTV) in 4 nos at suitable location, preferably at four different corner, complete with 4 nos galvanised steel poles in 10m high with 24 hours records and surveillance complete with CCTV camera web base including screen monitor and recoder for monitoring from afar. It should be maintained throughout the duration of the Contract Period to monitoring site area, construction progress and prevent any losses or theft. The Contractor shall solely be held responsible for the safety from damage or theft of all fixed and unfixed materials, goods, etc. delivered and stored on the site.</p> <p>The HD quality day and night closed circuit television (CCTV) shall be install and maintained to the requirements and satisfaction of the Superintending Officer.</p> <p>Cameras shall be strategically located throughout the premises (internal and external) to provide coverage which satisfy the intended security application. The locations are subjected to the approval and endorsement of the S.O., and shall be amended accordingly.</p> <p>The CCTV system shall be provided with enough storage capacity for 24 hours (continuous recording) full resolution recording of each camera at minimum 15 frames per second (fps). Recording shall generally be retained in storage for a minimum duration as as shown below from the date of recording:</p> <ul style="list-style-type: none"> i) Ninety (90) days – Premises with very high national interest such as national border, main national entry/exit point, high profile ministry building etc ii) Sixty (60) days – Secured premises such as prison, detention centre etc. iii) Thirty (30) days – Any other premises. <p>The CCTV system shall be equipped with a backup power source to enable it to operate even when the main power supply is disconnected or interrupted</p> <p>The system shall be equipped with a video management system which is capable of providing full function of CCTV system technology. The picture shall be digitally recorded and able to be viewed in real-time. A suitable computer workstation shall be provide</p> <p>On completion of the works, unless otherwise stated, the CCTV equipment with all accessories and fittings become the property of the Contractor and shall be remove from the site forthwith and the area where they stood reinstated to its original condition.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>TEMPORARY FENCING AND HOARDING</u></p> <p>The Contractor shall supply, erect, allow for moving and handling the hoarding due to construction method base on phase and maintain throughout the duration of the Contract Period a 2.1m high metal deck hoarding all along the perimeter of the site and complete with ingress and egress gates including all necessary hinges, bolts, locks, etc and remove them on completion of the works. The metal deck hoarding shall be constructed of all as per Superintending Officer's detail as per drawing.</p> <p>The hoarding shall be built and maintained to the requirements and satisfaction of the Superintending Officer and Local Authorities. The Contractor shall obtain all necessary permit and licenses. The Contractor shall also dismantle and re-erect the fencing and hoarding on new position and in association with staging as and when necessary as a result of the progress of the Works. The Contractor shall be responsible to get permit from local authority and pay all necessary fees.</p> <p><u>SIGNBOARD</u></p> <p>The Contractor shall allow for the provision and maintenance of signboard of approved size and design displaying the names of project, Employer, the Consultants and the Contractor. He shall erect the signboard where directed and obtained all necessary licences and permit and pay all charges in connection therewith. All as per S.O Instructions and authorities requirement.</p> <p><u>EMPLOYMENT OF FOREIGN WORKERS</u></p> <p>Every effort must be made by the Contractor to employ Malaysian citizen for the works. If foreign workers are to be employed the Contractor shall be responsible for their entry strictly in accordance with the requirements of the relevant immigration laws and regulations. He shall also be responsible for obtaining their work permits from the relevant authorities. The Employer/his agents absorbed themselves from all responsibilities pertaining this matter.</p> <p><u>TESTING</u></p> <p>The Contractor shall at his own expense provide such instruments, apparatus machine, assistance and labour as are normally required or stipulated in this contract for examining, measuring and testing any work and the quality, weight or quantity of any materials used or to be used or workmanship attained or to be attained. Allow for materials or work samples to be submitted for testing.</p> <p>The Contractor shall provide and bear all the incurred cost for officer to visit the assembly / manufacturing plant as per request by the Clients.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>DEFERMENT OF INSTALLATION OF LOOSE OR DISMANTLE ITEMS</u></p> <p>As a precaution to prevent to incident of theft or damaged on loose or dismantle items such as valve, stop-cock or tap heads, manhole or drain covers, electrical main switch and fittings and other items of a like nature, the Main Contractor is required to defer the installation of the said loose or dismantle item until instructed so by the Superintending Officer during the Defect Liability Period (DLP). The Main Contractor is to provide the necessary workforce and other expense required for the fixing of all the said loose or dismantle items as and when required by the Superintending Officer during the Defect Liability Period. The Superintending Officer will issue instruction to the Main Contractor for the fixing of the above items only upon instruction form the respective purchaser of various unit of this scheme.</p> <p>This arrangement will operate until the end of the Defect Liability Period. At the end of the Defect Liability Period, the Contractor will install all the loose or dismantle items to all the remaining units that have not been sold or occupied by the purchasers.</p> <p><u>SUB-CONTRACTORS AND SUPPLIERS</u></p> <p>Ensure that all sub-contractors and suppliers (whether nominated or otherwise) and others responsible to contractor are fully aware of the Contract Conditions, and any amendments thereto.</p> <p>Take full responsibility for any damage or delay, which may be occasioned by specialist firm or firms employed on any part of the contract work. The Employer exempts himself from the consequences of anything that may be eventuating in connection with their employment. The Contractor to submit to the Superintending Officer in due course the name and address of the following Sub-Contractors/Suppliers for approval :-</p> <ul style="list-style-type: none"> i) Internal electrical/telephone ii) Internal plumbing/sanitary iii) External water reticulation iv) External electrical/telephone v) External sewerage line vi) Other sub-contractors/suppliers <p>All such sub-contractors/supplier firms must be properly registered (locally) and licensed by the relevant Local Authority and approved by the Superintending Officer.</p> <p><u>RIGHT OF EMPLOYER TO PAY TO SUB-CONTRACTORS & SUPPLIERS</u></p> <p>It is hereby agreed that notwithstanding any provisions herein, the Employer reserve the right in his absolute discretion to make any payment/s directly to the Contractor's Suppliers and/or Sub-Contractor should, without any reasonable cause, the Contractor defaults in making any or all payment/s as agreed upon between the Contractor and the Suppliers and/or Sub-Contractors.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>RIGHT OF EMPLOYER TO PAY TO SUB-CONTRACTORS & SUPPLIERS (Cont'd)</u></p> <p>Upon receiving written notice from the Suppliers and/or Sub-Contractor that the Contractor has defaulted in making payments to them and upon the satisfaction of the Employer that the value of work carried out and/or the materials have been supplied as required certified in the Progress Payment Certificate and the Contractor has received payment/s for the said materials supplied and the work done, the Employer shall give fourteen (14) days notice to the Contractor requesting the Contractor to pay the amount/s due on the said materials and work done to the respective Suppliers and/or Sub-Contractors. Should the Contractor fail to make such payment/s within the fourteen (14) days period, the Employer may deduct directly from the monthly progress payment/s until all the payment/s due to the Suppliers and Sub-Contractors are settled, further, no cause of action shall accrue against the Employers by the Suppliers and/or Sub-Contractors unless it appears in writing to the contrary.</p> <p>a. <u>PROGRESS REPORTS</u></p> <p>The Contractor shall prepare and submit daily progress report for the works at monthly and weekly basis intervals. These reports shall be initialled by both the Contractor's representative and S.O. representative. The Contractor shall allow for making ten (10) copies of these report for distribution to all parties concerned. Monthly progress report indicating individual component progress made in the preceding fortnight. Such reports shall show cumulative progress towards scheduled completion, expressed as a percentage of all items shown in the approved works programme and shall also include a summary of the progress achieved through every phase of the Contract.</p> <p>Reports shall relate to key date achievement and indicate the degree of criticality on each activity. Any delays or potential delays shall be clearly identified and a statement given as to the measures being taken or to be taken to maintain the key dates.</p> <p>The progress reports shall include projected work activities for at least two (2) weeks ahead of those being reported upon with data on labour strength and equipment to be employed. The forth-nightly progress report shall be in a format approved by the Superintending Officer.</p> <p>b. <u>PROGRESS RECORD</u></p> <p>The Contractor shall prepare and keep on site daily record of work progress for inspection by the consultants. These records shall include the following information:-</p> <ul style="list-style-type: none"> i) Progress of each section of works. ii) Number of workmen employed classified as skilled under their respective trades. iii) Major materials delivered. iv) Type of plant employed. v) Weather conditions. vi) Details of site instruction giving such instruction. 	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
<p>a. <u>PROGRESS PHOTOGRAPHS</u></p> <p>The Contractor shall provide ten (10) sets of colored postcard size progress photographs of the proposed scheme of twelve different views of the whole works, on the first day of each month throughout the duration of the Contract or at such times as the Superintending Officer may direct. The Employer, Superintending Officer, Engineer and Quantity Surveyor shall be provided with a set each.</p> <p>b. <u>RECORD OF HIDDEN WORK</u></p> <p>Any work, which is not visible in the finished project and is subject to variations and in respect of which no drawings are issued shall not be covered up until a record of it, suitable for measuring purposes, has been taken and agreed between the Contractor and the Superintending Officer. Contractor has to give an advance notice (minimum 2 weeks) in respect of any work that must be inspected prior to covering up.</p> <p>Make accurate records of those parts of the Works, which will become hidden by further progress. Such records shall be checked and verified by the Resident Supervisory Staff while the work is still open for inspection. Do not cover up any work until inspected and records have been approved by the Superintending Officer and Quantity Surveyor.</p> <p>Records shall be entered by the Contractor on prints of drawings which will be made available to him free of cost for this purpose, amplified by him with supplementary dimension sketches and handed to the Superintending Officer as soon as practicable.</p> <p>c. <u>ANTIQUITIES</u></p> <p>All fossils, antiquities and other objects of interest of value, which may be found on the site or in excavation the same during the progress of the work, shall become the property of the Employer. The Contractor shall carefully take out and preserve all such objects and shall immediately or as soon as conveniently may be after the discovery of such articles deliver the same into the possession of the Superintending Officer or of the engineer uncleaned and as excavated.</p> <p>d. <u>MOSQUITO PREVENTION</u></p> <p>Allow for taking such precautions as may be deemed necessary or desirable by the Superintending Officer for the prevention of breeding of mosquitoes and pay all charges as may be required by Local Authority for anti-malaria and anti-dengue measured taken.</p> <p>e. <u>DUST PREVENTION</u></p> <p>The Contractor shall make adequate provision by spraying erecting screens or other suitable methods against any nuisance or damage by dust to all work under this Contract or to persons of properties in the vicinity and he will be held solely responsible for any complaints, damage or claims in this connection.</p>		
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>FULL TIME SITE SAFETY SUPERVISOR</u></p> <p>The Contractor shall be responsible for providing a qualified and experienced Site Safety & Health Officer (SHO) and Site Safety & Health Supervisor (SSS) to provide all necessary supervisory over the whole site for the full duration of the contract and as long thereafter as the Superintending Officer may consider necessary for the proper fulfillment of the Contractor's obligations under the Contract. His duty also to submit periodical report to the Superintending Officer. The report shall be in accordance with the local authority requirements/guidelines. He must be competent in English and/or Bahasa Malaysia. He shall be constantly on the work and shall devote his whole time to the supervisory of the same. Should the Superintending Officer find the safety supervisor unsuitable for any reason practicable after receiving such written notice from the Superintending Officer, he shall have the right to remove the safety officer from the site and shall thereafter employ another to the approval of the Superintending Officer.</p> <p>The Contractor shall prepare and submit to the S.O. ten (10) copies site safety and health plan (S-Plan) as per JKR requirement and it shall include among others:</p> <ul style="list-style-type: none"> i) Safety and Health Policy ii) Emergency Response Plan (ERP) iii) Chemical Safety Data Sheet (CSDS) <p>(Shall submit within Three (3) months after the receipt of Letter of Acceptance).</p> <p>The Contractor shall prepare and submit to the S.O. Ten (10) copies monthly safety & health report describing the occurrences of accidents, near misses, injuries and deaths and the action taken. The report may be incorporated in the Progress Report for the entire duration of the contract. It shall also include:-</p> <ul style="list-style-type: none"> i) Schedule of safety ii) Site safety & health iii) Safety & health iv) Safety & health inspections reports. <p><u>MECHANICAL & ELECTRICAL SERVICES COORDINATOR</u></p> <p>b. The Contractor shall be responsible for coordinating the implementation of all M&E works and related activities within the project scope. For this purpose the Contractor shall appoint M & E Services Coordinators full time on site during the whole duration of the works. The M & E Services Coordinators must be a minimum Diploma holder in related engineering field with minimum five (5) years of working experience in building construction and related works and competent in conversing in both English and Bahasa Malaysia. The appointment shall be approved by the S.O.</p> <p>The Contractor shall ensure all M & E requirements are implemented in a timely manner and adequately integrated with all services involved such as architectural, structural and other related services.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>MECHANICAL & ELECTRICAL SERVICES COORDINATOR (Cont'd)</u></p> <p>The Contractor shall conduct regular coordination meetings among all sub-contractors, nominated or otherwise, from related disciplines to evaluate and resolve all issues or problems regarding integration and coordination of all services</p> <p>a. <u>ADVERTISING</u></p> <p>The advertising rights covering the site are strictly reserved and the display other than approved signboard is prohibited.</p> <p>b. <u>STATEMENTS TO THE NEWSPAPER ETC</u></p> <p>No statement, photograph or information of any kind is to be given to the Newspaper, Trade journals etc. Whether for reward or not, unless prior consent of such statement photograph or information has been obtained from the Employer.</p> <p>c. <u>OCCUPATIONAL SAFETY AND HEALTH ACT 1994 (ACT 514)</u></p> <p>The Contractor shall allow for the compliance with all relevant provisions of the Occupational Safety and Health Act 1994 (Act 514); in particular, the employment of a competent person (s) to act as a Safety and Health Committee pursuant to Section 29 and Section 30 of the Act.</p> <p>d. <u>SOP CONSTRUCTION SECTOR FOR COVID-19</u></p> <p>The Contractor shall comply to any regulation & guidelines established by the government, Malaysia National Security Council (NSC), Ministry of Health (MOH), CIDB, Local Authority regulation and etc agencies on the pandemic issue i.e movement control order (MCO).</p> <p>The Contractor shall allow cost, work programme and provide sufficient requirement to meet all relevant provisions of the SOP construction sector for COVID-19 of the above</p> <p>e. <u>PERFORMANCE BOND</u></p> <p>The Contractor shall, before commencement of the Works, provide a Performance Bond in the form of Bank Guarantee from a Bank approved by the Employer for a sum amounting to five percent (5%) of the Contract Amount for the due performance and fulfillment of the Contract in all its parts according to the true intent and meaning thereof. The terms of the Bond shall be subjected to the approval of the Employer.</p> <p>The Bank Guarantee shall be valid until three (3) months plus fourteen (14) days after the end of Defects Liability Period or the date of issuance of the Certificate of Completion of Making Good Defects whichever is the later and shall be extended accordingly should extension of time be granted or delay occurs in completion of the project.</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT						
	<p><u>PERFORMANCE BOND (Cont'd)</u></p> <p>The original copy of he Performance Bond shall be deposited with the Employer as a condition precedent to commencement of the works shall remain with the Employer until three (3) months plus fourteen (14) days after the end of Defects Liability Period or the date of issuance of the Certificate of Completion of Making Good Defects, whichever is the later.</p> <p>In the event of the Contractor's failure to perform the Contract due to bankruptcy or any other reason, the amount of the Performance Bond will be utilized to off-set any additional cost or expenditure in obtaining another Contractor to complete the works</p> <p>a. <u>STREET, DRAINAGE AND BUILDING ACT (AMENDMENT) 1994</u></p> <p>The Contractor shall allow for and shall comply with the entire requirement as set out in the Act. The Contractor and Site Supervisor equally responsible of their Building were to collapse and can be fine up to RM 500,000.00 or jailed 10 years or both.</p> <p>b. <u>OPEN BURNING</u></p> <p>Open burning activities on site are strictly prohibited and the Contractor shall be held solely responsible for the sufficiency of precaution taken by him according to DOE requirements and shall be liable for and shall indemnify the Employer in respect of any claims or proceedings arising out of his neglect of this clause.</p> <p>c. <u>CLEARING OF RUBBISH</u></p> <p>From time to time during currency of the Contract, the Contractor shall remove all rubbish, debris, surplus and useless materials from site as they accumulate and as directed by the Superintending Officer.</p> <p>d. <u>CLEARING OF SITE ON COMPLETION</u></p> <p>The Contractor shall on completion of the works, remove as quickly as possible and convey away from the site at his cost, all plant and surplus materials except those ordered to be left on the site, together with all rubbish and debris. All services and leads, temporary buildings, sheds, barriers, scaffolding, etc, required in the work of construction are to be disconnected, dismantled, taken down and removed.</p> <p>e. <u>MAINTENANCE GANG</u></p> <p>The Contractor shall provide 1 gang (1 gang = 3 handyman) for the period of three (3) months after the issuance of Certificate of Practical Completion by the S.O. for purpose of making good defects as and when required by the S.O. as follows;</p> <table><tr><td>Every project RM10m and below</td><td>1 gang</td></tr><tr><td>Project RM10m - RM20m</td><td>2 gangs</td></tr><tr><td>RM20m and above</td><td>3 gangs</td></tr></table>	Every project RM10m and below	1 gang	Project RM10m - RM20m	2 gangs	RM20m and above	3 gangs	
Every project RM10m and below	1 gang							
Project RM10m - RM20m	2 gangs							
RM20m and above	3 gangs							
	TO COLLECTION							

ITEM	DESCRIPTION	AMOUNT
	<p><u>ON COMPLETION</u></p> <p><u>Clearing And Making Good On Completion</u></p> <p>On completion of the Works, and before the issue of the Certificate of Practical Completion of the Works, the Contractor shall be responsible for the final cleaning and commissioning of the Works and for leaving the site in a clean and tidy condition to the satisfaction of the S.O.. Such operation shall include, but not be limited to the following :-</p> <ul style="list-style-type: none"> i) Remove all rubbish, debris, etc from the buildings and the site, clear away and remove constructional plant and surplus materials, and leave the Works clean and tidy and ready for immediate occupation. ii) Remove any temporary markings, protective coverings, tapes, casings, still in position and clean exposed surfaces. iii) Clean all exposed concrete, brick, timber, pipe, steel and aluminium, etc. surfaces. iv) Leave all roofs and gutters watertight and clean. v) Wash, clean, dry and polish all floors (in addition to any previous polishing required by the Specification). vi) Ease all doors, windows, cupboard doors and drawers and leave them free to move. vii) Check, oil and adjust all ironmongery. Leave the Works secure with all accesses locked. Hand over all keys with identifying tags and identifying schedule to the S.O.. Retain duplicate schedule signed by the S.O. as receipt. viii) Cut out cracks in plaster, etc. and make good. ix) Clean and polish all glass, glazed tiles, stainless steel surfaces, all sanitary and kitchen wares, etc. x) Touch up all mirror faults in paint finishes or repaint badly marked areas back to suitable breaks. Remove all paint spots from floors, walls, hardware, glass, etc. xi) Ensure that all service and equipment are tested, commissioned and functioning efficiently and that all sanitary fittings are cleaned and sanitary and waste water pipes cleared of debris or blockage. xii) Road drains, walkways and sumps, etc. should be cleared of any obstructions and flushed out. xiii) Reinstate to original condition any area disturbed by sheds, materials, access roads, etc, not subsequently covered up by the Works. 	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
a.	<p><u>ON COMPLETION (Cont'd)</u></p> <p>Unless otherwise instructed by the S.O. in the event of the Contractor not clearing away the above mentioned materials and plant, temporary services and building or other than those which may be required as instructed, within the stipulated time, the Employer shall be empowered to perform such work, either employing a third party for such purpose or dealing with such direct and all the costs of such clearing away shall be deducted from the Contractor's Final Account.</p> <p>The Employer shall not be held responsible or liable for any material or plant left upon the site by the Contractor after the taking over of the site by the employer.</p> <p><u>As-Built Drawings</u></p> <p>On completion of the whole works under this Contract, the Contractor shall submit As-Built/Completed Drawings to the S.O. within three (3) months after the issuance of the Certificate of Practical Completion (C.P.C.) for approval. After the approval of the S.O., the Contractor shall submit that as-built drawings in the form of :-</p> <ul style="list-style-type: none"> i) Five (5) set reproducible transparent prints – loose copy. ii) Two (2) nos of Diskette/CD – digitized in Autocad Software. <p>The As-Built/Complete Drawings shall conform that the Works are wholly within the title boundaries such as :-</p> <ul style="list-style-type: none"> i) Architectural Landscape ii) Structural iii) Infrastructure works. iv) Mechanical & Electrical Works v) And all other related services. <p>The As-Built/Completed Drawings shall be prepared, endorsed and certified by a Licensed Professional Land Surveyor/Engineer/Architect and stamp as 'As-Built Drawing'.</p> <p>In the event the Contractor fails to submit the As-Built Drawings within three (3) months period, the S.O. shall appoint another party to undertake the above task and all cost incurred shall be deducted from the Contractor.</p> <p><u>PERFORMANCE WARRANTY</u></p> <p>On any material or goods supplied under this Contract where a performance warranty (manufacturer's and workmanship warranty) or guarantee is given by the manufacturer, the Contractor shall secure such warranty or guarantee in favour of the employer.</p> <p>The items and period of warranty are as follows :-</p> <ul style="list-style-type: none"> i) Anti-termite treatment (3 years) ii) Waterproofing (5 years) iii) Painting works (5 years) iv) UPVC Multilayer "Eco Roofing" (10 years) v) Aluminium works (5 years) 	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
	<p><u>PERFORMANCE WARRANTY</u></p> <p>Such warranty or guarantee shall commence from the date of practical completion and provided jointly and severally by the Contractor and the relevant manufacturers. The warranty shall be in the format as enclosed in the Appendix of Tender Document.</p> <p>On any material or goods supplied under this Contract where the manufacturer gives a warranty or guarantee, the Contractor shall secure such warranty or guarantee in favor of the employer. Such warranty or guarantee shall be provided jointly and severally by the Contractor and the relevant manufacturers and in the form to be approved by the Employer.</p> <p>a. <u>OTHER ITEM OF EXPENDITURE</u></p> <p>The Contractor is to allow here for any other items of expenditure, which are not allowed for elsewhere such as Holidays with pay, Public Holidays with Pay, Employees Provident Fund Contributions, Travelling Time and Fares and any costs due to importing labour from other districts, etc.</p> <p>The Contractor is to allow herein or elsewhere in his prices for all other works, which he considers necessary for the successful completion and efficient operation of the works and which may not be specifically mentioned in these documents. The Contractor is to insert herein the detail breakdown of items :-</p> <p>i)</p> <p>ii)</p> <p>iii)</p> <p>iv)</p> <p>v)</p>	
	TO COLLECTION	

ITEM	DESCRIPTION	AMOUNT
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	<p>BROUGHT FORWARD :</p>	
	<p>BILL NO 1 - PRELIMINARIES & GENERALLY CARRIED TO FINAL SUMMARY</p>	

BILL NO. 2 – PILING WORKS

BILL NO. 2 - PILING WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>(ALL PROVISIONAL)</u></p> <p><u>SPECIFICATION AND GENERAL LABOUR CLAUSES</u></p> <p>A For description of Material and Workmanship and General Labour applicable to this Bill, see Specification and Preambles To All Trades</p> <p><u>GENERALLY</u></p> <p>B The whole of the works is to be carried out in a manner approved by the S.O.</p> <p>C The Contractor shall deemed to have read the provision in the Specification in regard to piling works</p> <p>D He shall also note that his prices inserted against the items for provision, mobilisation and de-mobilisation of all necessary piling equipment, plant, tools and ancillaries are on a lump sum basis and are not adjustable whatsoever</p> <p>E The Contractor's prices shall be deemed to include for driving piles from any other level than the existing ground level</p> <p>F Piles shall be driven to the required set or otherwise directed by the S.O</p> <p>G The rates shall include fot handling, transporting, pitching and driving in singly and / or in cluster</p> <p>H All driving of piles shall be by hydraulic hammer as approved by the Local Authorities</p> <p>J The Contractor may carry out his own soil investigation in addition to any information that may be given and all costs in connection therewith are deemed to be included in his tender</p> <p>K The rates for piling shall include all items as described in Preambles To All Trades including wastage, carting away remaining materials etc.</p>				
	B2/1	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
A	<p><u>GENERALLY (cont'd)</u></p> <p>Piles shall be measured and paid for by linear metre. Regardless of the type of pile used and irrespective of the levels from which the piles are driven, the pay length piles for supply and driving shall be actual length driven as measured from toe of pile to the commencing surface of driving. The cut off level shall be 75mm above the base of pile cap or otherwise as shown on the drawing. No claims whatsoever will be entertained in this connection including any costs incurred due to change in pile depth on site.</p> <p>Allow for the protection, maintenance and removal of all existing services, pipes, chutes, sewers, manholes, mains, underground and overhead cables, street lights etc. during the execution of the Works</p> <p>Allow for the provision of bringing to site all required for this type of piling equipment, including any other necessary plant, tools and ancillaries, assembling and erecting and dismantling and removal off site on completion</p> <p>Allow for moving and handling piling equipment, plant, tools and ancillaries as often and whenever necessary for the whole operation including any necessary pontoon and/or barge board required for movement of the piling equipment and plant including idling time</p> <p>Allow for the provision of all temporary works including staging etc. for piles to be installed on slopes, edges of building platforms and the like</p> <p><u>PILING RECORDS</u></p> <p>Allow for the submission of piling results as described duly signed by the Contractor and S.O.'s representatives and delivering same to the S.O. as work proceeds. The Contractor should submit one set of as-built tracings on polyester film on piling completion including of as built works on autocad diskette when directed by the S.O</p> <p>Allow for the submission of piling setting out drawings as described duly signed by licensed surveyor before proceeding with other works</p>	ITEM ITEM ITEM ITEM ITEM			
	B2/2	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>PRECAST CONCRETE RC PILE</u>				
A	Supply and deliver 250mm x 250mm initial / head pile with pointed shoes in 12.00m length (In No. 229 Nos.)	M	2748		
B	Supply and deliver 250mm x 250mm extension pile in 12.00m length (In No. 458 Nos.)	M	5496		
	<u>Uplift, handle, transport, and pitch pile</u>				
C	Uplift from stack on site, handle, transport, and pitch 250mm x 250mm precast reinforced concrete piles	No	687		
	<u>Drive (initial / extension) 250mm x 250mm diameter precast concrete pile to the required set from finished platform level</u>				
D	Pile not exceeding 10.00m deep	M	2290		
E	Pile exceeding 10.00m and not exceeding 13.00m deep	M	687		
F	Pile exceeding 13.00m and not exceeding 16.00m deep	M	687		
G	Pile exceeding 16.00m and not exceeding 19.00m deep	M	687		
H	Pile exceeding 19.00m and not exceeding 22.00m deep	M	687		
J	Pile exceeding 22.00m and not exceeding 25.00m deep	M	687		
K	Pile exceeding 25.00m and not exceeding 28.00m deep	M	687		
L	Pile exceeding 28.00m and not exceeding 31.00m deep	M	687		
M	Pile exceeding 32.00m and not exceeding 34.00m deep	M	687		
N	Pile exceeding 35.00m and not exceeding 37.00m deep	M	458		
P	Exceeding 38.00m and above	M	Rate Only		
	B2/3	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>PRECAST CONCRETE RC PILE</u>				
	<u>Pile connection</u>				
A	Perimeter fillet well around to concrete male and female plate of 250mm x 250mm precast concrete pile as shown in the drawings.	No	458		
	<u>Cut off pile head</u>				
B	Cut off or break away head of 250mm x 250mm precast concrete pile at required level including trimming, stripping, dressing for key, straightening and bending rods in position for pile cap connection and remove debris off site	No	229		
	<u>TESTING</u>				
	<u>Dynamic Pile Test</u>				
C	Provide all equipment, pile hammer etc. for carrying out "Dynamic Pile Test" to a max working load of 40 tonne on 250mm x 250mm precast concrete pile by using a Pile Driving Analyser (PDA) as described including preparation of pile head and submission of analysis and test report and all incidental costs before and during the execution of the pile test	No	15		
	<u>(END OF ALL PROVISIONAL)</u>				
	B2/4	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u> PAGE B2/1 PAGE B2/2 PAGE B2/3 PAGE B2/4	. . . .	. . . .	. . . .
	<u>BILL NO. 2 - PILING WORKS</u> TOTAL CARRIED TO FINAL SUMMARY B2/S				

BILL NO. 3 – BUILDING WORKS

BILL NO. 3.1 – BLOK HAB KOMUNITI

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXCAVATION WORK</u>				
	<u>Excavate, get out, well ram and and cart away from site, level, grade and ram bottom</u>				
A	Reduce level average 500mm deep	M2	2,873		
	<u>Excavate, get out, part return, fill in, well ram and remainder load and cart away from site, level, grade and ram bottom, trim sides planking and strutting to</u>				
B	Pile cap not exceeding 1.50m deep	M3	171		
C	Pile cap exceeding 1.50m and not exceeding 3.00m deep	M3	42		
	Ground beam not exceeding 1.50m deep	M3	184		
	<u>Hardcore/crusher run as described, spread, levelled, well rammed and consolidated, watered and blinded on top with and to receive concrete including trimming base of excavation : -</u>				
D	150mm thick underneath ground slab	M2	2,577		
E	150mm thick underneath apron slab	M2	296		
F	One layer of 0.25mm high performance polythene sheetmoisture barrier laid on hardcore (measured separately) with 150mm laps joint (measured nett-no allowance made for laps)	M2	2,873		
	<u>CONCRETE WORK</u>				
	<u>Lean concrete Grade 15 blinding with surfaces finished level to receive concrete including where necessary trimming base of excavation : -</u>				
G	50mm thick blinding beneath pile cap	M2	114		
H	50mm thick blinding beneath ground beam	M2	238		
J	50mm thick blinding beneath ground slab	M2	2,577		
K	50mm thick blinding beneath apron slab	M2	296		
B3.1/A/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described in:-</u>				
A	Pile cap	M3	70		
B	Column stump	M3	25		
C	Ground beam	M3	137		
D	200mm thick ground slab	M2	2		
E	175mm thick ground slab	M2	1,129		
F	150mm thick ground slab	M2	1,177		
G	125mm thick ground slab	M2	269		
H	110mm thick apron slab	M2	296		
	<u>REINFORCEMENT</u>				
	<u>Mild steel bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Column stump</u>				
J	10mm diameter rod as links and stirrups	Kg	1,330		
	<u>Ground beam</u>				
K	16mm diameter rod as links and stirrups	Kg	5,220		
L	12mm diameter rod as links and stirrups	Kg	600		
M	10mm diameter rod as links and stirrups	Kg	80		
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position (Cont'd) :-</u>				
	<u>Pile cap</u>				
N	20mm diameter rod	Kg	8,470		
P	16mm diameter rod	Kg	370		
Q	12mm diameter rod	Kg	380		
R	10mm diameter rod as links and stirrups	Kg	1,630		
B3.1/A/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>REINFORCEMENT (CONT'D)</u>				
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position (Cont'd) : -</u>				
	<u>Column stump</u>				
A	25mm diameter rod	Kg	2,330		
B	20mm diameter rod	Kg	890		
C	16mm diameter rod	Kg	700		
D	10mm diameter rod as links and stirrups	Kg	500		
	<u>Ground beam</u>				
E	25mm diameter rod	Kg	12,480		
F	20mm diameter rod	Kg	3,070		
G	16mm diameter rod	Kg	2,280		
H	12mm diameter rod	Kg	2,040		
	<u>Ground slab</u>				
J	10mm diameter rod	Kg	2,560		
	<u>Fabric reinforcement cut to size</u>				
K	One layer of BRC No. A10 fabric reinforcement in ground slab	M2	530		
L	One layer of BRC No. A8 fabric reinforcement in ground slab	M2	1,640		
M	One layer of BRC No. A7 fabric reinforcement in ground slab	M2	140		
N	One layer of BRC No. B8 fabric reinforcement in ground slab	M2	260		
P	One layer of BRC No. B7 fabric reinforcement in ground slab	M2	860		
Q	One layer of BRC No. B6 fabric reinforcement in ground slab	M2	1,610		
B3.1/A/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>FORMWORK</u>				
	<u>Sawn formwork as described to concrete works :-</u>				
A	To sides of pile cap	M2	257		
B	To sides of column stump	M2	244		
C	To sides of ground beam	M2	1,343		
D	To edge of concrete exceeding 100mm not exceeding 200mm high	M	404		
	<u>RAMP</u>				
E	Construct and complete reinforced concrete ramp with groove line overall size 6650mm length x 2400mm width complete with 150mm thick concrete works, reinforcement, formwork and non-slip tiles finishes and other realated works. All per Architect's drawing E3/1088/2022/MBIP/PKD/DTL/WD-01 (Ramp 1)	No	1		
F	Ditto, overall size 3500mm x 1500mm width, ditto. (Ramp 2)	No	1		
G	Ditto, overall size 1500mm x 2400mm width, ditto. (Ramp 3)	No	1		
H	Ditto, overall size 2000mm x 1200mm width, ditto. (Ramp 4)	No	1		
J	Ditto, overall size 1200mm x 600mm width, ditto. (Ramp 5)	No	1		
K	Ditto, overall size 2200mm x 1200mm width, ditto. (Ramp 6)	No	2		
	<u>PLANTER BOX</u>				
	<u>Construct and complete planter box, complete with excavation work, sub structure and super structure work, brickwall with 20mm thick plastering on both side and the surface to be decorate including approved pebble wash finish, 20mm diameter spout pipe discharge, 250mm high top soil and all other necessary works all as per Architect's Drawing E3/1088/2022/MBIP/PKD/FD/WD-01,02,03</u>				
L	Overall size 6350mm x 1200mm x 1000mm high	No.	1		
M	Overall size 6530mm x 1200mm x 1000mm high	No.	1		
N	Overall size 5150mm x 1200mm x 1000mm high	No.	2		
B3.1/A/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>ANTI-TERMITE TREATMENT</u> <u>Chemical Treatment Against Subterranean Termite :-</u> Impregnation of chemical for termite control applied in four stages strictly in accordance with the manufacturer's and specialist contractor's recommendation and instruction	Item			
	B3.1/A/4	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u> PAGE B3.1/A/1 PAGE B3.1/A/2 PAGE B3.1/A/3 PAGE B3.1/A/4	-	-	-	
		-	-	-	
		-	-	-	
		-	-	-	
	<u>ELEMENT A - WORK BELOW LOWEST FLOOR LEVEL</u> TOTAL CARRIED TO BILL SUMMARY				
	B3.1/A/S				

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described :-</u>				
A	Column	M3	101		
B	Stiffner	M3	47		
C	Floor beam	M3	85		
D	Landscape pump room beam	M3	1		
E	Façade beam	M3	9		
F	Roof beam	M3	93		
	<u>REINFORCEMENT</u>				
	<u>Mild steel bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Column</u>				
G	10mm diameter rod as links and stirrups	Kg	18,250		
	<u>Stiffener</u>				
H	6mm diameter rod as links and stirrups	Kg	138		
	<u>Floor beam</u>				
J	10mm diameter rod as links and stirrups	Kg	3,650		
	<u>Landscape pump room beam</u>				
K	10mm diameter rod as links and stirrups	Kg	40		
	<u>Façade beam</u>				
L	10mm diameter rod as links and stirrups	Kg	360		
	<u>Roof beam</u>				
M	10mm diameter rod as links and stirrups	Kg	3,520		
B3.1/B/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>REINFORCEMENT (CONT'D)</u>				
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position : -</u>				
	<u>Column</u>				
A	25mm diameter rod	Kg	2,920		
B	20mm diameter rod	Kg	740		
C	16mm diameter rod	Kg	3,670		
D	12mm diameter rod	Kg	2,090		
	<u>Stiffener</u>				
E	10mm diameter rod	Kg	1,028		
	<u>Floor beam</u>				
F	25mm diameter rod	Kg	5,230		
G	20mm diameter rod	Kg	1,370		
H	16mm diameter rod	Kg	1,400		
J	12mm diameter rod	Kg	2,030		
	<u>Landscape pump room beam</u>				
K	16mm diameter rod	Kg	20		
L	12mm diameter rod	Kg	50		
	<u>Façade beam</u>				
M	20mm diameter rod	Kg	20		
N	16mm diameter rod	Kg	150		
P	12mm diameter rod	Kg	340		
B3.1/B/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>REINFORCEMENT (CONT'D)</u>				
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position : -</u>				
	<u>Roof beam</u>				
A	25mm diameter rod	Kg	2,770		
B	20mm diameter rod	Kg	780		
C	16mm diameter rod	Kg	790		
D	12mm diameter rod	Kg	2,670		
	<u>FORMWORK</u>				
	<u>Use and waste of sawn formwork : -</u>				
E	To sides of column	M2	912		
F	To sides of stiffner	M2	399		
G	To sides and soffit of floor beam	M2	989		
H	To sides and soffit of landscape pump room beam	M2	11		
J	To sides and soffit of façade beam	M2	124		
K	To sides and soffit of roof beam	M2	1,023		
B3.1/B/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>COLLECTION</u></p> <p>PAGE B3.1/B/1</p> <p>PAGE B3.1/B/2</p> <p>PAGE B3.1/B/3</p>	<p>-</p> <p>-</p> <p>-</p>			
<p><u>ELEMENT B - FRAME</u></p> <p>TOTAL CARRIED TO BILL SUMMARY</p> <p>B3.1/B/S</p>					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<p><u>PRECAST CONCRETE</u></p> <p>Reinforced vibrated precast concrete Grade 30 as described including all moulds, hoisting and setting in cement mortar (1:3) :-</p> <p>125mm x 200mm lintol reinforced with and including 2 nos. 10mm diameter top and bottom high tensile rod hooked at ends and 10mm diameter mild steel links at 200mm centres</p> <p><u>BRICKWORK</u></p> <p>Construct to manufacturer's specification IBS lightweight block wall including setting-out, level to receive lintels, build in all necessary fixtures and ties including provision of average 30mm levelling course (1:6 to cement:sand mortar), damp proof course for ground floor, wet area, floor and flat slab, steel brackets to r.c. members, r.c. stiffeners and tie beams to details as required and necessary (including stiffeners to fire door supports), lightweight block wall thin joint mortar to block joints, r.c. lintels over openings, weak mortar (1:6 to cement-sand) in-fill to gaps, unloading and hoisting, hand tools and equipment for the completion of work in the following sizes.</p>	M	224		
B	<p>150mm thick lightweight blocks in walls indicated on architectural plans</p> <p><u>SUNDRIES</u></p>	M2	2,140		
C	<p>Bituminous felt horizontal damp-proof course 150mm wide well lapped at joints laid on brickwall on and including 19mm thick cement and sand (1:1) bed coated with hot bitumen</p>	M	196		
D	<p>6mm diameter mild steel rod 350mm long as bonding tie, one end cast into concrete other end built into joint of brickwall</p> <p><u>ALUMINIUM ANODIZED LATTICE</u></p> <p>Supply and install the following 100mm x 150mm x 1.2mm thick powder coated aluminium box louver, blade spacing c/c 250mm, complete with aluminium hollow section and all fixed in position all as per Architect's approval and manufacturer's instruction</p>	No	1,440		
E	<p>Aluminium vertical lattice @ box louver</p>	M	1,930		
B3.1/C/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>STAINLESS STEEL WALL GUARD</u> Supply and install approved 50mm diameter stainless steel wall guard, at 300mm high, complete with all necessary fittings, fixings and necessary accessories and fixed in position all as per Achitect's approval and manufacturer's detail	M	15		
	50mm diameter stainless steel wall guard				
B	<u>GLAZING WORKS</u> <u>Supply and install frameless fixed glass panel including 12mm thick tempered glass panels complete with aluminium post and spider-web connecting system to specialist detailed and joint with silicon finish and all other fittings and fixing to position all in accordance with manufacturer's instructions all as per Architect's drawing No. E3/1088/2022/MBIP/PKD/MH/WD-01 and S.O. approval :-</u>	M2	118		
	Tempered frameless glass				
B3.1/C/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B3.1/C/1	-			
	PAGE B3.1/C/2	-			
<u>ELEMENT C - EXTERNAL WALL</u> TOTAL CARRIED TO BILL SUMMARY B3.1/C/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<p><u>PRECAST CONCRETE</u></p> <p><u>Reinforced vibrated precast concrete Grade 30 as described including all moulds, hoisting and setting in cement and mortar (1:3) :-</u></p> <p>150mm x 250mm lintol reinforced with and including 2 nos. 12mm diameter top and bottom high tensile rod hooked at ends and 6mm diameter mild steel links at 200mm centres</p> <p><u>BRICKWORK</u></p> <p><u>Construct to manufacturer's specification IBS lightweight block wall including setting-out, level to receive lintels, build in all necessary fixtures and ties including provision of average 30mm levelling course (1:6 to cement:sand mortar), damp proof course for ground floor, wet area, floor and flat slab, steel brackets to r.c. members, r.c. stiffeners and tie beams to details as required and necessary (including stiffeners to fire door supports), lightweight block wall thin joint mortar to block joints, r.c. lintels over openings, weak mortar (1:6 to cement-sand) in-fill to gaps, unloading an hoisting, hand tools and equipment for the completion of work in the following sizes.</u></p>	M	64		
B	<p>150mm thick lightweight blocks in walls indicated on architectural plans</p> <p><u>SUNDRIES</u></p>	M2	2,195		
C	<p>Bituminous felt horizontal damp-proof course 150mm wide well lapped at joints laid on brickwall on and including 19mm thick cement and sand (1:1) bed coated with hot bitumen</p>	M	231		
D	<p>6mm diameter mild steel rod 350mm long as bonding tie, one end cast into concrete other end built into joint of brickwall</p> <p><u>TOILET CUBICLE</u></p> <p><u>Supply, install and approved 2100mm high approved cubicle wall using standard colour 'toilet cubicle' wall and door system, complete with ironmongery and all other necessary fixing accessories all in accordance with the manufacturer's instructions and recommendations</u></p>	No	960		
E	<p>2100mm high to toilet wall</p>	M2	114		
B3.1/D/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>TOILET CUBICLE</u> Supply, install and approved 1200mm high approved cubicle wall using standard colour 'toilet cubicle' wall and door system, complete with ironmongery and all other necessary fixing accessories all in accordance with the manufacturer's instructions and recommendations	M2	5		
	1200mm high to urinal partition				
B	<u>GLAZING WORKS</u> Approved 12mm thk tempered glass wall generally constructed with 100mm high stainless steel bottom trim, 50mm high stainless steel top trim, GI steel bottom track, bolt anchored to floor c/w rubber sealant accessories and fixings all in accordance with the manufacturer's details and instructions	M2	10		
	12mm thk tempered glass railing				
B3.1/D/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u> PAGE B3.1/D/1 PAGE B3.1/D/2	- -		. .	
ELEMENT D - INTERNAL WALL TOTAL CARRIED TO BILL SUMMARY B3.1/D/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>STAIRCASE 1</u>				
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described : -</u>				
A	Suspended staircase	M3	3		
B	Suspended landing slab	M3	1		
C	Suspended landing beam	M3	1		
	<u>REINFORCEMENT</u>				
	<u>Mild steel bar in reinforcement to concrete works generally, including all cutting, bending and placing in position</u>				
	<u>Suspended landing beam</u>				
D	10mm diameter rod	Kg	40		
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position : -</u>				
	<u>Suspended staircase</u>				
E	12mm diameter rod	Kg	460		
	<u>Suspended landing slab</u>				
F	12mm diameter rod	Kg	70		
	<u>Suspended landing beam</u>				
G	20mm diameter rod	Kg	30		
H	16mm diameter rod	Kg	20		
	<u>FORMWORK</u>				
	<u>Sawn formwork as described to concrete works</u>				
J	To sloping soffit of suspended staircase	M2	11		
K	To soffit of landing slab	M2	4		
L	To side and soffit of landing beam	M2	6		
B3.1/E/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>STAIRCASE 1 (Cont'd)</u></p> <p><u>FORMWORK</u></p> <p><u>Sawn formwork as described to concrete works</u></p> <p>A To edge of undercut riser exceeding 100mm and not exceeding 200mm high of staircase</p> <p>B To open edge of concrete staircase with 275mm thread and 164.3mm undercut riser including cutting to profile of tread and riser.</p> <p><u>METALWORK</u></p> <p><u>The following in stainless steel handrailing and balustrading including all necessary shop and site fabrication ,welding, cutting and fixing in position etc:-</u></p> <p>C 1000mm mild steel railing complete with selected mesh wire grill railing to manufacturer's detail, with 50mm x 50mm x 3mm thick mild steel balustrade welded to 25mm x 50mm x 3mm thick handrail and 50mm x 5mm thick mild steel plate and 6mm thick mild steel plate welded to mild steel balustrade with mild steel capping and fixed to concrete staircase with bolt and nut including all necessary jointing and fixing accessories all as per Architect Drawing</p> <p><u>FINISHES</u></p> <p><u>Screeding</u></p> <p><u>Cement and sand (1:3) to receive porcelain tiles :-</u></p> <p>D 13mm thk screeded to staircase & landing slab</p> <p>E Ditto, backing to skirting 100mm high</p> <p>F Ditto, backing to riser 164.3mm high</p>	M	37		
		M	16		
		M	10		
		M2	47		
		M	53		
		M	37		
B3.1/E/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>STAIRCASE 1 (Cont'd)</u></p> <p><u>Porcelain Tiles - Matt Finish</u></p> <p><u>Approved 300mm x 600mm porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u></p>				
A	To staircase & landing slab	M2	47		
B	Finish to skirting 100mm high	M2	53		
C	Finish to riser 164.3mm high -----	M2	37		
D	10mm anti slip groove nosing for steps	M	38		
	<p><u>Apply approved skimcoat or equivalent to a smooth finish to all internal wall and r.c. structures surfaces (sills, returns, corners, projections and other wall surface profiles included) including preparing, levelling and making good of surface to receive skimcoat and provision of fibremesh to required areas.</u></p>				
E	4mm thick plainface to concrete soffit and sides of slab	M2	4		
F	4mm thick plainface to sloping concrete soffit	M2	17		
G	4mm thick plainface to edge of staircase	M	16		
	<p><u>PAINTING AND DECORATION</u></p> <p><u>Prepare and apply one coat of wall sealer or other equivalent and two coats of emulsion paint or other approved equivalent externally on surfaces of (all painting works should be done by certified painter)</u></p>				
H	To concrete soffit and sides of slab	M2	4		
J	To sloping concrete soffit	M2	17		
K	To edge of staircase	M	16		
B3.1/E/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>STAIRCASE 2</u>				
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described : -</u>				
A	Suspended staircase	M3	3		
B	Suspended landing slab	M3	1		
C	Suspended landing beam	M3	1		
	<u>REINFORCEMENT</u>				
	<u>Mild steel bar in reinforcement to concrete works generally, including all cutting, bending and placing in position</u>				
	<u>Suspended landing beam</u>				
D	10mm diameter rod	Kg	60		
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position : -</u>				
	<u>Suspended staircase</u>				
E	12mm diameter rod	Kg	450		
	<u>Suspended landing slab</u>				
F	12mm diameter rod	Kg	180		
	<u>Suspended landing beam</u>				
G	20mm diameter rod	Kg	50		
H	16mm diameter rod	Kg	40		
	<u>FORMWORK</u>				
	<u>Sawn formwork as described to concrete works</u>				
J	To sloping soffit of suspended staircase	M2	11		
K	To soffit of landing slab	M2	5		
L	To side and soffit of landing beam	M2	8		
B3.1/E/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>STAIRCASE 2 (Cont'd)</u>				
	<u>FORMWORK</u>				
A	To edge of undercut riser exceeding 100mm and not exceeding 200mm high of staircase	M	35		
B	To open edge of concrete staircase with 275mm thread and 164.3mm undercut riser including cutting to profile of tread and riser.	M	17		
	<u>METALWORK</u>				
	<u>The following in stainless steel handrailing and balustrading including all necessary shop and site fabrication ,welding, cutting and fixing in position etc:-</u>				
C	1000mm mild steel railing complete with selected mesh wire grill railing to manufacturer's detail, with 50mm x 50mm x 3mm thick mild steel balustrade welded to 25mm x 50mm x 3mm thick handrail and 50mm x 5mm thick mild steel plate and 6mm thick mild steel plate welded to mild steel balustrade with mild steel capping and fixed to concrete staircase with bolt and nut including all necessary jointing and fixing accessories all as per Architect Drawing	M	10		
	<u>FINISHES</u>				
	<u>Screeding</u>				
	<u>Cement and sand (1:3) to receive porcelain tiles :-</u>				
D	To staircase & landing slab	M2	42		
E	Ditto, backing to skirting 100mm high	M	52		
F	Ditto, backing to riser 164.3mm high	M	35		
B3.1/E/5		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>STAIRCASE 2 (Cont'd)</u></p> <p><u>Porcelain Tiles - Matt Finish</u></p> <p><u>Approved 300mm x 600mm porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u></p>				
A	To staircase & landing slab	M2	42		
B	Finish to skirting 100mm high	M2	52		
C	Finish to riser 164.3mm high -----	M2	35		
D	10mm anti slip groove nosing for steps	M	35		
	<p><u>Apply approved skimcoat or equivalent to a smooth finish to all internal wall and r.c. structures surfaces (sills, returns, corners, projections and other wall surface profiles included) including preparing, levelling and making good of surface to receive skimcoat and provision of fibremesh to required areas.</u></p>				
E	4mm thick plainface to concrete soffit and sides of slab	M2	5		
F	4mm thick plainface to sloping concrete soffit	M2	19		
G	4mm thick plainface to edge of staircase	M	17		
	<p><u>PAINTING AND DECORATION</u></p> <p><u>Prepare and apply one coat of wall sealer or other equivalent and two coats of emulsion paint or other approved equivalent externally on surfaces of (all painting works should be done by certified painter)</u></p>				
H	To concrete soffit and sides of slab	M2	5		
J	To sloping concrete soffit	M2	19		
K	To edge of staircase	M	17		
B3.1/E/6		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>STAIRCASE 3</u>				
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described : -</u>				
A	Suspended staircase	M3	3		
B	Suspended landing slab	M3	1		
C	Suspended landing beam	M3	1		
	<u>REINFORCEMENT</u>				
	<u>Mild steel bar in reinforcement to concrete works generally, including all cutting, bending and placing in position</u>				
	<u>Suspended landing beam</u>				
D	10mm diameter rod	Kg	40		
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position : -</u>				
	<u>Suspended staircase</u>				
E	12mm diameter rod	Kg	380		
	<u>Suspended landing slab</u>				
F	12mm diameter rod	Kg	120		
	<u>Suspended landing beam</u>				
G	20mm diameter rod	Kg	30		
H	16mm diameter rod	Kg	20		
	<u>FORMWORK</u>				
	<u>Sawn formwork as described to concrete works</u>				
J	To sloping soffit of suspended staircase	M2	11		
K	To soffit of landing slab	M2	4		
L	To side and soffit of landing beam	M2	5		
B3.1/E/7		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>STAIRCASE 3 (Cont'd)</u></p> <p><u>FORMWORK</u></p> <p><u>Sawn formwork as described to concrete works</u></p> <p>A To edge of undercut riser exceeding 100mm and not exceeding 200mm high of staircase</p> <p>B To open edge of concrete staircase with 275mm thread and 164.3mm undercut riser including cutting to profile of tread and riser.</p> <p><u>METALWORK</u></p> <p><u>The following in stainless steel handrailing and balustrading including all necessary shop and site fabrication ,welding, cutting and fixing in position etc:-</u></p> <p>C 1000mm mild steel railing complete with 50mm x 50mm x 3mm thick mild steel balustrade welded to 25mm x 50mm x 3mm thick handrail and 50mm x 5mm thick mild steel plate and 6mm thick mild steel plate welded to mild steel balustrade with mild steel capping and fixed to concrete staircase with bolt and nut including all necessary jointing and fixing accessories all as per Architect Drawing</p> <p><u>FINISHES</u></p> <p><u>PAVING</u></p> <p><u>Cement and sand (1:3) finished with a steel trowel</u></p> <p>D 20mm thick paving to floor finished to fall to staircase and slab</p> <p>E 20mm thick to riser 164.3mm high -----</p> <p>F 10mm anti slip groove nosing for steps</p>				
		M	35		
		M	17		
		M	10		
		M2	54		
		M	35		
		M	36		
B3.1/E/8		TO COLLECTION			

TO COLLECTION

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u> PAGE B3.1/E/1 PAGE B3.1/E/2 PAGE B3.1/E/3 PAGE B3.1/E/4 PAGE B3.1/E/5 PAGE B3.1/E/6 PAGE B3.1/E/7 PAGE B3.1/E/8 PAGE B3.1/E/9	- - - - - - - -			
<u>ELEMENT E - STAIRCASE, STEPS AND RAMP</u> TOTAL CARRIED TO BILL SUMMARY B3.1/E/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described :-</u>				
A	200mm thick floor slab	M2	42		
B	175mm thick floor slab	M2	427		
C	150mm thick floor slab	M2	142		
D	125mm thick floor slab	M2	109		
	<u>REINFORCEMENT</u>				
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Floor slab</u>				
E	10mm diameter rod	Kg	2,190		
	<u>Fabric reinforcement cut to size</u>				
F	One layer of BRC No. A10 fabric reinforcement in floor slab with 230mm side and end laps (measured nett as allowance made for laps)	M2	209		
G	One layer of BRC No. A8 fabric reinforcement in floor slab	M2	175		
H	One layer of BRC No. A7 fabric reinforcement in floor slab	M2	75		
J	One layer of BRC No. B12 fabric reinforcement in floor slab	M2	24		
K	One layer of BRC No. B10 fabric reinforcement in floor slab	M2	136		
L	One layer of BRC No. B8 fabric reinforcement in floor slab	M2	103		
M	One layer of BRC No. B7 fabric reinforcement in floor slab	M2	130		
N	One layer of BRC No. B6 fabric reinforcement in floor slab	M2	526		
B3.1/F/1		TO COLLECTION			

Bill No. 3.1 - Hab Komuniti
Element F - Upper Floor Construction

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>FORMWORK</u>				
	<u>Use and waste of sawn formwork : -</u>				
A	To soffit of suspended slab	M2	720		
B	To edge of concrete exceeding 100mm and not exceeding 200mm high	M	11		
B3.1/F/2		TO COLLECTION			

Bill No. 3.1 - Hab Komuniti
Element F - Upper Floor Construction

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B3.1/F/1	-			
	PAGE B3.1/F/2	-			
<u>ELEMENT F - UPPER FLOOR CONSTRUCTION</u> TOTAL CARRIED TO BILL SUMMARY B3.1/F/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described</u>				
A	200mm thick roof slab	M2	45		
B	175mm thick roof slab	M2	64		
C	150mm thick roof slab	M2	344		
	<u>REINFORCEMENT</u>				
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Roof Slab</u>				
D	12mm Diameter bar; straight and bend	Kg	160		
E	10mm Diameter bar; straight and bend	Kg	690		
	<u>Fabric reinforcement cut to size</u>				
F	One layer of BRC No. A10 fabric reinforcement in floor slab with 230mm side and end laps (measured nett as allowance made for laps)	M2	101		
G	One layer of BRC No. A8 fabric reinforcement in floor slab	M2	290		
H	One layer of BRC No. B7 fabric reinforcement in floor slab	M2	46		
J	One layer of BRC No. B6 fabric reinforcement in floor slab	M2	11		
	<u>FORMWORK</u>				
	<u>Sawn formwork as described to concrete works</u>				
K	To soffit of roof slab	M2	453		
L	To edge of concrete exceeding 100mm and not exceeding 200mm high	M	181		
B3.1/G/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>WATERPROOFING</u>				
	<u>Cement and sand (1:3) bed finished with a wood trowel a smooth and level surfaces to receive water proofing membrane</u>				
A	12mm thick to roof slab finished to fall	M2	453		
	<u>Approved water proofing membrane laid in strict accordance with the manufacturer's instructions and recommendation (measured nett and no allowance made for laps)</u>				
B	To roof slab finished to fall	M2	453		
C	To 300mm high, upturn	M	181		
	<u>Cement and sand (1:3) protective screed finished with a steel trowel to a smooth and level surface</u>				
D	25mm Thick to roof slab finished to fall	M2	453		
	<u>Ponding Test</u>				
E	Allow for performing ponding test as required by the S.O. over areas of waterproofed roof slab to ensure watertightness inclusive of provision of water, pumps, temporary walling, etc., and make good all defective areas and leave perfect	Item			
	<u>STRUCTURAL METALWORK FABRICATED</u>				
	<u>Supply, fabricate, install and fixing all necessary the following hot dip galvanised steel stucture all bolted and welded together including all shop and site welding, filling smooth junctions, hoisting, and fixing approximately 7.50m (maximum) above ground level complete with preparing and applying paint as described before fixing all in accordance with the manufacturer's instructions and recommendations</u>				
F	356 x 368 x 129kg/m as specified steel column (UC)	KG	6,170		
G	305 x 102 x 25kg/m as specified tie beam (UB)	KG	5,590		
B3.1/G/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>STEEL ROOF TRUSS</u></p> <p><u>ROOF TRUSSES AND FRAMING</u></p> <p><u>The following 2 no. roof trusses (ENTRANCE TRUSS TYPE A) size at 12.0m span, framed and welded together, hoisting and fixing approximately 9.0m above ground level including painting, labours, materials and appliance in shop and site condition.</u></p>				
A	<p>305 x 165 x 54kg/m as specified in the drawings no. IRFA/PD/23002/DBI_DEWAN/ST/BIST-06</p> <p><u>The following 1 no. roof trusses (ENTRANCE TRUSS TYPE B) size at 15.0m span, framed and welded together, hoisting and fixing approximately 9.0m above ground level including painting, labours, materials and appliance in shop and site condition</u></p>	KG	1,290		
B	<p>305 x 165 x 54kg/m as specified in the drawings no. IRFA/PD/23002/DBI_DEWAN/ST/BIST-06</p> <p><u>The following 1 no. roof trusses (ENTRANCE TRUSS TYPE C) size at 15.0m span, framed and welded together, hoisting and fixing approximately 9.0m above ground level including painting, labours, materials and appliance in shop and site condition</u></p>	KG	810		
C	<p>305 x 165 x 54kg/m as specified in the drawings no. IRFA/PD/23002/DBI_DEWAN/ST/BIST-06</p> <p><u>The following 3 no. roof trusses (TRUSS TYPE A) size at 40.90m span, framed and welded together, hoisting and fixing approximately 10.50m above ground level including painting, labours, materials and appliance in shop and site condition.</u></p>	KG	810		
D	610 x 324 x 154.8kg/m as specified in the drawings no. IRFA/PD/23002/DBI_DEWAN/ST/BIST-03	KG	11,890		
E	610 x 324 x 154.8kg/m (half cut) as specified in the drawings no. IRFA/PD/23002/DBI_DEWAN/ST/BIST-03	KG	4,290		
F	406 x 140 x 46.0kg/m as specified in the drawings no. IRFA/PD/23002/DBI_DEWAN/ST/BIST-03	KG	1,970		
B3.1/G/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>STEEL ROOF TRUSS (CONT'D)</u></p> <p><u>ROOF TRUSSES AND FRAMING (CONT'D)</u></p> <p><u>The following 2 no. roof trusses (TRUSS TYPE B) size at 40.90m span, framed and welded together, hoisting and fixing approximately 10.50m above ground level including painting, labours, materials and appliance in shop and site condition.</u></p>				
A	610 x 324 x 154.8kg/m as specified in the drawings no. IRFA/PD/23002/DBI_DEWAN/ST/BIST-04	KG	7,190		
B	610 x 324 x 154.8kg/m (half cut) as specified in the drawings no. IRFA/PD/23002/DBI_DEWAN/ST/BIST-04	KG	1,450		
C	406 x 140 x 46.0kg/m as specified in the drawings no. IRFA/PD/23002/DBI_DEWAN/ST/BIST-04	KG	1,260		
	<p><u>The following 2 no. roof trusses (TRUSS TYPE C) size at 40.90m span, framed and welded together, hoisting and fixing approximately 10.50m above ground level including painting, labours, materials and appliance in shop and site condition.</u></p>				
D	406 x 140 x 46.0kg/m as specified in the drawings no. IRFA/PD/23002/DBI_DEWAN/ST/BIST-05	KG	3,760		
E	406 x 140 x 46.0kg/m (half cut) as specified in the drawings no. IRFA/PD/23002/DBI_DEWAN/ST/BIST-05	KG	280		
	<p><u>The following 2 no. roof trusses (TRUSS GUTTER), framed and welded together, hoisting and fixing approximately 10.5m above ground level including painting, labours, materials and appliance in shop and site condition</u></p>				
F	RHS 100mm x 50mm x 5.0mm thick x 10.9kg as specified in the drawings no. IRFA/PD/23002/DBI_DEWAN/ST/BIST-05	Kg	1,440		
B3.1/G/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>STEEL ROOF TRUSS (CONT'D)</u> <u>ROOF TRUSSES AND FRAMING (CONT'D)</u> <u>Galvanised Iron as specified :-</u>				
A	203m x 76mm x 23.82kg/m C - Channel as purlin <u>Mild steel plate rafter, purlins, sag rod, connection etc. fixing in positions including painting before and after fixing</u>	Kg	53,890		
B	10mm diameter anti sag rod with turnbuckle <hr/>	No	200		
C	Allow for all necessary bolts and nuts with washers, m.s base plates, steel plate, connection plate, stiffner plate, angle plate and base plate, splice, J-bolts, bolts, complete with head, nut and washers, cement grout, and including drilling through steel, welding, filling smooth junctions and all necessary works	Item			
D	Allow for all necessary fillet weld all around to members <hr/>	Item			
E	<u>Metal Fascia Board as specified</u> 650mm high fascia board complete with side cap. All as per drawings E3/1088/2022/MBIP/PKD/MH/WD-01	M	198		
B3.1/G/5		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY'	RATE (RM)	AMOUNT (RM)
	<u>ROOF COVERING</u> <u>Metal Roofing</u> <u>Supply and install approved equivalent prepainted metal roofing sheet covered all surface complete with 20mm Polyurethane (PU Foam), prepainted metal sheet, including all necessary fixing accessories, corrosion protection, fixed in accordance with the manufacturer's instructions (measured nett and no allowance made for laps) (The Contractor is required to provide warranty from the product manufacturer)</u>				
A	0.48mm thick metal deck roofing sheet including top fixing fastener to mild steel purlin (measured separately) including all necessary accessories 5 degrees slope	M2	2,360		
B	Ditto, 3 degrees slope.	M2	180		
C	----- Approved ridge capping	M	58		
D	Approved 22 Gauge GI Flashing 1200mm girth bent, one edge tucked to brickwall and other edge dressed over roofing	M	110		
	<u>Galvanised Iron gutter</u> <u>Supply and fix or other approved equivalent for galvanised iron gutter and fittings used strictly in accordance with manufacturer's instruction :-</u>				
E	Approved galvanised iron gutter 450mm width, laid under roof trusses including all necessary fittings, fixings, accessories, painting etc. all accordance with the manufacturer's instruction	M	130		
B3.1/G/6		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>RAIN WATER DOWN PLUMBING INSTALLATION</u> <u>Unplasticised PVC pipe and fittings used strictly in accordance with manufacturer's instruction : -</u>				
A	150mm diameter rainwater down pipe cast in column	M	320		
B	150mm diameter rainwater down pipe laid in trench	M	30		
C	<u>Extra over</u> bend	No	90		
D	Supply and install dome grating including gutter inlet with sleeve to suit 150mm diameter rainwater downpipe	No	30		
B3.1/G/7		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u> PAGE B3.1/G/1 PAGE B3.1/G/2 PAGE B3.1/G/3 PAGE B3.1/G/4 PAGE B3.1/G/5 PAGE B3.1/G/6 PAGE B3.1/G/7	- - - - - - -			
<u>ELEMENT G - ROOF</u> TOTAL CARRIED TO BILL SUMMARY B3.1/G/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>ALUMINIUM WORK</u></p> <p>Supply and install the following 1.1mm thick aluminium frame windows and fixed panels complete with frames, coupling, transomes, mullions concealed top and bottom bolts, ironmongery, glazing, beads and including 8mm thick tinted glass as described and all other fittings and accessories and fixing complete in accordance to manufacturer's instructions and recommendations all as shown in Architect's schedule and detail drawings.</p> <p><u>Fixed Windows</u></p> <p>A Fixed window overall size 1000mm x 2400mm high, complete with 8mm thick 30% green tinted glass panel. (Typw W1)</p> <p><u>Top Hung Windows</u></p> <p>B Top hung window overall size 1200mm x 1500mm high comprising of 1 nos. of top hung window panel size 1200mm x 1500mm high, complete with 8mm thick 30% green tinted glass panel. (Type W2)</p> <p>C Top hung window overall size 2400mm x 600mm high comprising of 4 nos. of top hung window panel size 600mm x 600mm high, complete with 8mm thick frosted glass panel. (Type W4)</p> <p>D Top hung window overall size 1800mm x 600mm high comprising of 3 nos. of top hung window panel size 600mm x 600mm high, complete with 8mm thick frosted glass panel. (Type W5)</p> <p>E Top hung window overall size 1200mm x 600mm high comprising of 2 nos. of top hung window panel size 600mm x 600mm high, complete with 8mm thick frosted glass panel. (Type W6)</p> <p><u>Casement With Top Hung</u></p> <p>F Casement window with top hung above, overall size 1800mm x 2100mm high comprising of 3 nos. of casement with top hung window panel size 600mm x 2100mm high, complete with 8mm thick 30% green tinted glass panel. (Type W3)</p>	Nos.	36		
		Nos.	10		
		Nos.	12		
		Nos.	16		
		Nos.	4		
		Nos.	5		
B3.1/H/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>ALUMINIUM WORK (CONT'D)</u> <u>Supply and install frameless fixed glass panel including 12mm thick tempered glass panels with 30% green tinted, complete with aluminium post and spider-web connecting system to specialist detailed and joint with silicons finish and all other fittings and fixing to position all in accordance with manufacturer's instructions all as per Architect's schedule and detail drawings and S.O. approval :-</u> Tempered glass fixed window, overall size 2400mm x 1200mm high, complete with 12mm thick 30% green tinted glass panel. (Type W7)	Nos.	2		
B3.1/H/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u> PAGE B3.1/H/1 PAGE B3.1/H/2	-	.	.	
		-	.	.	
ELEMENT H - WINDOWS TOTAL CARRIED TO BILL SUMMARY B3.1/H/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>METAL DOOR FRAME</u></p> <p>Supply and fix approved 1.0mm thick metal door frame and infilled with cement grout, including all necessary bedding, fixing anchors, and fixing accessories, covered all surface with hot dip galvanised all in accordance to the manufacturer's instructions, S.O. approval and as per Arhitect's drawing :-</p>				
A	Overall size 1800mm x 2100mm high (Type D3)	Nos.	6		
B	Overall size 1800mm x 2100mm high (Type D4)	Nos.	5		
C	Overall size 900mm x 2100mm high (Type D5)	Nos.	2		
D	Overall size 900mm x 2100mm high (Type D6)	Nos.	11		
E	Overall size 900mm x 2100mm high (Type D7)	Nos.	6		
F	Overall size 1100mm x 2100mm high (Type D8)	Nos.	1		
G	Overall size 900mm x 1500mm high (Type D10)	Nos.	5		
H	Overall size 1800mm x 2100mm high (Type D11)	Nos.	3		
J	Overall size 900mm x 2100mm high (Type D12)	Nos.	3		
K	Overall size 1200mm x 2100mm high (Type D13)	Nos.	1		
	<p><u>FRAMELESS GLASS DOOR</u></p> <p>Supply and install the following frameless 12mm thick tempered glass door complete with all necessary fittings, ironmongeries, accessories(measured separately) all accordance to the manufacturer's instruction, S.O approval and as per Architect's drawing.</p>				
L	Double leaf frameless tinted glass door overall size 2000mm x 2400mm high (Type D1)	No	3		
M	Single leaf frameless tinted glass door overall size 1000mm x 2400mm (Type D2)	No	1		
B3.1/J/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CARPENTRY AND JOINERY</u>				
	<u>Wrot and framed "pressure treated" Grade 'A' timber all in accordance to the manufacturer's instruction, S.O approval and as per Arhitect's drawing :-</u>				
	<u>Solid Timber Decorative Door</u>				
A	Approved double leaf solid engineered timber door overall size 1800mm x 200mm high, to manufacturer's detail and hung in position with butt hinges (measured separately) (Type D3)	No	6		
B	Approved single leaf solid engineered timber door overall size 900mm x 200mm high, to manufacturer's detail and hung in position with butt hinges (measured separately) (Type D5)	No	2		
	<u>Timber Flush Door</u>				
	<u>Solid timber flush door complete with all necessary fittings, ironmongeries & accessories (measured separately) and selected finishes all in accordance manufacturer's instruction, S.O approval and as per Architect's drawing :-</u>				
C	Approved double leaf solid timber flush door overall size 1800mm x 2100mm high (Type D4)	No	5		
D	Approved single leaf solid timber flush door overall size 900mm x 2100mm high (Type D6)	No	11		
E	Approved single leaf solid timber flush door overall size 900mm x 2100mm high, complete with 300mm high stainless steel sheet water barrier. (Type D7)	No	6		
F	Approved single leaf solid timber flush door overall size 1100mm x 2100mm high, complete with 300mm high stainless steel sheet water barrier. (Type D8)	No	1		
	<u>Aluminium Frame Louvres Door</u>				
G	Supply and fix approved aluminium frame louvres door overall size 900mm x 1500mm high including all necessary ironmongeries and other accessories (measured separately) accordance with the manufacturer's detail and Architect's drawings. (Type D10)	No	5		
B3.1/J/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>Fire Rated Door</u> <u>One-hour fire-rated door complete with all necessary fittings, ironmongery, accessories, 1.0mm thick mild steel door frame including intumescent strip to frame obtained from an approved manufacturer and to the approval of the Inspectorate of Fire Services requirement all in accordance to the manufacturer's instruction S.O approval and as per Architect's drawing:-</u>				
A	Approved double leaves fire door overall size 1800 x 2100mm high (Type D11)	No	3		
B	Approved single leaf fire door overall size 900 x 2100mm (Type D12)	No	3		
C	Approved single leaf fire door overall size 1200 x 2100mm (Type D13)	No	1		
	<u>Cubicle Door</u> <u>Cubicle door complete with all necessary fittings, ironmongeries, accessories (measured separately) and mild steel frame all in accordance manufacturer's instruction, S.O approval and as per Arhitect's drawing :-</u>				
D	Overall size 750mm x 2100mm high (Type D9)	No	22		
	<u>Roller Shutter</u> <u>Supply and install the following highspeed PVC roller shutter door with transparent polycarbonate, complete with roller drum, guides, mullions and all fittings and accessories all in accordance to the manufacturer's instruction</u>				
E	Approved roller shutter to suit opening size 4500mm x 2600 mm high (Type RS1)	No	3		
F	Approved motorized roller shutter to suit opening size 3500mm x 2600 mm high. (Type RS2)	No	1		
G	Approved roller shutter to suit opening size 6100mm x 2600 mm high (Type RS3)	No	2		
H	Approved motorized roller shutter to suit opening size 6100mm x 2600 mm high. (Type RS3a)	No	2		
B3.1/J/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>Roller Shutter</u> <u>Supply and install the following metal frame roller shutter complete with roller drum, guides, mullions and all fittings and accessories all in accordance to the manufacturer's instruction</u>				
A	Approved roller shutter to suit opening size 8400mm x 2600 mm high (Type RS4)	No	2		
B	Approved motorized roller shutter to suit opening size 8400 x 2600 mm high (Type RS4a)	No	2		
B3.1/J/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B3.1/J/1	-	.	.	
	PAGE B3.1/J/2	-	.	.	
	PAGE B3.1/J/3	-	.	.	
	PAGE B3.1/J/4	-	.	.	
<u>ELEMENT J - DOORS</u> TOTAL CARRIED TO BILL SUMMARY B3.1/J/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>IRONMONGERY</u> Supply and fix the following ironmongery as specified or other equal and approved equivalent to hardwood including providing requisite matching screws and fixing accessories as approved by the S.O. <u>NON-FIRE RATED DOORS</u> <u>HINGE(S)</u> A Approved 4" X 3.0" X 2.5MM SUS 304 2BB STAINLESS STEEL HINGE B Approved BTS84 EN 3/4 HOLD OPEN FLOOR SPRING WITH SS COVER <u>DOOR CLOSER</u> C Approved TS68 EN2/3/4 DOOR CLOSER /W STANDARD ARM IN SILVER FINISH D Approved TS68 EN2/3/4 HOLD OPEN DOOR CLOSER /W STANDARD ARM IN SILVER FINISH E Approved TS83 DC EN 3--6 EASY ACTION STANDARD ARM DOOR CLOSER WITH DELAYED ACTION IN SILVER FINISH F Approved S/STEEL DOOR SELECTOR <u>LOCKSETS</u> G Approved DST 281a 60MM X 72MM SASHLOCK MORTISE COMPLETE WITH STRIKE PLATE H Approved DST 288a 60MM BS DEADLOCK MORTISE COMPLETE WITH STRIKE PLATE <u>LEVER HANDLE</u> J Approved PURE 8906 SS HOLLOW LEVER HANDLE WITH ROUND ROSE & ESCUTCHEON				
		Nos	160		
		Nos	7		
		Sets	33		
		Sets	10		
		Sets	1		
		Nos	11		
		Sets	23		
		Sets	11		
		Pairs	22		
B3.1/K/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>IRONMONGERY (CONT'D)</u>				
	<u>CYLINDERS</u>				
A	Approved PC83 THUMBTURN KEY CYLINDER IN SSS FINISH W 3 KEYS -- 6 PINS EURO PROFILE CYLINDER SYSTEM	Nos	18		
B	Approved PC82 DOUBLE KEY CYLINDER IN SSS FINISH W 3 KEYS -- 6 PINS EURO PROFILE CYLINDER SYSTEM	Nos	15		
C	Approved PC45 SINGLE CYLINDER IN SSS FINISH W 3 KEYS -- 6 PINS EURO PROFILE CYLINDER SYSTEM	Nos	6		
D	Approved PC93--WC PRIVACY CYLINDER IN SSS FINISH	Nos	2		
E	Approved SS FINISH EURO PROFILE ROUND	Nos	16		
F	Approved S/STEEL REBATED PART TO SUIT LOCK	Nos	11		
G	Approved S/STEEL FBB 200 MM BOX TYPE FLUSH BOLT	Nos	11		
H	Approved S/STEEL FBB 300 MM BOX TYPE FLUSH BOLT	Nos	11		
J	Approved DUST PROOF SOCKET	Nos	11		
K	Approved S/STEEL HAT & COAT HOOK	Nos	1		
L	Approved 70MM BRASS BALL CATCH	Nos	5		
M	Approved S/STEEL TW150MM x 19MM D--PULL HANDLE	Nos	5		
N	Approved 300MM X 200MM X 1.2MM PUSH PLATE IN S/STEEL FINISH	Nos	6		
P	Approved TW 300, 300MM X 19MM D--SHAPE PULL HANDLE IN S/STEEL FINISH	Nos	6		
Q	Approved TG 300, 300MM X 19MM D--SHAPE PULL HANDLE (BACK--TO--BACK) IN S/STEEL FINISH	Pairs	1		
B3.1/K/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>IRONMONGERY (CONT'D)</u>				
	<u>CYLINDERS</u>				
A	Approved 1000MM x 38MM (DIA) H--SHAPE PULL HANDLE (BACK--TO--BACK) IN SS FINISH (TIMBER APPLICATION)	Pairs	8		
B	Approved 1000MM x 38MM (DIA) H--SHAPE PULL HANDLE (BACK--TO--BACK) IN SS FINISH (TGLASS APPLICATION)	Pairs	7		
C	Approved 300MM X 900MM X 1.2MM KICK PLATE IN S/STEEL FINISH	Nos	6		
D	Approved 300MM X 1200MM X 1.2MM KICK PLATE IN S/STEEL FINISH	Nos	1		
	<u>PATCH FITTING</u>				
E	Approved MUNDUS COMFORT PT10 LOWER PATCH FITTING IN PSS FINISH FOR 8 -- 12MM GLASS	Sets	7		
F	Approved MUNDUS COMFORT PT20 TOP PATCH FITTING WITH SOCKET FOR PIVOT IN PSS FINISHING FOR 8 -- 12MM GLASS	Sets	7		
G	Approved MUNDUS COMFORT US10 PATCH LOCK IN PSS FINISHING FOR 8 -- GLASS	Sets	7		
H	Approved MUNDUS PT24 TOP PIVOT SCREW ON CEILING IN SSS FINISHING	Nos	7		
	<u>SURCHARGE</u>				
J	Approved MASTERKEY SYSTEM SURCHARGE	CYLS	54		
	<u>FIRE RATED DOORS</u>				
	<u>HINGE(S)</u>				
K	Approved 4" X 3.5" X 3MM 2BB S/STEEL BUTT HINGE (3091F)	Nos	40		
B3.1/K/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>IRONMONGERY (CONT'D)</u>				
	<u>DOOR CLOSER</u>				
A	Approved TS68 EN2/3/4 BC DOOR CLOSER /W STANDARD ARM IN SILVER FINISH	Sets	9		
B	Approved TS83 BC EN 3--6 EASY ACTION STANDARD ARM DOOR CLOSER IN SILVER FINISH	Sets	1		
C	Approved SS DOOR SELECTOR FOR FIRE RATED DOOR	Nos	3		
	<u>LOCKSETS</u>				
D	Approved DST 381e MORTICE ANTI PANIC LOCK (BACKSET: 60 MM) IN SQUARE FOREND C/W STRIKE PLATE	Sets	7		
	<u>LEVER HANDLE</u>				
E	Approved PURE 8906 SS HOLLOW LEVER HANDLE WITH ROUND ROSE & ESCUTCHEON	Pairs	7		
	<u>CYLINDERS</u>				
F	Approved PC83 THUMBTURN KEY CYLINDER IN SSS FINISH W 3 KEYS -- 6 PINS EURO PROFILE CYLINDER SYSTEM	Nos	2		
G	Approved PC82 DOUBLE KEY CYLINDER IN SSS FINISH W 3 KEYS -- 6 PINS EURO PROFILE CYLINDER SYSTEM	Nos	5		
	<u>ACCESSORIES</u>				
H	Approved S/STEEL REBATED PART TO SUIT MORTICE LOCK	Nos	3		
J	Approved AUTO FLUSH BOLT	Nos	6		
K	Approved DUST PROOF SOCKET	Nos	3		
	<u>SURCHARGE</u>				
L	Approved MASTERKEY SYSTEM SURCHARGE	CYLS	12		
B3.1/K/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>COLLECTION</u></p> <p>PAGE B3.1/K/1</p> <p>PAGE B3.1/K/2</p> <p>PAGE B3.1/K/3</p> <p>PAGE B3.1/K/4</p>	<p>-</p> <p>-</p> <p>-</p> <p>-</p>			
<p><u>ELEMENT K - IRONMONGERY</u></p> <p>TOTAL CARRIED TO BILL SUMMARY</p> <p>B3.1/K/S</p>					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXTERNAL WALL FINISHES</u>				
	<u>Skim Coat</u> <u>Apply approved skimcoat or equivalent to a smooth finish to all external wall and r.c. structures surfaces (sills, returns, corners, projections and other wall surface profiles included) including preparing, levelling and making good of surface to receive skimcoat and provision of fibremesh to required areas.</u>				
A	4mm thick plainface to wall and column	M2	2,705		
	<u>Precast Concrete Block Decorative Panel</u>				
B	Approved precast concrete block decorative panel, complete with all necessary fittings, fixings and necessary accessories and fixed in position all as per Achitect's approval and manufacturer's detail	M2	287		
	<u>INTERNAL WALL FINISHES</u>				
	<u>Skim Coat</u> <u>Apply approved skimcoat or equivalent to a smooth finish to all internal wall and r.c. structures surfaces (sills, returns, corners, projections and other wall surface profiles included) including preparing, levelling and making good of surface to receive skimcoat and provision of fibremesh to required areas.</u>				
C	4mm thick plainface to wall and column	M2	4,529		
	<u>Tiling</u> <u>Cement and sand (1:3) to receive ceramic wall tiles :-</u>				
D	13mm thk screeded backing	M2	444		
	<u>Cement and sand (1:3) to receive porcelain wall tiles :-</u>				
E	13mm thk screeded backing	M2	57		
B3.1/L/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>INTERNAL WALL FINISHES (cont'd)</u></p> <p><u>Tiling (Cont'd)</u></p> <p><u>Ceramic Wall Tiles - Gloss Finish</u></p> <p><u>Approved 300mm x 600mm ceramic wall tiles or other approved equivalent bedded in cement and sand mortar (1:3) pointed in matching colour cement and laid on screeded backings (measured separately) to required pattern:-</u></p>				
A	<p>To wall and column</p> <p><u>Approved 300mm x 600mm ceramic wall tiles or other approved equivalent bedded in cement and sand mortar (1:3) pointed in matching colour cement and laid on screeded backings (measured separately) to required pattern:-</u></p>	M2	138		
B	<p>To wall and column</p> <p><u>Approved 300mm x 600mm ceramic wall tiles or other approved equivalent bedded in cement and sand mortar (1:3) pointed in matching colour cement and laid on screeded backings (measured separately) to required pattern:-</u></p>	M2	68		
E	<p>To wall and column</p> <p><u>Approved 300mm x 600mm ceramic wall tiles or other approved equivalent bedded in cement and sand mortar (1:3) pointed in matching colour cement and laid on screeded backings (measured separately) to required pattern:-</u></p>	M2	114		
F	<p>To wall and column</p> <p><u>Approved 300mm x 600mm ceramic wall tiles or other approved equivalent bedded in cement and sand mortar (1:3) pointed in matching colour cement and laid on screeded backings (measured separately) to required pattern:-</u></p>	M2	110		
G	<p>To wall and column</p>	M2	14		
B3.1/L/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>INTERNAL WALL FINISHES (cont'd)</u></p> <p><u>Tiling (cont'd)</u></p> <p><u>Porcelain Wall Tiles - Gloss Finish</u></p> <p><u>Approved 600mm x 600mm porcelain wall tiles or other approved equivalent bedded in cement and sand mortar (1:3) pointed in matching colour cement and laid on screeded backings (measured separately) to required pattern:-</u></p>				
A	To wall and column	M2	57		
	<p><u>ACCOUSTIC WALL SYSTEM</u></p>				
B	Supply and install approved combination of high performance fabric acoustic wall lining system <u>or other and approved equivalent</u> c/w 50mm x 50mm timber hardwood c/w uPVC profiled alignment track in size of 50mm wide x 18mm high with centre slot for fabric tugging and jaw faced on both side for gripping of fabric, proprietary designed acoustic infill to meet the sound absorption co- efficient, set out 100mm from the plastered brick wall with system performance in compliance to the SIRIM Tested report, all finished with textured VENTI range of SIRIM tested acoustically transparent fabric (NRC:0.95) and approved perforated timber acoustic wall lining system <u>or other and approved equivalent</u> c/w 50mm thick timber framing c/w hook on bracket, propriety designed acoustic infill to meet the sound absorption co-efficient, set out 55mm- 70mm from the plastered brickwall with system performance in compliance to the SIRIM Tested Report, all finished with selected range of Melamine veneer. The front slots shall be 3mm wide at an interval of 13mm with back perforation of 12mm at an interval of 3mm. (NRC:0.70). All as per drawings no. E3/1088/2022/MBIP/PKD/MH/WD-01 and details drawings.	M2	1,015		
B3.1/L/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>INTERNAL WALL FINISHES (cont'd)</u> <u>WATER PROOFING</u> Supply and install in accordance with manufacturer's recommendation approved waterproofing system to 1.5m height to lightweight walls in wet areas subject to splashing (ie. toilet area, etc) and other areas as defined by S.O.				
A	To wall area, 1.50m high	M2	501		
B3.1/L/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B3.1/L/1	-	.	.	
	PAGE B3.1/L/2	-	.	.	
	PAGE B3.1/L/3	-	.	.	
	PAGE B3.1/L/4	-	.	.	
ELEMENT L - WALL FINISHES TOTAL CARRIED TO BILL SUMMARY B3.1/L/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXTERNAL FLOOR FINISHES</u>				
	<u>Paving</u>				
	<u>Cement and sand (1:3) finished with a steel trowel :-</u>				
A	20mm thick paving to floor finished to fall to slab	M2	233		
	<u>Screeding</u>				
	<u>Cement and sand (1:3) to receive porcelain tiles :-</u>				
B	13mm thk screeded bed	M2	1,133		
C	13mm thk screeded backing to skirting 100mm high	M	113		
	<u>Cement and sand (1:3) to receive ceramic tiles :-</u>				
D	13mm thk screeded backing to skirting 100mm high	M	262		
	<u>Tiling</u>				
	<u>Porcelain Tiles - Matt Finish</u>				
	<u>Approved 600mm x 600mm porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
E	To floor	M2	535		
F	Finish to up 100mm high	M	86		
	<u>Approved 600mm x 600mm porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
G	To floor	M2	477		
B3.1/M/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXTERNAL FLOOR FINISHES (Cont'd)</u>				
	<u>Porcelain Tiles - Structure Finish</u>				
	<u>Approved 300mm x 600mm porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
A	To floor	M2	121		
B	Finish to up 100mm high	M	27		
	<u>Ceramic Wall Tiles - Gloss Finish</u>				
	<u>Approved 300mm x 600mm ceramic tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
C	Finish to skirting 100mm high	M	262		
	<u>Artificial Turfing</u>				
	Supply and lay artificial turfing, laid with and including adhesive bonding system c/w bonding agent, complete with and including all necessary fixings fittings and accessories all in accordance to the manufacturer's instruction as described:-				
D	To floor	M	121		
	<u>INTERNAL FLOOR FINISHES</u>				
	<u>Paving</u>				
	<u>Cement and sand (1:3) finished with a steel trowel :-</u>				
E	20mm thick paving to floor finished to fall to slab	M2	205		
F	Finish to up 50mm high	M	5		
B3.1/M/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>INTERNAL FLOOR FINISHES</u>				
	<u>Screeding</u>				
	<u>Cement and sand (1:3) to receive porcelain tiles : -</u>				
A	13mm thk screeded bed	M2	1,208		
B	Ditto, backing to skirting 100mm high	M	529		
C	Ditto, backing to up 100mm high	M	10		
D	Ditto, backing to drop 75mm high	M	2		
E	Ditto, backing to drop 50mm high	M	19		
	<u>Cement and sand (1:3) to receive ceramic tiles : -</u>				
F	13mm thk screeded backing to skirting 100mm high	M2	115		
	<u>Board Flooring</u>				
	<u>Supply and lay 600mm wide board flooring, laid with and including adhesive bonding system c/w bonding agent, complete with and including all necessary fixings fittings and accessories all in accordance to the manufacturer's instruction as described:-</u>				
G	To floor	M	79		
	<u>Sports System Flooring</u>				
	<u>Supply and install approved indoor sports floorings or other approved equivalent as finishing works, including all necessary connections, fixings, accessories, hoisting and fixing in position in accordance with the manufacturer's instruction. All as per drawing E3/1088/2022/MBIP/PKD/MH/WD-01</u>				
H	Extreme Sport or other approved equivalent : 6.0mm thickness color oak/maple or solid colors	M2	922		
J	Supply and lay approved self leveling compound, 3mm thick max	M2	922		
K	Supply and lay approved moisture barrier compound	M2	922		
L	Allow for mobilization & demobilization equipment upon construction & completion of works.	sum			
B3.1/M/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>INTERNAL FLOOR FINISHES (cont'd)</u>				
	<u>Tiling (cont'd)</u>				
	<u>Tiling</u>				
	<u>Porcelain Tiles - Polished Finish</u>				
	<u>Approved 600mm x 600mm porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
A	To floor	M2	171		
B	Finish to skirting 100mm high	M	237		
	<u>Approved 600mm x 600mm porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
C	To floor	M2	69		
D	Finish to skirting 100mm high	M	47		
	<u>Porcelain Tiles - Matt Finish</u>				
	<u>Approved 300mm x 600mm porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
E	To floor	M2	292		
F	Finish to skirting 100mm high	M	85		
B3.1/M/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>INTERNAL FLOOR FINISHES (cont'd)</u>				
	<u>Tiling (cont'd)</u>				
	<u>Porcelain Tiles - Matt Finish</u>				
	<u>Approved 300mm x 600mm porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
A	To floor	M2	20		
B	Finish to drop 50mm high	M	4		
	<u>Approved 300mm x 600mm porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
C	To floor	M2	157		
D	Finish to skirting 100mm high	M	54		
	<u>Approved 600mm x 600mm porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
E	To floor	M2	261		
F	Finish to skirting 100mm high	M	90		
B3.1/M/5		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>INTERNAL FLOOR FINISHES (cont'd)</u>				
	<u>Tiling (cont'd)</u>				
	<u>Porcelain Tiles - Structure Finish</u>				
	<u>Approved 300mm x 600mm porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
A	To floor	M2	90		
B	Finish to up 100mm high	M	4		
	<u>Rectified Porcelain Tiles - Matt Finish</u>				
	<u>Approved 300mm x 600mm rectified porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
A	To floor	M2	74		
B	Finish to skirting 100mm high	M	16		
C	Finish to up 100mm high	M	3		
D	Finish to drop 75mm high	M	1		
E	Finish to drop 50mm high	M	6		
B3.1/M/6		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>INTERNAL FLOOR FINISHES (cont'd)</u></p> <p><u>Tiling (cont'd)</u></p> <p><u>Rectified Porcelain Tiles - Matt Finish</u></p> <p><u>Approved 300mm x 600mm rectified porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u></p>				
A	To floor	M2	68		
B	Finish to up 100mm high	M	3		
C	Finish to drop 75mm high	M	1		
D	Finish to drop 50mm high	M	9		
	<p><u>Approved 300mm x 600mm rectified porcelain tiles laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u></p>				
E	To floor	M2	6		
	<p><u>Ceramic Wall Tiles - Gloss Finish</u></p> <p><u>Approved 300mm x 600mm ceramic wall tiles or other approved equivalent bedded in cement and sand mortar (1:3) pointed in matching colour cement and laid on screeded backings (measured separately) to required pattern:-</u></p>				
F	Finish to skirting 100mm high	M2	115		
B3.1/M/7		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>INTERNAL FLOOR FINISHES (cont'd)</u>				
	<u>Heavy Duty Epoxy</u>				
	<u>Prepare and apply 'Heavy Duty' epoxy flooring system to levelled concrete inclusive of coat with concrete curing compound all in accordance to manufacturers recommendation and S.O approval</u>				
A	To floor	M2	115		
	<u>WATERPROOFING</u>				
	<u>Approved water proofing membrane laid in strict accordance with the manufacturer's instructions and recommendation (measured nett and no allowance made for laps)</u>				
B	To floor area, finished to fall	M2	1,592		
C	To 300mm high, upturn	M	666		
	<u>PONDING TEST</u>				
D	Allow for performing ponding test as required by the S.O. over areas of waterproofed roof slab to ensure watertightness inclusive of provision of water, pumps, temporary walling, etc., and make good all defective areas and leave perfect	Item			
B3.1/M/8		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p style="text-align: center;"><u>COLLECTION</u></p> <p>PAGE B3.1/M/1</p> <p>PAGE B3.1/M/2</p> <p>PAGE B3.1/M/3</p> <p>PAGE B3.1/M/4</p> <p>PAGE B3.1/M/5</p> <p>PAGE B3.1/M/6</p> <p>PAGE B3.1/M/7</p> <p>PAGE B3.1/M/8</p>	- - - - - - - -	. . . . . . . . . . . . . . .	. . . . . . . . . . . . . . .
ELEMENT M - FLOOR FINISHES					
TOTAL CARRIED TO BILL SUMMARY					
B3.1/M/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXTERNAL CEILING FINISHES</u> <u>Supply and install approved 100mm x 50mm x 0.5mm thk prepainted aluminium box ceiling c/w aluminium hollow carrier 38 m x 80mm x 1.0mm thk (colour powder coated) c/w GI rod hanger and bracket cover & end cap, including all standard fixing accessories all fixed accordance to manufacturer's instruction and Architect's approval.</u>				
A	General ceiling area <u>Supply and install approved pre-painted Aluminium Strip Ceiling, 100mm width x 0.55mm thick,; complete with G.I. Multi Carrier @ spacing at max.1200mm c/c to hold the panels, suspended multi carrier from the soffit by means of 14 gauge wire hanger and u-channel to perimeter of walls including all standard fixing accessories all fixed accordance to manufacturer's instruction and Architect's approval.</u>	M2	313		
B	General ceiling area <u>INTERNAL CEILING FINISHES</u> <u>Skim Coat</u> <u>Apply approved skimcoat or equivalent to a smooth finish to all external wall and r.c. structures surfaces (sills, returns, corners, projections and other wall surface profiles included) including preparing, levelling and making good of surface to receive skimcoat and provision of fibremesh to required areas.</u>	M2	643		
C	12.5mm thick plainface to concrete soffit and sides of slab <u>Supply and install combination of plaster ceiling and approved APC acoustic ceiling or other and approved equivalent in perforated c/w acoustic tissue, acoustic infill and including all necessary framing and as per specialist's details.</u>	M2	413		
D	General ceiling area	M2	720		
B3.1/N/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>INTERNAL CEILING FINISHES (cont'd)</u>				
	<u>Supply and install approved 12.5mm thick Standardcore fibrous plaster ceiling or other and approved equivalent as described complete with framing and suspension system and jointing all accessories in accordance with the manufactures instruction and architect's approval and Architect's detail drawing.</u>				
	General ceiling area	M2	1,155		
	<u>Supply and install approved 12.5mm thick Wetstop-moisture resistance cement fiber board ceiling or other and approved equivalent, complete with framing and suspension system and jointing all accessories in accordance with the manufactures instruction and architect's approval and Architect's detail drawing.</u>				
B	General ceiling area	M2	30		
C	Extra over access manholes of 450mm x 450mm including all necessary framing and painting	No	25		
B3.1/N/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B3.1/N/1	-	.	.	
	PAGE B3.1/N/2	-	.	.	
ELEMENT N - CEILING FINISHES TOTAL CARRIED TO BILL SUMMARY					
B3.1/N/S					

ELEMENT P - SANITARY WARES & FITTINGS

Bill No. 3.1 - Hab Komuniti

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>SANITARY FITTINGS</u></p> <p>Note :- <u>The sanitary wares and fittings as specified are as an indication of the quality required. Other manufacturer's or other brands are acceptable if the quality is equivalent and approved by the S.O.</u></p> <p><u>Supply and fix the following sanitary wares and fittings or other approved and equivalent as specified or other equal and approved equivalent complete with all necessary joints and connections to supply and waste pipes. All as per drawings.</u></p> <p><u>WATER CLOSET</u></p> <p>A Approved 4.5/3L close coupled WC set comprising of dual outlet close-coupled WC cistern complete with slim lid, 4.5/3L fittings, 2 nos of fixing bolts complete with stand, soft closed seat and cover, bent outlet connector (250mm "S" trap) and jointing to soil pipe as per drawings.</p> <p>B Approved 4.5/3L mid level cistern set squatting WC complete with lid and sec pipe, comprising of comprising of cistern complete with lid 50mm diameter, 4.5/3L mid level fittings complete with sec pipe and jointing to soil pipe as per drawings.</p> <p>C Approved reinforced flexible hose with angle valve, 400mm. All as per drawings.</p> <p>D Approved angle valve with bidet complete set with ABS hand spray, 1.2m flexible hose and wall bracket. All as per drawings.</p> <p><u>URINAL</u></p> <p>E Approved urinal cleansing set comprising of urinal cleansing, ceramic waste, plastic flange, screws, washer & mastic, 2 nos of light urinal hangers, 4 nos. of fixing bolts (S8 RS 80Z), cleansing nozzle TI 320/455 and jointing to soil pie. All as per drawings.</p> <p>F Approved "17205" exposed urinal flush valve complete with straight pipe. All as per drawings.</p>	Nos	16		
		Nos	6		
		Nos	26		
		Set	22		
		Nos	7		
		Nos	7		
B3.1/P/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>SANITARY FITTINGS (CONT'D)</u>				
	<u>Supply and fix the following sanitary wares and fittings or other approved and equivalent as specified or other equal and approved equivalent complete with all necessary joints and connections to supply and waste pipes. All as per drawings.</u>				
	<u>WASH BASIN</u>				
A	Approved under counter basin comprising of 2 nos. of fixing clips, All as per drawings.	Nos	28		
B	Approved single lever 1/2" basin pillar tap without pop up waste and flexible hose. All as per drawings.	Nos	28		
C	Approved grated basin waste and chrome zinc bottle trap. All as per drawings.	Set	36		
D	Approved reinforced flexible hose with angle valve, 400mm. All as per drawings.	Nos	26		
	<u>SHOWER</u>				
E	Approved single lever concealed shower tap.	Nos	2		
F	Approved fixed shower head, 152mm diameter complete with shower arm.	Nos	2		
	<u>ACCESSORIES</u>				
G	Approved ablution tap complete with wall flange	Nos	4		
H	Approved washing machine tap complete with wall flange	Nos	2		
J	Approved deck mounted sink tap with swivel (L-Shape) spout & flange	Nos	5		
K	Approved reinforced flexible hose with angle valve, 400mm long as per drawings.	Nos	5		
L	Approved stainless steel single bowl. Single drainer kitchen sink, complete with standard waste and 38mm PVC bottle trap. All as per drawings.	Nos	5		
B3.1/P/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>SANITARY FITTINGS (CONT'D)</u></p> <p><u>Supply and fix the following sanitary wares and fittings or other approved and equivalent as specified or other equal and approved equivalent complete with all necessary joints and connections to supply and waste pipes. All as per drawings.</u></p> <p><u>ACCESSORIES</u></p> <p>A Approved wall mounted sink tap with swivel (L-Shape) spout & flange</p> <p>B Approved reinforced flexible hose with angle valve, 400mm long as per drawings.</p> <p>C Approved stainless steel double bowl double drainer kitchen sink complete with standard waste and 38mm PVC bottle trap. All as per drawings.</p> <p>D Approved semi-recessed paper holder in vitreous china complete with plastic roller. All as per drawings.</p> <p>E Approved 150mm x 150mm stainless steel floor trap (SUS304) with anti insect. All as per drawings.</p> <p><u>OKU Toilet</u></p> <p><u>WATER CLOSET</u></p> <p>F Approved 4.5/3L close coupled WC set comprising of dual outlet close-coupled WC cistern complete with slim lid, 4.5/3L fittings, 2 nos of fixing bolts complete with stand, soft closed seat and cover, bent outlet connector (250mm "S" trap) and jointing to soil pipe as per drawings.</p> <p>G Approved reinforced flexible hose with angle valve, 400mm long as per drawings.</p> <p>H Approved angle valve with bidet complete set with ABS hand spray, 1.2m flexible hose and wall bracket. All as per drawings.</p>				
		Nos	4		
		Nos	4		
		Nos	4		
		Nos	24		
		Nos	54		
		Nos	1		
		Nos	1		
		Set	1		
B3.1/P/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>SANITARY FITTINGS (CONT'D)</u></p> <p><u>Supply and fix the following sanitary wares and fittings or other approved and equivalent as specified or other equal and approved equivalent complete with all necessary joints and connections to supply and waste pipes. All as per drawings.</u></p> <p><u>OKU Toilet</u> <u>WASH BASIN</u></p> <p>A Approved handicap wall hung basin size 640 x 545 x 195 in vitreous china c/w fixing bolts and safety bracket. All as per drawings.</p> <p>B Approved deck mounted elbow action pillar tap. All as per drawings.</p> <p>C Approved grated basin waste and chrome zinc bottle trap. All as per drawings.</p> <p>D Approved reinforced flexible hose with angle valve, 400mm long as per drawings.</p> <p>E Approved semi-recessed toilet roll holder fixed to wall. All as per drawings.</p> <p>F Approved stainless steel L-shape grab bar size 750mm x 750mm. All as per drawings.</p> <p>G Approved wall hinged support rail. All as per drawings.</p> <p>H Approved horizontal bend grab bar. All as per drawings.</p> <p>J Approved 150mm x 150mm stainless steel floor trap (SUS304) with anti insect. All as per drawings.</p> <p><u>ACCESSORIES</u></p> <p>K Approved stainless steel liquid soap dispenser 800ml. All as per drawings.</p> <p>L Approved wall mounted paper dispenser 270mm diameter. All as per drawings.</p> <p>M Approved automatic fast drying hand dryer with warm air. All as per drawings.</p>				
B3.1/P/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>SANITARY FITTINGS (CONT'D)</u></p> <p><u>Supply and fix the following sanitary wares and fittings or other approved and equivalent as specified or other equal and approved equivalent complete with all necessary joints and connections to supply and waste pipes. All as per drawings.</u></p>				
A	450mm x 600mm x 6mm thick polished plate glass mirror with natural anodised aluminium edging all around with and including 6mm thick waterproofing plywood backing, hardwood support plugged and screwed to concrete or brickwall with chrome plated dome headed screws and fibre washers c/w 50mm width shadow gap to install light fittings all as per Architect's detail drawing	No	29		
B	On completion of the sanitary fittings installation, test all piping and fittings and leave complete installation in perfect working order and to the satisfaction of the S.O.	Item			
	<p><u>Builder's Work In Connection With Sanitary Fittings</u></p> <p><u>Kerb</u></p>				
C	Allow for construction of concrete kerb under the cubicle wall, overall size 150mm width x 150mm high including concrete works, reinforcement, formwork, tiles finishes, complete with all necessary works all as per drawing E3/1088/2022/MBIP/PKD/MH/WD-01	M	40		
D	Allow for construction of concrete ablution kerb, overall size 300mm width x 150mm high including concrete works, reinforcement, formwork, tiles finishes, complete with all necessary works all as per drawing E3/1088/2022/MBIP/PKD/MH/WD-01	M	4		
	<p><u>Counter top</u></p>				
E	Allow for construction of concrete table top overall size 1100mm x 600mm x 830mm high including concrete works, reinforcement, formwork, tiles finishes, complete with all necessary works all as per drawing E3/1088/2022/MBIP/PKD/GH/WD-01	No.	1		
F	Ditto, overall size 850mm x 600mm x 830mm high, ditto.	No.	1		
B3.1/P/5		TO COLLECTION			

Bill No. 3.1 - Hab Komuniti
Element P - Sanitary Wares & Fittings

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>Builder's Work In Connection With Sanitary Fittings</u>				
	<u>Counter top</u>				
A	Allow for construction of concrete table top overall size 1550mm x 600mm x 900mm high including concrete works, reinforcement, formwork, tiles finishes, complete with all necessary works all as per drawing E3/1088/2022/MBIP/PKD/GH/WD-01	No.	1		
B	Ditto, overall size 2700mm x 600mm x 900mm high, ditto	No.	1		
C	Ditto, overall size 3350mm x 600mm x 830mm thk ditto	No.	3		
D	Ditto, overall size 1500mm x 600mm x 830mm thk ditto	No.	1		
E	Ditto, overall size 2000mm x 600mm x 100mm thk ditto	No.	1		
F	Ditto, overall size 6675mm x 600mm x 100mm thk ditto	No.	1		
G	Ditto, overall size 4200mm x 600mm x 100mm thk ditto	No.	1		
H	Ditto, overall size 3600mm x 1200mm x 100mm thk ditto	No.	1		
J	Ditto, overall size 3050mm x 600mm x 100mm thk ditto	No.	1		
	<u>Concrete stooling</u>				
K	Allow for construction of concrete stooling overall size 1150mm x 850mm x 150mm high including concrete works, reinforcement, formwork, tiles finishes, complete with all necessary works all as per drawing E3/1088/2022/MBIP/PKD/MH/WD-01	No.	6		
B3.1/P/6		TO COLLECTION			

Bill No. 3.1 - Hab Komuniti
 Element P - Sanitary Wares & Fittings

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>COLLECTION</u></p> <p>PAGE B3.1/P/1</p> <p>PAGE B3.1/P/2</p> <p>PAGE B3.1/P/3</p> <p>PAGE B3.1/P/4</p> <p>PAGE B3.1/P/5</p> <p>PAGE B3.1/P/6</p>	-	.	.	
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<p><u>ELEMENT P - SANITARY WARES & FITTINGS</u></p> <p>TOTAL CARRIED TO BILL SUMMARY</p>					
B3.1/P/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>EXTERNAL WALL AND CEILING</u> <u>Prepare and apply approved one sealer coat of alkali-resisting primer and two coats of approved weatherbond paint or other approved equivalent externally on surfaces of (all painting works should be done by certified painter)</u>	M2	2,705		
	Plastered wall and column				
B	<u>INTERNAL WALL AND CEILING</u> <u>Prepare and apply approved one sealer coat of alkali-resisting primer and two coats of approved emulsion paint or other approved equivalent internally on surfaces of (all painting works should be done by certified painter)</u>	M2	4,529		
	Plastered wall and column				
C	Plastered concrete soffit	M2	413		
D	General surface of ceiling	M2	1,185		
E	<u>METALWORK</u> <u>Prepare and paint approved one coat of epoxy primer and two finishing coats of metallic paint or other approved equivalent (all painting works should be done by certified painter)</u>	M	226		
	Surfaces of door frame exceeding 200mm girth and not exceeding 300mm girth				
F	<u>WOODWORK</u> <u>Knot, prime, stop and paint approved one coat zinc cromate primer, one coat economy undercoat and two finishing coats of alkyd resin enamel paint or other approved equivalent as (all painting works should be done by certified painter)</u>	M2	212		
	General surfaces of doors				
ELEMENT Q - PAINTING AND DECORATION TOTAL CARRIED TO BILL SUMMARY					
B3.1/Q/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>WATER DISPENSER</u>				
	Supply and install approved water dispenser, in two (2) nos per set, 1 nos. for adult and 1 nos. for children. All as per drawings E3/1088/2022/MBIP/PKD/MH/WD-01	Set	3		
	<u>AUTOMATED EXTERNAL DEFIBRILLATORS (AED)</u>				
	Supply and install approved Automated External Defibrillators (AED), complete with wall cabinet, charts, signage, batteries, etc with and including all fittings, fixings and other related accessories. All as per drawings E3/1088/2022/MBIP/PKD/MH/WD-01	Set	2		
	<u>GAME LINES</u>				
	<u>Line Painting</u>				
	<u>Supply and lay approved epoxy paint or other equal and approved laid on surface cleaned from loose debris and dust all in strict accordance with the manufacturer's instructions and recommendation and approved by S.O. All as per drawing E3/1088/2022/MBIP/PKD/GH/WD-01</u>				
	C Badminton Courts	No.	4		
	D Basketball Courts	No.	1		
	<u>COURT ACCESSORIES</u>				
E	Supply and install portable badminton post complete with net and other related accessories (international standard) as per Architect and S.O approval	Set	4		
F	Supply and install portable umpire chair as per Architect and S.O approval	Nos.	4		
G	Supply and install portable basketball hoops complete with other related accessories, as per Architect and S.O approval	Nos.	2		
<u>ELEMENT R - SUNDRIES</u> TOTAL CARRIED TO BILL SUMMARY					
B3.1/R/S					

ELEMENT S - SIGNAGES

Bill No. 3.1 - Hab Komuniti

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>The following in Signages</u></p> <p><u>Supply and install ROOM SIGN, construct of 3mm thick Acrylic PVC Vacuum Forming, nailed to wall with wall plug, all to be use font type 'ARIAL NARROW', font colour 'WHITE' and patterned background colour in 'GRAY', all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-01</u></p> <p><u>Overall size 450mm x 200mm high (Type A)</u></p>				
A	'BILIK TAMU / HOLDING ROOM'	Nos.	1		
B	'TANDAS / TOILET'	Nos.	2		
C	'UTILITI / UTILITY'	Nos.	1		
D	'BILIK PERALATAN / EQUIPMENT ROOM'	Nos.	1		
E	'BILIK KAWALAN / CONTROL ROOM'	Nos.	1		
F	'KULINARI / CULINARY'	Nos.	2		
G	'BILIK AUDIO VISUAL / AUDIO VISUAL ROOM'	Nos.	1		
H	'BILIK KAKITANGAN / STAFF ROOM'	Nos.	1		
J	'BILIK MESYUARAT / MEETING ROOM'	Nos.	1		
	<u>Overall size 600mm x 200mm high (Type B)</u>				
K	'DAPUR & BILIK PERSEDIAAN / KITCHEN & PREPARATION ROOM'	Nos.	1		
L	'PERPUSTAKAAN DIGITAL / DIGITAL LIBRARY'	Nos.	1		
B3.1/S/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>The following in Signages</u> <u>Supply and install ROOM SIGN, construct of 3mm thick Clear Acrylic nailed to door surface with wall plug with capping, all to be use font type 'ARIAL NARROW', font colour 'WHITE' and patterned background colour in 'GRAY', all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-02</u> <u>Overall size 450mm x 200mm high (Type A)</u>				
A	'JANITOR / JANITOR'	Nos.	1		
B	'BILIK M&E / M&E ROOM'	Nos.	1		
C	'BILIK PAM / PUMP ROOM'	Nos.	1		
D	'TANDAS LELAKI / MALE TOILET'	Nos.	1		
E	'TANDAS WANITA / FEMALE TOILET'	Nos.	1		
F	'TANDAS OKU / DISABLE TOILET'	Nos.	1		
G	'PEJABAT / OFFICE'	Nos.	1		
H	'MBIP KIOSK / MBIP KIOSK'	Nos.	1		
J	'BILIK SERVER / SERVER ROOM'	Nos.	1		
K	'PANTRY / PANTRI'	Nos.	1		
L	'AHU 1'	Nos.	1		
M	'AHU 2'	Nos.	1		
N	'TANDAS LELAKI / MALE TOILET'	Nos.	1		
P	'TANDAS WANITA / FEMALE TOILET'	Nos.	1		
	<u>Overall size 600mm x 200mm high (Type B)</u>				
Q	'BILIK SOLAT & WUDUK (L) / PRAYER ROOM (M)'	Nos.	1		
R	'BILIK SOLAT & WUDUK (P) / PRAYER ROOM (F)'	Nos.	1		
B3.1/S/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>The following in Signages</u></p> <p><u>Supply and install GENDERS SIGN (PRAYER ROOM) & (TOILET), construct of 3mm thick Acrylic PVC Vacuum Forming, nailed to wall with wall plug, all to be use font type 'ARIAL NARROW', font colour 'WHITE' and patterned background colour in 'GRAY', all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-03 & 04</u></p> <p><u>Overall size 450mm x 900mm high</u></p> <p>A 'BILIK SOLAT & WUDUK (L)'</p> <p>B 'BILIK SOLAT & WUDUK (P)'</p> <p>C 'TANDAS LELAKI'</p> <p>D 'TANDAS WANITA'</p> <p>E 'TANDAS OKU'</p> <p><u>Supply and install GENDERS SIGN (BOTH SIDES), construct of 3mm thick Acrylic PVC Vacuum Forming, nailed to wall with wall plug, all to be use font type 'ARIAL NARROW', font colour 'WHITE' and patterned background colour in 'GRAY', all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-05</u></p> <p><u>Overall size 180mm x 300mm high</u></p> <p>F 'TANDAS LELAKI'</p> <p>G 'TANDAS WANITA'</p> <p>H 'TANDAS OKU'</p> <p>J 'BILIK SOLAT & WUDUK (L)'</p> <p>K 'BILIK SOLAT & WUDUK (P)'</p> <p>L 'TANDAS UNISEX'</p>	<p>Nos.</p> <p>Nos.</p> <p>Nos.</p> <p>Nos.</p> <p>Nos.</p> <p>Nos.</p> <p>Nos.</p> <p>Nos.</p> <p>Nos.</p> <p>Nos.</p> <p>Nos.</p> <p>Nos.</p> <p>Nos.</p>	<p>1</p> <p>1</p> <p>2</p> <p>2</p> <p>1</p> <p>2</p> <p>2</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p>		
B3.1/S/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>The following in Signages</u></p> <p><u>Supply and install NO SMOKING SIGN, construct of 3mm thick Clear Acrylic nailed to wall with wall plug with capping, all to be use font type 'ARIAL NARROW', font colour 'BLACK' and patterned background colour in WHITE', all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-06</u></p> <p><u>Overall size 900mm x 200mm high</u></p>				
A	<p>'DILARANG MEROKOK / NO SMOKING'</p> <p><u>Supply and install HOSE REEL SIGN, construct of 3mm thick Transparent Acrylic fixed to wall with double sided tape, all to be use font type 'ARIAL NARROW', font colour 'WHITE' and patterned background colour in RED', all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-06</u></p> <p><u>Overall size 160mm x 160mm high</u></p>	Nos.	10		
B	<p>'HOSE REEL SIGN'</p> <p><u>Supply and install DIRECTORY SIGNAGE 1, construct of 3mm thick Acrylic PVC Vacuum Forming, hanging with 25mm diameter steel support, all to be use font type 'ARIAL NARROW', font colour 'WHITE' and patterned background colour in 'GRAY' on both sides, all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-07</u></p> <p><u>Overall size 900mm x 400mm high</u></p>	Nos.	5		
A	<p>'DIRECTORY SIGNAGE 1 - SIDE A & SIDE B'</p>	Nos.	1		
B3.1/S/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>The following in Signages</u></p> <p><u>Supply and install DIRECTORY SIGNAGE 2, construct of 3mm thick Acrylic PVC Vacuum Forming, hanging with 25mm diameter steel support, all to be use font type 'ARIAL NARROW', font colour 'WHITE' and patterned background colour in 'GRAY' on both sides, all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-08</u></p> <p><u>Overall size 900mm x 400mm high</u></p>				
A	<p>'DIRECTORY SIGNAGE 2 - SIDE A & SIDE B'</p> <p><u>Supply and install DIRECTORY SIGNAGE 3, construct of 3mm thick Acrylic PVC Vacuum Forming, hanging with 25mm diameter steel support, all to be use font type 'ARIAL NARROW', font colour 'WHITE' and patterned background colour in 'GRAY' on both sides, all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-09</u></p> <p><u>Overall size 900mm x 250mm high</u></p>	Nos.	1		
B	<p>'DIRECTORY SIGNAGE 3 - SIDE A & SIDE B'</p> <p><u>Supply and install DIRECTORY SIGNAGE 4, construct of 3mm thick Acrylic PVC Vacuum Forming, hanging with 25mm diameter steel support, all to be use font type 'ARIAL NARROW', font colour 'WHITE' and patterned background colour in 'GRAY' on both sides, all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-10</u></p> <p><u>Overall size 900mm x 250mm high</u></p>	Nos.	1		
C	<p>'DIRECTORY SIGNAGE 4 - SIDE A & SIDE B'</p>	Nos.	1		
B3.1/S/5		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>The following in Signages</u></p> <p><u>Supply and install DIRECTORY SIGNAGE 5, DIRECTORY SIGNAGE 6, DIRECTORY SIGNAGE 7, construct of 3mm thick Acrylic PVC Vacuum Forming, nailed to wall with wall plug, all to be use font type 'ARIAL NARROW', font colour 'WHITE' and patterned background colour in 'GRAY', all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-11</u></p> <p><u>Overall size 450mm x 900mm high</u></p> <p>A 'DIRECTORY SIGNAGE 5'</p> <p><u>Overall size 450mm x 600mm high</u></p> <p>B 'DIRECTORY SIGNAGE 6'</p> <p>C 'DIRECTORY SIGNAGE 7'</p> <p><u>BUILDING SIGNAGES</u></p> <p><u>Supply and install various height lettering (750mm and 375mm high) and MBIP logo (900mm high), using 1.2mm thick polycarbonate back lit lighting box-up for lettering and logo, individual wall plug to be fitted on building wall, all to be use font type 'Arial Bold', colour and patterned background all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-14</u></p> <p>D " HAB KOMUNITI @ BUKIT INDAH (complete with MBIP logo & MBIP lettering) (at Building Wall)</p>	<p>Nos.</p> <p>Nos.</p> <p>Nos.</p> <p>No.</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p>		
B3.1/S/6		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>The following in Signages</u></p> <p><u>STALL SIGNAGES</u></p> <p><u>Supply and install STALL SIGNAGES, construct of 3mm thick Transparent Acrylic with 35mm x 35mm mild steel frame and aluminium edge frame, all to be use font type 'ARIAL' and MBIP logo with printed GRAY PVC Transparent sticker mirror back and back white stricker finish, fixed to wall with wall plug, all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-16</u></p> <p><u>Overall size 2400mm x 600mm high</u></p>				
A	<p>STALL SIGANGES</p> <p><u>ADVERTISEMENT BOARD SIGNAGES</u></p> <p><u>Supply and install ADVERTISEMENT BOARD SIGNAGES, construct of 3mm thick Transparent Acrylic with 35mm x 35mm mild steel frame and aluminium edge frame, all to be use font type 'ARIAL' with printed GRAY PVC Transparent sticker mirror back and back white stricker finish, fixed to wall with wall plug, all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-17</u></p>	Nos.	6		
B	Advertisement Board 1, Overall size 6700mm x 1200mm high	Nos.	1		
C	Advertisement Board 1, Overall size 8450mm x 1200mm high	Nos.	1		
D	Advertisement Board 1, Overall size 7725mm x 1200mm high	Nos.	1		
E	Advertisement Board 1, Overall size 8325mm x 1200mm high	Nos.	1		
B3.1/S/7		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>The following in Signages</u></p> <p><u>BACKDROP SIGNAGE</u></p> <p><u>Supply and install BACKDROP SIGNAGES, construct of 3mm thick printed Acrylic, including various height lettering (150mm, 100mm and 85mm high), using stainless steel signage box-up for lettering, individual wall plug to be fitted on building wall, all to be use font type 'ARIAL NARROW BOLD', colour and patterned background all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-18</u></p>				
A	<p>PERPUSTAKAAN DIGITAL DIGITAL LIBRARY HAB KOMUNITI '@ BUKIT INDAH (at Digital Library, 1st Floor)</p> <p><u>RECYCLE BIN SIGN</u></p> <p><u>Supply and install RECYCLE BIN SIGN, construct of 3mm thick Clear Acrylic nailed to wall with wall plug with capping, with sticker finish, all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-19</u></p> <p><u>Overall size 1800mm x 700mm high</u></p>	Nos.	1		
B	'KITAR SEMULA / RECYCLE'	Nos.	1		
B3.1/S/9		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u> PAGE B3.1/S/1 PAGE B3.1/S/2 PAGE B3.1/S/3 PAGE B3.1/S/4 PAGE B3.1/S/5 PAGE B3.1/S/6 PAGE B3.1/S/7 PAGE B3.1/S/8	. . . . . . . .	. . . . . . . .	. . . . . . . .
<u>ELEMENT S - SIGNAGES</u> TOTAL CARRIED TO BILL SUMMARY					
B3.1/S/S					

BUILDING WORKS

Bill No. 3.1 - Hab Komuniti

[illegible]

BILL NO. 3.2 – PONDOK PENGAWAL

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXCAVATION WORK</u>				
	<u>Excavate, get out, well ram and and cart away from site, level, grade and ram bottom</u>				
A	Reduce level average 500mm deep	M2	15		
	<u>Excavate, get out, part return, fill in, well ram and remainder load and cart away from site, level, grade and ram bottom, trim sides planking and strutting to</u>				
B	Pad footing not exceeding 1.50m deep	M3	3		
C	Pad footing exceeding 1.50m and not exceeding 3.00m deep	M3	8		
D	Ground beam not exceeding 1.50m deep	M3	2		
	<u>Hardcore/crusher run as described, spread, levelled, well rammed and consolidated, watered and blinded on top with and to receive concrete including trimming base of excavation : -</u>				
E	150mm thick underneath ground slab	M2	14		
F	150mm thick underneath apron slab	M2	19		
G	One layer of 0.25mm high performance polythene sheet moisture barrier laid on hardcore (measured separately) with 150mm laps joint (measured nett-no allowance made for laps)	M2	33		
B3.2/A/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK</u>				
	<u>Lean concrete Grade 15 blinding with surfaces finished level to receive concrete including where necessary trimming base of excavation :-</u>				
A	50mm thick blinding beneath pad footing	M2	8		
B	50mm thick blinding beneath ground beam	M2	2		
C	50mm thick blinding beneath ground slab	M2	14		
D	50mm thick blinding beneath apron slab	M2	19		
	<u>Vibrated reinforced concrete Grade 30 as described in :-</u>				
E	Pad footing	M3	3		
F	Column stump	M3	0.5		
G	Ground beam	M3	1		
H	125mm thick suspended ground slab	M2	14		
J	110mm thick apron slab	M2	19		
	<u>REINFORCEMENT</u>				
	<u>Mild steel bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Column stump</u>				
K	10mm diameter rod as links and stirrups	Kg	31		
	<u>Ground beam</u>				
L	10mm diameter rod as links and stirrups	Kg	75		
B3.2/A/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>REINFORCEMENT (Cont'd)</u>				
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Pad Footing</u>				
A	16mm diameter rod	Kg	52		
B	12mm diameter rod	Kg	158		
C	10mm diameter rod as links and stirrups	Kg	66		
	<u>Column stump</u>				
D	12mm diameter rod	Kg	29		
	<u>Ground beam</u>				
E	16mm diameter rod	Kg	23		
F	12mm diameter rod	Kg	74		
	<u>Apron slab</u>				
G	10mm diameter rod starter bar	Kg	36		
	<u>Fabric reinforcement cut to size</u>				
H	One layer of BRC No. A7 fabric reinforcement in ground slab with 230mm side and end laps (measured nett as allowance made for laps)	M2	14		
J	One layer of BRC No. B6 fabric reinforcement in ground slab ditto	M2	13		
K	One layer of BRC No. A8 fabric reinforcement in apron slab ditto	M2	19		
B3.2/A/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>REINFORCEMENT (Cont'd)</u>				
	<u>FORMWORK</u>				
	<u>Sawn formwork as described to concrete works : -</u>				
A	To sides of pad footing	M2	9		
B	To sides of column stump	M2	4		
C	To sides of ground beam	M2	18		
D	To edge of concrete exceeding 100mm and not exceeding 200mm high	M	15		
	<u>ANTI-TERMITE TREATMENT</u>				
	<u>Chemical Treatment Against Subterranean Termite:-</u>				
E	Impregnation of chemical for termite control applied in four stages strictly in accordance with the manufacturer's and specialist contractor's recommendation and instruction	M2	33		
	<u>PERIMETER DRAIN</u>				
F	225mm half round precast concrete drain laid to fall complete with brickwall both sides and concrete base, including all necessary excavation, reinforcement, formwork, plastering and all necessary as per drawings E3/1088/2022/MBIP/PKD/GH/W-01	M	25		
G	Supply and install approved FRP drain cover slab, including all necessary fitting, fixings and other related works. All as per drawings E3/1088/2022/MBIP/PKD/GH/W-01	M	5		
B3.2/A/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B3.2/A/1	-	-	-	
	PAGE B3.2/A/2	-	-	-	
	PAGE B3.2/A/3	-	-	-	
	PAGE B3.2/A/4	-	-	-	
<u>ELEMENT A - WORK BELOW LOWEST FLOOR LEVEL</u>					
TOTAL CARRIED TO BILL SUMMARY					
B3.2/A/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described :-</u>				
A	Column	M3	1		
B	Stiffeners	M3	0.2		
C	Intermediate beam	M3	1		
D	Roof beam	M3	1		
	<u>REINFORCEMENT</u>				
	<u>Mild steel bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Column</u>				
E	10mm diameter rod as links and stirrups	Kg	162		
	<u>Stiffeners</u>				
F	6mm diameter rod as links and stirrups	Kg	8		
	<u>Intermediate beam</u>				
G	10mm diameter rod as links and stirrups	Kg	12		
H	6mm diameter rod as links and stirrups	Kg	30		
	<u>Roof beam</u>				
J	10mm diameter rod as links and stirrups	Kg	9		
K	6mm diameter rod as links and stirrups	Kg	19		
B3.2/B/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>REINFORCEMENT (CONT'D)</u>				
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position : -</u>				
	<u>Column</u>				
A	20mm diameter rod	Kg	31		
B	12mm diameter rod	Kg	82		
	<u>Stiffeners</u>				
C	10mm diameter rod	Kg	24		
	<u>Intermediate beam</u>				
D	16mm diameter rod	Kg	45		
E	12mm diameter rod	Kg	88		
	<u>Roof beam</u>				
F	20mm diameter rod	Kg	11		
G	12mm diameter rod	Kg	59		
	<u>FORMWORK</u>				
	<u>Use and waste of sawn formwork : -</u>				
H	To sides of column	M2	19		
J	To sides of stiffeners	M2	3		
K	To sides and soffit of intermediate beam	M2	23		
L	To sides and soffit of roof beam	M2	12		
B3.2/B/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>COLLECTION</u></p> <p>PAGE B3.2/B/1</p> <p>PAGE B3.2/B/2</p>	-	-	-	
<p>ELEMENT B - FRAME</p> <p>TOTAL CARRIED TO BILL SUMMARY</p>					
B3.2/B/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>PRECAST CONCRETE</u>				
	Reinforced vibrated precast concrete Grade 25 as described including all moulds, hoisting and setting in cement mortar (1:3) :-				
A	125mm x 200mm lintol reinforced with and including 2 nos. 10mm diameter top and bottom high tensile rod hooked at ends and 10mm diameter mild steel links at 200mm centres	M	10		
	<u>BRICKWORK</u>				
	Well burnt clay bricks bedded and jointed in cement mortar (1:3) with plasticiser as described :-				
B	Brick wall (230mm thick) reinforced with and including a layer of "Exmet" at every fourth course	M2	10		
C	Brick wall (115mm thick) reinforced with and including a layer of "Exmet" at every fourth course	M2	29		
	<u>SUNDRIES</u>				
D	Bituminous felt horizontal damp-proof course 230mm wide well lapped at joints laid on brickwall on and including 19mm thick cement and sand (1:1) bed coated with hot bitumen	M	3		
E	Ditto 115mm wide ditto	M	10		
F	6mm diameter mild steel rod 350mm long as bonding tie, one end cast into concrete other end built into joint of brickwall	No	67		
ELEMENT C - EXTERNAL WALL TOTAL CARRIED TO BILL SUMMARY					
		B3.2/C/S			

ELEMENT D - INTERNAL WALL

Bill No. 3.2 - Guard House

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>PRECAST CONCRETE</u> Reinforced vibrated precast concrete Grade 25 as described including all moulds, hoisting and setting in cement mortar (1:3) :- A 125mm x 200mm lintol reinforced with and including 2 nos. 10mm diameter top and bottom high tensile rod hooked at ends and 10mm diameter mild steel links at 200mm centres <u>BRICKWORK</u> Well burnt clay bricks bedded and jointed in cement mortar (1:3) with plasticiser as described :- B Brick wall (115mm thick) reinforced with and including a layer of "Exmet" at every fourth course <u>SUNDRIES</u> C Bituminous felt horizontal damp-proof course 120mm wide well lapped at joints laid on brickwall on and including 19mm thick cement and sand (1:1) bed coated with hot bitumen D 6mm diameter mild steel rod 350mm long as bonding tie, one end cast into concrete other end built into joint of brickwall	 M M2 M No	 2 10 4 27		
<u>ELEMENT D - INTERNAL WALL</u> TOTAL CARRIED TO BILL SUMMARY B3.2/D/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described:-</u>				
A	150mm thick roof slab	M2	4		
B	125mm thick roof slab	M2	12		
C	Extra over for scupper drain overall size 150mm x 50mm deep laid to falls including all necessary formwork, waterproofing compound and finishes as per detail drawing	M	12		
	<u>REINFORCEMENT</u>				
	<u>Fabric reinforcement cut to size</u>				
D	A layer of BRC No. A8 fabric reinforcement in roof slab with 230mm side and end laps (measured nett as allowance made for laps)	M2	4		
E	A layer of BRC No. A7 fabric reinforcement in roof slab ditto	M2	12		
F	A layer of BRC No. B6 fabric reinforcement in roof slab ditto	M2	16		
	<u>FORMWORK</u>				
	<u>Sawn formwork as described to concrete works</u>				
G	To soffit of roof slab	M2	16		
H	To edge of concrete exceeding 100mm and not exceeding 200mm high	M	48		
	<u>WATERPROOFING</u>				
	<u>Cement and sand (1:3) bed finished with a wood trowel a smooth and level surfaces to receive water proofing membrane</u>				
J	12mm thick to roof slab finished to fall	M2	16		
B3.2/E/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>WATERPROOFING (Cont'd</u></p> <p><u>Approved water proofing membrane laid in strict accordance with the manufacturer's instructions and recommendation (measured nett and no allowance made for laps)</u></p>				
A	<p>To roof slab finished to fall</p> <p><u>Cement and sand (1:3) protective screed finished with a steel trowel to a smooth and level surface</u></p>	M2	16		
B	<p>25mm Thick to roof slab finished to fall</p> <p><u>Ponding Test</u></p>	M2	16		
C	<p>Allow for performing ponding test as required by the S.O. over areas of waterproofed roof slab to ensure watertightness inclusive of provision of water, pumps, temporary walling, etc., and make good all defective areas and leave perfect</p>	Item			
	<p><u>ROOF TRUSS AND FRAMING</u></p> <p>Notes :-</p> <p>The contractor shall be required to design complete with endorsement from Professional Engineer, fabricate and erect a roof trusses system together with associated roof framing members (i.e. rafters, wall plates, battens, struts, tie beams, etc.)</p> <p>The contractor shall submit to the Engineer the shop drawings of the proposed proprietary system detailing of all members, connections and fixings for approval before manufacture and installation of the truss system</p> <p>The contractor shall submit with his tender, detailed quantities and schedule of rates of items provided for the proprietary roof truss system and associated roof framing members</p>				
B3.2/E/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>ROOF TRUSS AND FRAMING (Cont'd</u>				
A	Design, fabrication, delivery to site and fixing in position light weight steel roof truss system complete with purlin together with associated roof framing members for roof covering, 1 degrees including all necessary connections, fixings and accessories and fixing in position in accordance with the manufacturer's instruction, hoisting and fixing in position	M2	33		
	<u>Metal Fascia Board as specified</u>				
B	350mm high fascia board complete with side cap. All as per drawings E3/1088/2022/MBIP/PKD/GH/WD-01	M	23		
	<u>ROOF COVERING</u>				
	<u>Metal Roofing</u>				
	<u>Supply and install approved equivalent prepainted metal roofing sheet covered all surface complete with 20mm Polyurethane (PU Foam), prepainted metal sheet, including all necessary fixing accessories, corrosion protection, fixed in accordance with the manufacturer's instructions (measured nett and no allowance made for laps) (The Contractor is required to provide warranty from the product manufacturer)</u>				
C	0.48mm thick metal deck roofing sheet including top fixing fastener to mild steel purlin (measured separately) including all necessary accessories 1 degrees slope	M2	33		

D	Flashing 900mm girth one times bent, one edge tucked into brickwall and other edge dressed over roofing	M	13		
B3.2/E/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>ROOF COVERING</u>				
	<u>Galvanised Iron gutter</u>				
A	<u>Supply and fix or other approved equivalent for galvanised iron gutter and fittings used strictly in accordance with manufacturer's instruction :-</u>				
B	Approved galvanised iron gutter including ms framing and all necessary fittings, fixings, accessories, etc. all accordance to manufacturer's details. All as per drawing E3/1088/2022/MBIP/PKD/GH/WD-01	M	5		
	<u>PLUMBING INSTALLATION</u>				
	<u>Unplasticised PVC pipe and fittings used strictly in accordance with manufacturer's instruction :-</u>				
C	100mm diameter rainwater down pipe fixed to wall	M	5		
D	100mm diameter rainwater down pipe laid in trench	M	1		
E	<u>Extra over</u> bend	No	3		
F	Supply and install dome grating including gutter inlet with sleeve to suit 100mm diameter rainwater downpipe	No	1		
B3.2/E/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p style="text-align: center;"><u>COLLECTION</u></p> <p>PAGE B3.2/E/1</p> <p>PAGE B3.2/E/2</p> <p>PAGE B3.2/E/3</p> <p>PAGE B3.2/E/4</p>	- - - -	- - - -	- - - -	
ELEMENT E - ROOF					
TOTAL CARRIED TO BILL SUMMARY					
B3.2/E/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>ALUMINIUM WORK</u> <u>Supply and install the following aluminium andized frame windows and fixed panels complete with frames, coupling, transomes, mullions concealed top and bottom bolts, ironmongery, glazing, beads and including 6mm thk clear tinted glass as described and all other fittings and accessories and fixing complete in accordance to manufacturer's instructions and recommendations all as shown in drawing E3/1088/2022/MBIP/PKD/GH/WD-01</u> <u>Sliding Window</u> A Sliding window overall size 1250mm x 3200mm high, with 6mm thick clear glass. (Type W1) <u>Pocket Window</u> B Pcket window overall size 600mm x 600mm high. with 6mm thick clear glass. (Type W2)	No	2		
		No	2		
<u>ELEMENT F - WINDOWS</u> TOTAL CARRIED TO BILL SUMMARY					
		B3.2/F/S			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>METAL DOORS FRAME</u> <u>Supply and fix approved 1.0mm thick metal door frame and infilled with cement grout, including all necessary bedding, fixing anchors, and fixing accessories, covered all surface with hot dip galvanised all in accordance to the manufacturer's instructions, S.O. approval and as per drawing E3/1088/2022/MBIP/PKD/GH/WD-01</u>				
A	Overall size 900mm x 2100mm high (Type D1)	No	1		
B	Overall size 750mm x 2100mm high (Type D2)	No	1		
	<u>CARPENTRY AND JOINERY</u> <u>Wrot and framed "pressure treated" Grade 'A' timber all in accordance to the manufacturer's instruction, S.O approval and all as per Arhitect's drawings :-</u> <u>Timber Flush Door</u>				
C	Single leaf timber flush door overall size 900mm x 2100mm high (Type D1)	No	1		
	<u>PVC Flush Door</u> <u>PVC flush door complete with all necessary fittings, ironmongeries, accessories(measured separately) and selected finishes all in accordance manufacturer instruction, S.O approval and as per Architect's Drawings :-</u>				
D	Single leaf PVC flush door overall size 750mm x 2100mm high (Type D2)	No	1		
ELEMENT G - DOORS TOTAL CARRIED TO BILL SUMMARY					
		B3.2/G/S			

Bill No. 3.2 - Guard House

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>IRONMONGERY</u> Supply and fix the following ironmongery as specified or other equal and approved equivalent to hardwood including providing requisite matching screws and fixing accessories as approved by the S.O. <u>HINGES</u> A Approved stainless steel hinges <u>DOOR CLOSER</u> B Approved door closer with standard arm in silver finish. <u>LOCKSET</u> C Approved sashlock mortise lock set <u>LEVER HANDLE</u> D Approve hollow lever handle with	No	6		
		No	1		
		No	2		
		No	2		
ELEMENT H - IRONMONGERY					
TOTAL CARRIED TO BILL SUMMARY					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>EXTERNAL WALL FINISHES</u>				
	<u>Plastering</u>				
	<u>Cement and sand (1:3) with and approved plasticiser externally finished with wood float</u>				
	20mm thk plainface to wall and column	M2	39		
	<u>INTERNAL WALL FINISHES</u>				
B	<u>Plastering</u>				
	<u>Cement and sand (1:3) with and approved plasticiser internally finished with steel trowel :-</u>				
	20mm thk plainface to wall and column	M2	44		
C	<u>Screeding</u>				
	<u>Cement and sand (1:3) to receive glazed wall tiles :-</u>				
	13mm thk screeded backing	M2	17		
D	<u>Tiling</u>				
	<u>Approved 300mm x 300mm glazed ceramic wall tiles, bedded in cement and sand mortar (1:3) pointed in matching colour cement and laid on screeded backings (measured separately) to required pattern:-</u>				
	To wall	M2	17		
E	<u>WATER PROOFING</u>				
	<u>Supply and install in accordance with manufacturer's recommendation approved waterproofing system to 1.5m height to lightweight walls in wet areas subject to splashing (ie. toilet area, etc) and other areas as defined by S.O.</u>				
	To wall area, 1.50m high	M2	17		
ELEMENT J - WALL FINISHES					
TOTAL CARRIED TO BILL SUMMARY					
		B3.2/J/S			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXTERNAL FLOOR FINISHES</u>				
	<u>Paving</u>				
	<u>Cement and sand (1:3) finished with a steel trowel:-</u>				
A	20mm thick paving to floor finished to fall to slab	M2	20		
	<u>INTERNAL FLOOR FINISHES</u>				
	<u>Screeding</u>				
	<u>Cement and sand (1:3) to receive porcelain tiles :-</u>				
B	13mm thk screeded bed	M2	13		
C	13mm thk screeded backing to skirting 100mm high	M	21		
D	13mm thk screeded backing to drop 100mm high	M	1		
E	13mm thk screeded backing to drop 50mm high	M	1		
	<u>Tiling</u>				
	<u>Approved 300mm x 600mm porcelain tiles in structure finish, laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
F	To floor	M2	11		
G	To skirting 100mm high	M	21		
H	To drop 100mm high	M	1		
	<u>Approved 300mm x 300mm porcelain tiles in structure finish, laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
J	To floor	M2	2		
K	To drop 50mm high	M	1		
B3.2/K/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>INTERNAL FLOOR FINISHES (Cont'd)</u>				
	<u>WATERPROOFING</u>				
	<u>Approved water proofing membrane laid in strict accordance with the manufacturer's instructions and recommendation (measured nett and no allowance made for laps)</u>				
A	To slab finished to fall	M2	2		
B3.2/K/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B3.2/K/1	-	-	-	
	PAGE B3.2/K/2	-	-	-	
<u>ELEMENT K - FLOOR FINISHES</u> TOTAL CARRIED TO BILL SUMMARY					
B3.2/K/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXTERNAL CEILING FINISHES</u> <u>Skim Coat</u> Apply approved skimcoat or equivalent to a smooth finish to all external wall and r.c. structures surfaces (sills, returns, corners, projections and other wall surface profiles included) including preparing, levelling and making good of surface to receive skimcoat and provision of fibremesh to required areas.				
A	12.5mm thick plainface to concrete soffit and sides of slab <u>Supply and install approved pre-painted Aluminium Strip Ceiling, 100mm width x 0.55mm thick.; complete with G.I. Multi Carrier @ spacing at max.1200mm c/c to hold the panels, suspended multi carrier from the soffit by means of 14 gauge wire hanger and u-channel to perimeter of walls including all standard fixing accessories all fixed accordance to manufacturer's instruction and Architect's approval.</u>	M2	16		
B	General ceiling area <u>INTERNAL CEILING FINISHES</u> <u>Supply and install approved asbestos free suspended ceiling or other and approved equivalent, complete with framing and suspension system and jointing all accessories in accordance with the manufactures instruction and architect's approval and Architect's drawing E3/1088/2022/MBIP/PKD/GH/WD-01</u>	M2	19		
C	General ceiling area	M2	14		
ELEMENT L - CEILING FINISHES TOTAL CARRIED TO BILL SUMMARY B3.2/L/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>Note :-</u></p> <p><u>The sanitary wares and fittings as specified are as an indication of the quality required. Other manufacturer's or other brands are acceptable if the quality is equivalent and approved by the S.O.</u></p> <p><u>Supply and fix the following "JOHNSON SUISSE" sanitary wares and fittings or other approved and equivalent as specified or other equal and approved equivalent complete with all necessary joints and connections to supply and waste pipes</u></p> <p><u>WATER CLOSET</u></p> <p>A Approved close coupled washdown pedestal set with cistern and lid in vitreous china complete with 4.5/3L dual push activated internal fitting, WC fixing bracket, straight connector and PP soft close seat cover and jointing to soil pipe. All as per drawings.</p> <p>B Approved reinforced flexible hose with angle valve, 400mm. All as per drawings.</p> <p>C Approved angle valve with bidet complete set with ABS hand spray, 1.2m flexible hose and wall bracket. All as per drawings.</p> <p><u>WASH BASIN</u></p> <p>D Approved wall hung basin size 400mm x 365mm x 190mm, complete with of fixing bolts. All as per drawings.</p> <p>E Approved reinforced flexible hose with angle valve, 400mm. All as per drawings.</p> <p>F Approved basin pillar tap. All as per drawings.</p> <p>G Approved grated basin waste and chrome zinc bottle trap. All as per drawings.</p> <p>H Approved semi-recessed paper holder in vitreous china complete with plastic roller. All as per drawings.</p> <p>J Approved 150mm x 150mm stainless steel floor trap with insect trap. All as per drawings.</p>				
B3.2/M/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>Supply and fix the following "JOHNSON SUISSE" sanitary wares and fittings or other approved and equivalent as specified or other equal and approved equivalent complete with all necessary joints and connections to supply and waste pipes</u>				
A	450mm x 600mm x 6mm thick polished plate glass mirror with natural anodised aluminium edging all around with and including 6mm thick waterproofing plywood backing, hardwood support plugged and screwed to concrete or brickwall with chrome plated dome headed screws and fibre washers c/w 50mm width shadow gap to install light fittings all as per Architect's detail drawing	No	1		
B	On completion of the sanitary fittings installation, test all piping and fittings and leave complete installation in perfect working order and to the satisfaction of the S.O. <u>Builder's Work In Connection With Sanitary Fittings</u>	Item			
C	Allow for construction of concrete table top overall size 6000mm x 400mm x 900mm high including concrete works, reinforcement, formwork, tiles finishes, complete with all necessary works all as per drawing E3/1088/2022/MBIP/PKD/GH/WD-01	No	1		
B3.2/M/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B3.2/M/1	-	-	-	
	PAGE B3.2/M/2	-	-	-	
ELEMENT M - SANITARY FITTINGS TOTAL CARRIED TO BILL SUMMARY B3.2/M/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>WALL AND CEILING</u> Prepare and apply approved one sealer coat of alkali-resisting primer and two coats of approved weatherbond paint or other approved equivalent externally on surfaces of (all painting works should be done by certified painter)				
A	Plastered wall and column	M2	39		
B	Plastered concrete soffit	M2	16		
	Prepare and apply approved one sealer coat of alkali-resisting primer and two coats of approved emulsion paint or other approved equivalent internally on surfaces of (all painting works should be done by certified painter)				
C	Plastered wall and column	M2	44		
	<u>METALWORK</u> Prepare and paint approved one coat of epoxy primer and two finishing coats of metallic paint or other approved equivalent (all painting works should be done by certified painter)				
D	Surfaces of door frame exceeding 200mm girth and not exceeding 300mm girth	M	10		
	<u>WOODWORK</u> Knot, prime, stop and paint approved one coat zinc cromate primer, one coat economy undercoat and two finishing coats of alkyd resin enamel paint or other approved equivalent as (all painting works should be done by certified painter)				
E	General surfaces of doors	M2	7		
ELEMENT N - PAINTING AND DECORATION TOTAL CARRIED TO BILL SUMMARY B3.2/N/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<div><div><u>BILL SUMMARY</u></div><div><u>PAGE</u></div></div>				
A	WORK BELOW LOWEST FLOOR LEVEL	B3.2/A/S	.	.	.
B	FRAME	B3.2/B/S	.	.	.
C	EXTERNAL WALL	B3.2/C/S	.	.	.
D	INTERNAL WALL	B3.2/D/S	.	.	.
E	ROOF	B3.2/E/S	.	.	.
F	WINDOWS	B3.2/F/S	.	.	.
G	DOORS	B3.2/G/S	.	.	.
H	IRONMONGERY	B3.2/H/S	.	.	.
J	WALL FINISHES	B3.2/J/S	.	.	.
K	FLOOR FINISHES	B3.2/K/S	.	.	.
L	CEILING FINISHES	B3.2/L/S	.	.	.
M	SANITARY FITTINGS	B3.2/M/S	.	.	.
N	PAINTING AND DECORATION	B3.2/N/S	.	.	.
<u>BILL NO. 3.2 - GUARD HOUSE</u> TOTAL CARRIED TO FINAL SUMMARY		B3.2/S			

BILL NO. 3.3 – RUMAH SAMPAH

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXCAVATION WORK</u>				
	<u>Excavate, get out, well ram and and cart away from site, level, grade and ram bottom</u>				
A	Reduce level average 500mm deep	M2	10		
	<u>Excavate, get out, part return, fill in, well ram and remainder load and cart away from site, level, grade and ram bottom, trim sides planking and strutting to</u>				
B	Pad footing not exceeding 1.50m deep	M3	1		
C	Pad footing exceeding 1.50m and not exceeding 3.00m deep	M3	3		
D	Ground beam not exceeding 1.50m deep	M3	1		
	<u>Hardcore/crusher run as described, spread, levelled, well rammed and consolidated, watered and blinded on top with and to receive concrete including trimming base of excavation : -</u>				
E	150mm thick underneath ground slab	M2	9		
F	150mm thick underneath apron slab	M2	16		
G	One layer of 0.25mm high performance polythene sheet moisture barrier laid on hardcore (measured separately) with 150mm laps joint (measured nett-no allowance made for laps)	M2	25		
B3.3/A/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK</u>				
	<u>Lean concrete Grade 15 blinding with surfaces finished level to receive concrete including where necessary trimming base of excavation :-</u>				
A	50mm thick blinding beneath pad footing	M2	3		
B	50mm thick blinding beneath ground beam	M2	2		
C	50mm thick blinding beneath ground slab	M2	9		
D	50mm thick blinding beneath apron slab	M2	16		
	<u>Vibrated reinforced concrete Grade 30 as described in :-</u>				
E	Pad footing	M3	1		
F	Column stump	M3	0.1		
G	Ground beam	M3	1		
H	150mm thick suspended ground slab	M2	9		
J	110mm thick apron slab	M2	16		
	<u>REINFORCEMENT</u>				
	<u>Mild steel bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Column stump</u>				
K	10mm diameter rod as links and stirrups	Kg	14		
	<u>Ground beam</u>				
L	6mm diameter rod as links and stirrups	Kg	17		
B3.3/A/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>REINFORCEMENT (Cont'd)</u>				
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Pad Footing</u>				
A	12mm diameter rod	Kg	85		
B	10mm diameter rod as links and stirrups	Kg	36		
	<u>Column stump</u>				
C	12mm diameter rod	Kg	19		
	<u>Ground beam</u>				
D	16mm diameter rod	Kg	12		
E	12mm diameter rod	Kg	45		
	<u>Apron slab</u>				
F	10mm diameter rod starter bar	Kg	52		
	<u>Fabric reinforcement cut to size</u>				
G	One layer of BRC No. A8 fabric reinforcement in ground slab with 230mm side and end laps (measured nett as allowance made for laps)	M2	9		
H	One layer of BRC No. B6 fabric reinforcement in ground slab ditto	M2	7		
J	One layer of BRC No. A8 fabric reinforcement in apron slab ditto	M2	16		
B3.3/A/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>FORMWORK</u>				
	<u>Sawn formwork as described to concrete works : -</u>				
A	To sides of pad footing	M2	5		
B	To sides of column stump	M2	2		
C	To sides of ground beam	M2	11		
D	To edge of concrete exceeding 100mm and not exceeding 200mm high	M	12		
	<u>RAMP</u>				
E	Construct and complete reinforced concrete ramp with groove line overall size 3000mm length x 1000mm width complete with concrete works, reinforcement, formwork and cement render finishes, and all per Architect's drawing E3/1088/2022/MBIP/PKD/BC/WD-01	No	1		
	<u>ANTI-TERMITE TREATMENT</u>				
	<u>Chemical Treatment Against Subterranean Termite:-</u>				
F	Impregnation of chemical for termite control applied in four stages strictly in accordance with the manufacturer's and specialist contractor's recommendation and instruction	M2	25		
	<u>PERIMETER DRAIN</u>				
G	225mm half round precast concrete drain laid to fall complete with brickwall both sides and concrete base, including all necessary excavation, reinforcement, formwork, plastering and all necessary as per drawings E3/1088/2022/MBIP/PKD/BC/WD-01	M	15		
H	Supply and install approved FRP drain cover slab, including all necessary fitting, fixings and other related works. All as per drawings E3/1088/2022/MBIP/PKD/BC/WD-01	M	4		
B3.3/A/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B3.3/A/1	-	-	-	
	PAGE B3.3/A/2	-	-	-	
	PAGE B3.3/A/3	-	-	-	
	PAGE B3.3/A/4	-	-	-	
<u>ELEMENT A - WORK BELOW LOWEST FLOOR LEVEL</u>					
TOTAL CARRIED TO BILL SUMMARY					
B3.3/A/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described :-</u>				
A	Column	M3	1		
B	Stiffeners	M3	0.1		
C	Roof beam	M3	1		
	<u>REINFORCEMENT</u>				
	<u>Mild steel bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Column</u>				
D	10mm diameter rod as links and stirrups	Kg	67		
	<u>Stiffeners</u>				
E	6mm diameter rod as links and stirrups	Kg	9		
	<u>Roof beam</u>				
F	6mm diameter rod as links and stirrups	Kg	15		
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Column</u>				
G	12mm diameter rod	Kg	53		
	<u>Stiffeners</u>				
H	10mm diameter rod	Kg	19		
	<u>Roof beam</u>				
J	12mm diameter rod	Kg	51		
B3.3/B/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>FORMWORK</u>				
	<u>Use and waste of sawn formwork : -</u>				
A	To sides of column	M2	13		
B	To sides of stiffeners	M2	3		
C	To sides and soffit of roof beam	M2	11		
B3.3/B/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B3.3/B/1	-	-	-	
	PAGE B3.3/B/2	-	-	-	
<u>ELEMENT B - FRAME</u>					
TOTAL CARRIED TO BILL SUMMARY					
B3.3/B/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>PRECAST CONCRETE</u>				
	Reinforced vibrated precast concrete Grade 25 as described including all moulds, hoisting and setting in cement mortar (1:3) :-				
A	125mm x 200mm lintol reinforced with and including 2 nos. 10mm diameter top and bottom high tensile rod hooked at ends and 10mm diameter mild steel links at 200mm centres	M	7		
	<u>BRICKWORK</u>				
	Well burnt clay bricks bedded and jointed in cement mortar (1:3) with plasticiser as described :-				
B	Brick wall (230mm thick) reinforced with and including a layer of "Exmet" at every fourth course	M2	7		
C	Brick wall (115mm thick) reinforced with and including a layer of "Exmet" at every fourth course	M2	19		
	<u>SUNDRIES</u>				
D	Bituminous felt horizontal damp-proof course 230mm wide well lapped at joints laid on brickwall on and including 19mm thick cement and sand (1:1) bed coated with hot bitumen	M	2		
E	Ditto 115mm wide ditto	M	6		
F	6mm diameter mild steel rod 350mm long as bonding tie, one end cast into concrete other end built into joint of brickwall	No	48		
ELEMENT C - EXTERNAL WALL TOTAL CARRIED TO BILL SUMMARY					
		B3.3/C/S			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described:-</u>				
A	110mm thick roof slab	M2	8		
B	<u>Extra over</u> for scupper drain overall size 150mm x 50mm deep laid to falls including all necessary formwork, waterproofing compound and finishes as per detail drawing	M	12		
	<u>REINFORCEMENT</u>				
	<u>Fabric reinforcement cut to size</u>				
C	A layer of BRC No. A7 fabric reinforcement in roof slab with 230mm side and end laps (measured nett as allowance made for laps)	M2	8		
D	A layer of BRC No. B6 fabric reinforcement in roof slab ditto	M2	7		
	<u>FORMWORK</u>				
	<u>Sawn formwork as described to concrete works</u>				
E	To soffit of roof slab	M2	8		
F	To edge of concrete exceeding 100mm and not exceeding 200mm high	M	36		
	<u>WATERPROOFING</u>				
	<u>Cement and sand (1:3) bed finished with a wood trowel a smooth and level surfaces to receive water proofing membrane</u>				
H	12mm thick to roof slab finished to fall	M2	8		
B3.3/D/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>WATERPROOFING (Cont'd</u></p> <p><u>Approved water proofing membrane laid in strict accordance with the manufacturer's instructions and recommendation (measured nett and no allowance made for laps)</u></p>				
A	<p>To roof slab finished to fall</p> <p><u>Cement and sand (1:3) protective screed finished with a steel trowel to a smooth and level surface</u></p>	M2	8		
B	<p>25mm Thick to roof slab finished to fall</p> <p><u>Ponding Test</u></p>	M2	8		
C	<p>Allow for performing ponding test as required by the S.O. over areas of waterproofed roof slab to ensure watertightness inclusive of provision of water, pumps, temporary walling, etc., and make good all defective areas and leave perfect</p>	Item			
	<p><u>ROOF TRUSS AND FRAMING</u></p> <p>Notes :-</p> <p>The contractor shall be required to design complete with endorsement from Professional Engineer, fabricate and erect a roof trusses system together with associated roof framing members (i.e. rafters, wall plates, battens, struts, tie beams, etc.)</p> <p>The contractor shall submit to the Engineer the shop drawings of the proposed proprietary system detailing of all members, connections and fixings for approval before manufacture and installation of the truss system</p> <p>The contractor shall submit with his tender, detailed quantities and schedule of rates of items provided for the proprietary roof truss system and associated roof framing members</p>				
B3.3/D/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>ROOF TRUSS AND FRAMING (Cont'd</u>				
A	Design, fabrication, delivery to site and fixing in position light weight steel roof truss system complete with purlin together with associated roof framing members for roof covering, 1 degrees including all necessary connections, fixings and accessories and fixing in position in accordance with the manufacturer's instruction, hoisting and fixing in position	M2	25		
	<u>Metal Fascia Board as specified</u>				
B	350mm high fascia board complete with side cap. All as per drawings E3/1088/2022/MBIP/PKD/BC/WD-01	M	20		
	<u>ROOF COVERING</u>				
	<u>Metal Roofing</u>				
	<u>Supply and install approved equivalent prepainted metal roofing sheet covered all surface complete with 20mm Polyurethane (PU Foam), prepainted metal sheet, including all necessary fixing accessories, corrosion protection, fixed in accordance with the manufacturer's instructions (measured nett and no allowance made for laps) (The Contractor is required to provide warranty from the product manufacturer)</u>				
C	0.48mm thick metal deck roofing sheet including top fixing fastener to mild steel purlin (measured separately) including all necessary accessories 1 degrees slope	M2	25		

D	Flashing 900mm girth one times bent, one edge tucked into brickwall and other edge dressed over roofing	M	10		
B3.3/D/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>ROOF COVERING</u> <u>Galvanised Iron gutter</u> <u>Supply and fix or other approved equivalent for galvanised iron gutter and fittings used strictly in accordance with manufacturer's instruction :-</u> A Approved galvanised iron gutter including ms framing and all necessary fittings, fixings, accessories, etc. all accordance to manufacturer's details. All as per drawing E3/1088/2022/MBIP/PKD/BC/WD-01 <u>PLUMBING INSTALLATION</u> <u>Unplasticised PVC pipe and fittings used strictly in accordance with manufacturer's instruction : -</u>				
B	100mm diameter rainwater down pipe fixed to wall	M	10		
C	100mm diameter rainwater down pipe laid in trench	M	2		
D	<u>Extra over</u> bend	No	6		
E	Supply and install dome grating including gutter inlet with sleeve to suit 100mm diameter rainwater downpipe	No	2		
B3.3/D/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u> PAGE B3.3/D/1 PAGE B3.3/D/2 PAGE B3.3/D/3 PAGE B3.3/D/4	- - - -	- - - -	- - - -	
ELEMENT D - ROOF TOTAL CARRIED TO BILL SUMMARY					
B3.3/D/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>ALUMINIUM WORK</u> <u>Supply and install the following aluminium anodized frame windows and fixed panels complete with frames, coupling, transoms, mullions concealed top and bottom bolts, ironmongery, glazing, beads and including 6mm thk clear tinted glass as described and all other fittings and accessories and fixing complete in accordance to manufacturer's instructions and recommendations all as shown in drawing E3/1088/2022/MBIP/PKD/BC/WD-01</u> <u>Fixed Glass Window</u>				
A	Fixed glass window overall size 600mm x 2000mm high, with 3mm thick clear glass panel (Type W1)	No	1		
<u>ELEMENT E - WINDOWS</u> TOTAL CARRIED TO BILL SUMMARY					
		B3.3/E/S			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>METAL DOORS FRAME</u> <u>Supply and fix approved 1.0mm thick metal door frame and infilled with cement grout, including all necessary bedding, fixing anchors, and fixing accessories, covered all surface with hot dip galvanised all in accordance to the manufacturer's instructions, S.O. approval and as per drawing E3/1088/2022/MBIP/PKD/BC/WD-01</u>	No	1		
	Overall size 900mm x 2100mm high (Type D1)				
	<u>CARPENTRY AND JOINERY</u> <u>Wrot and framed "pressure treated" Grade 'A' timber all in accordance to the manufacturer's instruction, S.O approval and all as per Arhitect's drawings :-</u> <u>Timber Flush Door</u>				
B	Single leaf timber flush door overall size 900mm x 2100mm high (Type D1) <u>Roller Shutter</u> <u>Supply and install the following metal frame roller shutter complete with roller drum, guides, mullions and all fittings and accessories all in accordance to the manufacturer's instruction</u>	No	1		
C	Approved roller shutter to suit opening size 2400mm x 2850 mm high (Type D2)	No	1		
<u>ELEMENT F - DOORS</u> TOTAL CARRIED TO BILL SUMMARY B3.3/F/S					

Bill No. 3.3 - Bin Centre

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>IRONMONGERY</u> Supply and fix the following ironmongery as specified or other equal and approved equivalent to hardwood including providing requisite matching screws and fixing accessories as approved by the S.O. <u>HINGES</u> A Approved stainless steel hinges <u>DOOR CLOSER</u> B Approved door closer with standard arm in silver finish. <u>LOCKSET</u> C Approved sashlock mortise lock set <u>LEVER HANDLE</u> D Approve hollow lever handle with				
	<u>ELEMENT G - IRONMONGERY</u> TOTAL CARRIED TO BILL SUMMARY B3.3/G/S				

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>EXTERNAL WALL FINISHES</u>				
	<u>Plastering</u>				
	<u>Cement and sand (1:3) with and approved plasticiser externally finished with wood float</u>				
A	20mm thk plainface to wall and column	M2	26		
B	<u>INTERNAL WALL FINISHES</u>				
	<u>Screeding</u>				
	<u>Cement and sand (1:3) to receive glazed wall tiles :-</u>				
B	13mm thk screeded backing	M2	26		
C	<u>Tiling</u>				
	<u>Approved 300mm x 300mm glazed ceramic wall tiles, bedded in cement and sand mortar (1:3) pointed in matching colour cement and laid on screeded backings (measured separately) to required pattern:-</u>				
	To wall	M2	26		
<u>ELEMENT H - WALL FINISHES</u>					
TOTAL CARRIED TO BILL SUMMARY					
B3.3/H/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXTERNAL FLOOR FINISHES</u>				
	<u>Paving</u>				
	<u>Cement and sand (1:3) finished with imprint :-</u>				
A	20mm paving	M2	13		
	<u>Screeding</u>				
	<u>Cement and sand (1:3) to receive porcelain tiles :-</u>				
B	13mm thk screeded bed	M2	3		
	<u>Tiling</u>				
	<u>Approved 300mm x 300mm porcelain tiles in structure finish, laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
C	To floor	M2	3		
	<u>INTERNAL FLOOR FINISHES</u>				
	<u>Screeding</u>				
	<u>Cement and sand (1:3) to receive porcelain tiles :-</u>				
D	13mm thk screeded bed	M2	9		
E	13mm thk screeded backing to drop 50mm high	M	1		
	<u>Approved 300mm x 300mm porcelain tiles in structure finish, laid with and including adhesive bonding system c/w bonding agent cement or other approved equivalent with border, bedded, jointed and pointed in cement with flush joint laid on cement and sand screed (measured separately) with an approved colour and pattern as described:-</u>				
F	To floor	M2	9		
G	To drop 50mm high	M	1		
B3.3/J/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>INTERNAL FLOOR FINISHES (Cont'd)</u>				
	<u>WATERPROOFING</u>				
	<u>Approved water proofing membrane laid in strict accordance with the manufacturer's instructions and recommendation (measured nett and no allowance made for laps)</u>				
A	To slab finished to fall	M2	9		
B3.3/J/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B3.3/J/1	-	-	-	
	PAGE B3.3/J/2	-	-	-	
<u>ELEMENT J - FLOOR FINISHES</u> TOTAL CARRIED TO BILL SUMMARY					
B3.3/J/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXTERNAL CEILING FINISHES</u> <u>Skim Coat</u> Apply approved skimcoat or equivalent to a smooth finish to all external wall and r.c. structures surfaces (sills, returns, corners, projections and other wall surface profiles included) including preparing, levelling and making good of surface to receive skimcoat and provision of fibremesh to required areas.				
A	12.5mm thick plainface to concrete soffit and sides of slab <u>Supply and install approved pre-painted Aluminium Strip Ceiling, 100mm width x 0.55mm thick.; complete with G.I. Multi Carrier @ spacing at max.1200mm c/c to hold the panels, suspended multi carrier from the soffit by means of 14 gauge wire hanger and u-channel to perimeter of walls including all standard fixing accessories all fixed accordance to manufacturer's instruction and Architect's approval.</u>	M2	8		
B	General ceiling area <u>INTERNAL CEILING FINISHES</u> <u>Supply and install approved asbestos free suspended ceiling or other and approved equivalent, complete with framing and suspension system and jointing all accessories in accordance with the manufactures instruction and architect's approval and Architect's drawing E3/1088/2022/MBIP/PKD/BC/WD-01</u>	M2	13		
C	General ceiling area	M2	9		
ELEMENT K - CEILING FINISHES TOTAL CARRIED TO BILL SUMMARY					
		B3.3/K/S			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>Note :-</u></p> <p><u>The sanitary wares and fittings as specified are as an indication of the quality required. Other manufacturer's or other brands are acceptable if the quality is equivalent and approved by the S.O.</u></p> <p><u>Supply and fix the following "JOHNSON SUISSE" sanitary wares and fittings or other approved and equivalent as specified or other equal and approved equivalent complete with all necessary joints and connections to supply and waste pipes</u></p>				
A	Approved pillar tap. All as per drawings.	Nos	1		
B	Approved 150mm x 150mm stainless steel floor trap with insect trap. All as per drawings.	Nos	1		
C	On completion of the sanitary fittings installation, test all piping and fittings and leave complete installation in perfect working order and to the satisfaction of the S.O.	Item			
	<u>Builder's Work In Connection With Sanitary Fittings</u>				
D	<u>Extra over</u> for scupper drain overall size 200mm x 50mm deep laid to falls including all necessary formwork, waterproofing compound and finishes as per detail drawing	M	3		
ELEMENT L - SANITARY FITTINGS TOTAL CARRIED TO BILL SUMMARY					
		B3.3/L/S			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>WALL AND CEILING</u> Prepare and apply approved one sealer coat of alkali-resisting primer and two coats of approved weatherbond paint or other approved equivalent externally on surfaces of (all painting works should be done by certified painter)				
A	Plastered wall and column	M2	26		
B	Plastered concrete soffit	M2	8		
	<u>METALWORK</u> Prepare and paint approved one coat of epoxy primer and two finishing coats of metallic paint or other approved equivalent (all painting works should be done by certified painter)				
C	Surfaces of door frame exceeding 200mm girth and not exceeding 300mm girth	M	13		
	<u>WOODWORK</u> Knot, prime, stop and paint approved one coat zinc cromate primer, one coat economy undercoat and two finishing coats of alkyd resin enamel paint or other approved equivalent as (all painting works should be done by certified painter)				
D	General surfaces of doors	M2	4		
<u>ELEMENT M - PAINTING AND DECORATION</u> TOTAL CARRIED TO BILL SUMMARY B3.3/M/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>RECYCLE BIN</u>				
	Supply and install approve recycle bin, overall size 780mm x 575mm x 1040mm high (240L), with and including all necessary fixings, fittings and other related works. All as per drawings E3/1088/2022/MBIP/PKD/BC/WD-01	Nos.	3		
B	<u>SIGNAGE</u>				
	Supply and fix approved signage	Nos.	1		
ELEMENT N - SUNDRIES TOTAL CARRIED TO BILL SUMMARY					
		B3.3/N/S			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>BILL SUMMARY</u>				
		<u>PAGE</u>			
A	WORK BELOW LOWEST FLOOR LEVEL	B3.3/A/S	.	.	.
B	FRAME	B3.3/B/S	.	.	.
C	EXTERNAL WALL	B3.3/C/S	.	.	.
D	ROOF	B3.3/D/S	.	.	.
E	WINDOWS	B3.3/E/S	.	.	.
F	DOORS	B3.3/F/S	.	.	.
G	IRONMONGERY	B3.3/G/S	.	.	.
H	WALL FINISHES	B3.3/H/S	.	.	.
J	FLOOR FINISHES	B3.3/J/S	.	.	.
K	CEILING FINISHES	B3.3/K/S	.	.	.
L	SANITARY FITTINGS	B3.3/L/S	.	.	.
M	PAINTING AND DECORATION	B3.3/M/S	.	.	.
N	SUNDRIES	B3.3/N/S	.	.	.
<u>BILL NO. 3.3 - BIN CENTRE</u>					
TOTAL CARRIED TO FINAL SUMMARY					
		B3.3/S			

BILL NO. 3.4 – RUMAH PAM

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXCAVATION WORK</u>				
	<u>Excavate, get out, well ram and and cart away from site, level, grade and ram bottom</u>				
A	Reduce level average 500mm deep	M2	18		
	<u>Excavate, get out, part return, fill in, well ram and remainder load and cart away from site, level, grade and ram bottom, trim sides planking and strutting to</u>				
B	Pad footing not exceeding 1.50m deep	M3	3		
C	Pad footing exceeding 1.50m and not exceeding 3.00m deep	M3	7		
D	Ground beam not exceeding 1.50m deep	M3	2		
	<u>Hardcore/crusher run as described, spread, levelled, well rammed and consolidated, watered and blinded on top with and to receive concrete including trimming base of excavation : -</u>				
E	150mm thick underneath ground slab	M2	18		
F	150mm thick underneath apron slab	M2	22		

G	One layer of 0.25mm high performance polythene sheet moisture barrier laid on hardcore (measured separately) with 150mm laps joint (measured nett-no allowance made for laps)	M2	40		
	<u>CONCRETE WORK</u>				
	<u>Lean concrete Grade 15 blinding with surfaces finished level to receive concrete including where necessary trimming base of excavation : -</u>				
H	50mm thick blinding beneath pad footing	M2	7		
J	50mm thick blinding beneath ground beam	M2	3		
K	50mm thick blinding beneath ground slab	M2	18		
L	50mm thick blinding beneath apron slab	M2	22		
B3.4/A/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK (Cont'd)</u>				
	<u>Vibrated reinforced concrete Grade 30 as described in :-</u>				
A	Pad footing	M3	2		
B	Column stump	M3	0.1		
C	Ground beam	M3	1		
D	150mm thick suspended ground slab	M2	18		
E	110mm thick apron slab	M2	22		
	<u>REINFORCEMENT</u>				
	<u>Mild steel bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Column stump</u>				
F	10mm diameter rod as links and stirrups	Kg	22		
	<u>Ground beam</u>				
G	10mm diameter rod as links and stirrups	Kg	79		
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Pad Footing</u>				
H	16mm diameter rod	Kg	104		
J	12mm diameter rod	Kg	91		
K	10mm diameter rod as links and stirrups	Kg	66		
	<u>Column stump</u>				
L	12mm diameter rod	Kg	29		
B3.4/A/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>REINFORCEMENT (Cont'd)</u>				
	<u>Ground beam</u>				
A	25mm diameter rod	Kg	28		
B	12mm diameter rod	Kg	79		
	<u>Apron slab</u>				
C	10mm diameter rod starter bar	Kg	42		
	<u>Fabric reinforcement cut to size</u>				
D	One layer of BRC No. A10 fabric reinforcement in ground slab with 230mm side and end laps (measured nett as allowance made for laps)	M2	18		
E	One layer of BRC No. B6 fabric reinforcement in ground slab ditto	M2	11		
F	One layer of BRC No. B7 fabric reinforcement in ground slab ditto	M2	5		
G	One layer of BRC No. A8 fabric reinforcement in apron slab ditto	M2	22		
	<u>FORMWORK</u>				
	<u>Sawn formwork as described to concrete works : -</u>				
H	To sides of pad footing	M2	9		
J	To sides of column stump	M2	3		
K	To sides of ground beam	M2	19		
L	To edge of concrete exceeding 100mm and not exceeding 200mm high	M	18		
B3.4/A/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>ANTI-TERMITE TREATMENT</u> <u>Chemical Treatment Against Subterranean Termite:-</u> A Impregnation of chemical for termite control applied in four stages strictly in accordance with the manufacturer's and specialist contractor's recommendation and instruction	M2	40		
	<u>PERIMETER DRAIN</u> B 225mm half round precast concrete drain laid to fall complete with brickwall both sides and concrete base, including all necessary excavation, reinforcement, formwork, plastering and all necessary as per drawings E3/1088/2022/MBIP/PKD/PH/WD-01	M	18		
B3.4/A/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u> PAGE B3.4/A/1 PAGE B3.4/A/2 PAGE B3.4/A/3 PAGE B3.4/A/4	- - - -	- - - -	- - - -	
<u>ELEMENT A - WORK BELOW LOWEST FLOOR LEVEL</u> TOTAL CARRIED TO BILL SUMMARY B3.4/A/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described :-</u>				
A	Column	M3	1		
B	Stiffeners	M3	0.1		
C	Roof beam	M3	1		
	<u>REINFORCEMENT</u>				
	<u>Mild steel bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Column</u>				
D	10mm diameter rod as links and stirrups	Kg	103		
	<u>Stiffeners</u>				
E	6mm diameter rod as links and stirrups	Kg	9		
	<u>Roof beam</u>				
F	6mm diameter rod as links and stirrups	Kg	24		
	<u>High tensile bar in reinforcement to concrete works generally, including all cutting, bending and placing in position :-</u>				
	<u>Column</u>				
G	12mm diameter rod	Kg	80		
	<u>Stiffeners</u>				
H	10mm diameter rod	Kg	22		
	<u>Roof beam</u>				
J	12mm diameter rod	Kg	83		
B3.4/B/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>FORMWORK</u>				
	<u>Use and waste of sawn formwork : -</u>				
A	To sides of column	M2	17		
B	To sides of stiffeners	M2	3		
C	To sides and soffit of roof beam	M2	17		
B3.4/B/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B3.4/B/1	-	-	-	
	PAGE B3.4/B/2	-	-	-	
<u>ELEMENT B - FRAME</u>					
TOTAL CARRIED TO BILL SUMMARY					
B3.4/B/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>PRECAST CONCRETE</u>				
	Reinforced vibrated precast concrete Grade 25 as described including all moulds, hoisting and setting in cement mortar (1:3) :-				
A	125mm x 200mm lintol reinforced with and including 2 nos. 10mm diameter top and bottom high tensile rod hooked at ends and 10mm diameter mild steel links at 200mm centres	M	12		
	<u>BRICKWORK</u>				
	Well burnt clay bricks bedded and jointed in cement mortar (1:3) with plasticiser as described :-				
B	Brick wall (230mm thick) reinforced with and including a layer of "Exmet" at every fourth course	M2	9		
C	Brick wall (115mm thick) reinforced with and including a layer of "Exmet" at every fourth course	M2	34		
	<u>SUNDRIES</u>				
D	Bituminous felt horizontal damp-proof course 230mm wide well lapped at joints laid on brickwall on and including 19mm thick cement and sand (1:1) bed coated with hot bitumen	M	3		
E	Ditto 115mm wide ditto	M	13		
F	6mm diameter mild steel rod 350mm long as bonding tie, one end cast into concrete other end built into joint of brickwall	No	80		
ELEMENT C - EXTERNAL WALL TOTAL CARRIED TO BILL SUMMARY					
		B3.4/C/S			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>CONCRETE WORK</u>				
	<u>Vibrated reinforced concrete Grade 30 as described:-</u>				
A	110mm thick roof slab	M2	11		
B	<u>Extra over</u> for scupper drain overall size 150mm x 50mm deep laid to falls including all necessary formwork, waterproofing compound and finishes as per detail drawing	M	18		
	<u>REINFORCEMENT</u>				
	<u>Fabric reinforcement cut to size</u>				
C	A layer of BRC No. A7 fabric reinforcement in roof slab with 230mm side and end laps (measured nett as allowance made for laps)	M2	11		
D	A layer of BRC No. B6 fabric reinforcement in roof slab ditto	M2	9		
	<u>FORMWORK</u>				
	<u>Sawn formwork as described to concrete works</u>				
E	To soffit of roof slab	M2	11		
F	To edge of concrete exceeding 100mm and not exceeding 200mm high	M	48		
	<u>WATERPROOFING</u>				
	<u>Cement and sand (1:3) bed finished with a wood trowel a smooth and level surfaces to receive water proofing membrane</u>				
H	12mm thick to roof slab finished to fall	M2	11		
B3.4/D/1		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>WATERPROOFING (Cont'd</u></p> <p><u>Approved water proofing membrane laid in strict accordance with the manufacturer's instructions and recommendation (measured nett and no allowance made for laps)</u></p>				
A	<p>To roof slab finished to fall</p> <p><u>Cement and sand (1:3) protective screed finished with a steel trowel to a smooth and level surface</u></p>	M2	11		
B	<p>25mm Thick to roof slab finished to fall</p> <p><u>Ponding Test</u></p>	M2	11		
C	<p>Allow for performing ponding test as required by the S.O. over areas of waterproofed roof slab to ensure watertightness inclusive of provision of water, pumps, temporary walling, etc., and make good all defective areas and leave perfect</p>	Item			
	<p><u>ROOF TRUSS AND FRAMING</u></p> <p>Notes :-</p> <p>The contractor shall be required to design complete with endorsement from Professional Engineer, fabricate and erect a roof trusses system together with associated roof framing members (i.e. rafters, wall plates, battens, struts, tie beams, etc.)</p> <p>The contractor shall submit to the Engineer the shop drawings of the proposed proprietary system detailing of all members, connections and fixings for approval before manufacture and installation of the truss system</p> <p>The contractor shall submit with his tender, detailed quantities and schedule of rates of items provided for the proprietary roof truss system and associated roof framing members</p>				
B3.4/D/2		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>ROOF TRUSS AND FRAMING (Cont'd</u>				
A	Design, fabrication, delivery to site and fixing in position light weight steel roof truss system complete with purlin together with associated roof framing members for roof covering, 1 degrees including all necessary connections, fixings and accessories and fixing in position in accordance with the manufacturer's instruction, hoisting and fixing in position	M2	40		
	<u>Metal Fascia Board as specified</u>				
B	350mm high fascia board complete with side cap. All as per drawings E3/1088/2022/MBIP/PKD/PH/WD-01	M	26		
	<u>ROOF COVERING</u>				
	<u>Metal Roofing</u>				
	<u>Supply and install approved equivalent prepainted metal roofing sheet covered all surface complete with 20mm Polyurethane (PU Foam), prepainted metal sheet, including all necessary fixing accessories, corrosion protection, fixed in accordance with the manufacturer's instructions (measured nett and no allowance made for laps) (The Contractor is required to provide warranty from the product manufacturer)</u>				
C	0.48mm thick metal deck roofing sheet including top fixing fastener to mild steel purlin (measured separately) including all necessary accessories 1 degrees slope	M2	40		

D	Flashing 900mm girth one times bent, one edge tucked into brickwall and other edge dressed over roofing	M	10		
B3.4/D/3		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>ROOF COVERING</u> <u>Galvanised Iron gutter</u> <u>Supply and fix or other approved equivalent for galvanised iron gutter and fittings used strictly in accordance with manufacturer's instruction :-</u> A Approved galvanised iron gutter including ms framing and all necessary fittings, fixings, accessories, etc. all accordance to manufacturer's details. All as per drawing E3/1088/2022/MBIP/PKD/PH/WD-01	M	8		
	<u>PLUMBING INSTALLATION</u> <u>Unplasticised PVC pipe and fittings used strictly in accordance with manufacturer's instruction : -</u>				
B	100mm diameter rainwater down pipe fixed to wall	M	12		
C	100mm diameter rainwater down pipe laid in trench	M	2		
D	<u>Extra over</u> bend	No	6		
E	Supply and install dome grating including gutter inlet with sleeve to suit 100mm diameter rainwater downpipe	No	2		
B3.4/D/4		TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p style="text-align: center;"><u>COLLECTION</u></p> <p>PAGE B3.4/D/1</p> <p>PAGE B3.4/D/2</p> <p>PAGE B3.4/D/3</p> <p>PAGE B3.4/D/4</p>	- - - -	- - - -	- - - -	
ELEMENT D - ROOF					
TOTAL CARRIED TO BILL SUMMARY					
B3.4/D/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>ALUMINIUM WORK</u> <u>Supply and install the following aluminium anodized frame windows and fixed panels complete with frames, coupling, transoms, mullions concealed top and bottom bolts, ironmongery, glazing, beads and including 6mm thk clear tinted glass as described and all other fittings and accessories and fixing complete in accordance to manufacturer's instructions and recommendations all as shown in drawing E3/1088/2022/MBIP/PKD/PH/WD-01</u> <u>Fixed Glass Window</u>				
A	Fixed glass window overall size 600mm x 2000mm high, with 3mm thick clear glass panel (Type W1)	No	3		
<u>ELEMENT E - WINDOWS</u> TOTAL CARRIED TO BILL SUMMARY					
		B3.4/E/S			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>METAL DOORS FRAME</u> Supply and fix approved 1.0mm thick metal door frame and infilled with cement grout, including all necessary bedding, fixing anchors, and fixing accessories, covered all surface with hot dip galvanised all in accordance to the manufacturer's instructions, S.O. approval and as per drawing E3/1088/2022/MBIP/PKD/PH/WD-01	No	1		
	Overall size 1800mm x 2100mm high (Type D1)				
B	<u>CARPENTRY AND JOINERY</u> Wrot and framed "pressure treated" Grade 'A' timber all in accordance to the manufacturer's instruction, S.O approval and all as per Arhitect's drawings :- <u>Timber Flush Door</u>	No	1		
	Single leaf timber flush door overall size 1800mm x 2100mm high (Type D1)				
<u>ELEMENT F - DOORS</u> TOTAL CARRIED TO BILL SUMMARY					
B3.4/F/S					

Bill No. 3.4 - Pump House

B3.4/G/S

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>EXTERNAL WALL FINISHES</u>				
	<u>Plastering</u> <u>Cement and sand (1:3) with and approved plasticiser</u> <u>externally finished with wood float</u>				
A	20mm thk plainface to wall and column	M2	43		
B	<u>INTERNAL WALL FINISHES</u>				
	<u>Plastering</u> <u>Cement and sand (1:3) with and approved plasticiser</u> <u>internally finished with steel trowel :-</u>				
B	20mm thk plainface to wall and column	M2	43		
<u>ELEMENT H - WALL FINISHES</u>					
TOTAL CARRIED TO BILL SUMMARY					
B3.4/H/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
A	<u>EXTERNAL FLOOR FINISHES</u> <u>Paving</u> <u>Cement and sand (1:3) finished with a steel trowel:-</u> 20mm thick paving to floor finished to fall to slab	M2	22		
	<u>INTERNAL FLOOR FINISHES</u> <u>Paving</u> <u>Cement and sand (1:3) finished with a steel trowel:-</u> 20mm thick paving to floor finished to fall to slab	M2	18		
<u>ELEMENT J - FLOOR FINISHES</u> TOTAL CARRIED TO BILL SUMMARY B3.4/J/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>EXTERNAL CEILING FINISHES</u> <u>Skim Coat</u> Apply approved skimcoat or equivalent to a smooth finish to all external wall and r.c. structures surfaces (sills, returns, corners, projections and other wall surface profiles included) including preparing, levelling and making good of surface to receive skimcoat and provision of fibremesh to required areas.				
A	12.5mm thick plainface to concrete soffit and sides of slab <u>Supply and install approved pre-painted Aluminium Strip Ceiling, 100mm width x 0.55mm thick.; complete with G.I. Multi Carrier @ spacing at max.1200mm c/c to hold the panels, suspended multi carrier from the soffit by means of 14 gauge wire hanger and u-channel to perimeter of walls including all standard fixing accessories all fixed accordance to manufacturer's instruction and Architect's approval.</u>	M2	11		
B	General ceiling area <u>INTERNAL CEILING FINISHES</u> <u>Supply and install approved asbestos free suspended ceiling or other and approved equivalent, complete with framing and suspension system and jointing all accessories in accordance with the manufactures instruction and architect's approval and Architect's drawing E3/1088/2022/MBIP/PKD/PH/WD-01</u>	M2	22		
C	General ceiling area	M2	18		
ELEMENT K - CEILING FINISHES TOTAL CARRIED TO BILL SUMMARY B3.4/K/S					

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<p><u>Note :-</u></p> <p><u>The sanitary wares and fittings as specified are as an indication of the quality required. Other manufacturer's or other brands are acceptable if the quality is equivalent and approved by the S.O.</u></p> <p><u>Supply and fix the following "JOHNSON SUISSE" sanitary wares and fittings or other approved and equivalent as specified or other equal and approved equivalent complete with all necessary joints and connections to supply and waste pipes</u></p>				
A	Approved 150mm x 150mm stainless steel floor trap with insect trap. All as per drawings.	Nos	1		
C	On completion of the sanitary fittings installation, test all piping and fittings and leave complete installation in perfect working order and to the satisfaction of the S.O.	Item			
	<u>Builder's Work In Connection With Sanitary Fittings</u>				
D	<u>Extra over</u> for scupper drain overall size 200mm x 50mm deep laid to falls including all necessary formwork, waterproofing compound and finishes as per detail drawing	M	6		
<u>ELEMENT L - SANITARY FITTINGS</u> TOTAL CARRIED TO BILL SUMMARY					
		B3.4/L/S			

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<u>WALL AND CEILING</u> Prepare and apply approved one sealer coat of alkali-resisting primer and two coats of approved weatherbond paint or other approved equivalent externally on surfaces of (all painting works should be done by certified painter)				
A	Plastered wall and column	M2	43		
B	Plastered concrete soffit	M2	11		
	Prepare and apply approved one sealer coat of alkali-resisting primer and two coats of approved emulsion paint or other approved equivalent internally on surfaces of (all painting works should be done by certified painter)				
C	Plastered wall and column	M2	43		
	<u>METALWORK</u> Prepare and paint approved one coat of epoxy primer and two finishing coats of metallic paint or other approved equivalent (all painting works should be done by certified painter)				
D	Surfaces of door frame exceeding 200mm girth and not exceeding 300mm girth	M	6		
	<u>WOODWORK</u> Knot, prime, stop and paint approved one coat zinc cromate primer, one coat economy undercoat and two finishing coats of alkyd resin enamel paint or other approved equivalent as (all painting works should be done by certified painter)				
E	General surfaces of doors	M2	8		
ELEMENT M - PAINTING AND DECORATION TOTAL CARRIED TO BILL SUMMARY B3.4/M/S					

BILL NO. 4 – MECHANICAL & ELECTRICAL WORKS

CADANGAN MENDIRIKAN SEBUAH HAB KOMUNITI YANG MENGANDUNGI:-

- i) 1 BLOK HAB KOMUNITI BERSERTA KEMUDAHAN 2 TINGKAT
- ii) 1 UNIT PONDOK PENGAWAL
- iii) 1 UNIT RUMAH SAMPAH BERSERTA RUANG KITAR SEMULA
- iv) 1 UNIT RUMAH PAM
- v) 1 UNIT PENCAWANG PADAT

DI ATAS LOT 66832, JALAN INDAH 5/8, TAMAN BUKIT INDAH, MUKIM PULAI, DAERAH JOHOR BAHRU, JOHOR DARUL TA'ZIM UNTUK
MAJLIS BANDARAYA ISKANDAR PUTERI

SUMMARY PRICE

MECHANICAL & ELECTRICAL SERVICES

ITEM	DESCRIPTIONS	TOTAL AMOUNT (RM)
	<u>MECHANICAL SERVICES</u>	
1	COLDWATER PLUMBING SYSTEM. - INTERNAL COLD WATER SERVICES - WATER LANDSCAPE SYSTEM - RAIN WATER HARVESTING	
2	SANITARY PLUMBING SYSTEM	
3	AIR-CONDITIONING & MECHANICAL VENTILATION SYSTEM (ACMV) - AIR-CONDITIONING SERVICES - KITCHEN HOOD SYSTEM	
4	FIRE PROTECTION SERVICES.	
5	OKU LIFT	
6	MISCELLANEOUS.	
	<u>ELECTRICAL SERVICES</u>	
1	INFRA ELECTRICAL SYSTEM.	
2	LOW VOLTAGE SYSTEM.	
3	INFORMATION & COMMUNICATION TECHNOLOGY SYSTEM.	
4	LIGHTNING PROTECTION SYSTEM.	
5	SOLAR SYSTEM	
6	EXTRA LOW VOLTAGE SYSTEM. i) PUBLIC ADDRESS (PA) SYSTEM ii) AUDIO & VISUAL SYSTEM iii) INDOOR LED DISPLAY BOARD iv) CCTV SYSTEM	
7	ELECTRIC VEHICLE (EV) CHARGER (2 NOS)	
8	MISCELLANEOUS.	
9	PROVISIONAL ITEM (TNB COMPACT-SUBSTATION).	
TOTAL PRICE		

MECHANICAL WORKS

CADANGAN MENDIRIKAN SEBUAH HAB KOMUNITI YANG MENGANDUNGI:-

- i) 1 BLOK HAB KOMUNITI BERSERTA KEMUDAHAN 2 TINGKAT
- ii) 1 UNIT PONDOK PENGAWAL
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DI ATAS LOT 66832, JALAN INDAH 5/8, TAMAN BUKIT INDAH, MUKIM PULAI, DAERAH JOHOR BAHRU, JOHOR DARUL TA'ZIM UNTUK MAJLIS BANDARAYA ISKANDAR PUTERI

MECHANICAL SYSTEM SUMMARY OF PRICE

ITEM	DESCRIPTION OF WORKS	CONTRACT AMOUNT (RM)
A	COLDWATER PLUMBING SYSTEM	
B	SANITARY PLUMBING SYSTEM	
C	AIRCONDITIONING & MECHANICAL VENTALITAION SYSTEM (ACMV)	
D	FIRE PROTECTION SYSTEM	
E	OKU LIFT SYSTEM	
F	MISCELLANEUOS	
CARRIED FORWARD TO M&E SUMMARY (ITEM A)		-

NO	DESCRIPTION	UNIT	1	UNIT RATE	AMOUNT
A	COLD WATER PLUMBING To complete supply, install, testing and commissioning of the following system and other ancillary works in accordance with the requirements of the specifications and drawings :-				
A.1	PUMP, STROGE TANK & DELIVERY PIPE				
1.0	<u>STROGE TANK & ASSOCIATED PIPEWORKS</u>				
1.1	<u>SUCTION TANK</u> To supply and install FRP tank c/w compartment, ball valve, inlet, outlet, drainpoint, cover, over flow, valve, c channel, cat ladder, piping and other accessories. Tank Size: 1m x 3m x 3m(H) (8,400Liters)	Lot	1		
1.2	<u>DOMESTIC TANK</u> To supply and install FRP tank (compartmented) c/w compartment, ball valve, inlet, outlet, drainpoint, cover, over flow, valve, c channel, cat ladder, piping and other accessories. Tank Size: 4m x 2m x 2m(H) (14,400Liters)	Lot	1		
1.3	<u>STORAGE TANK (GUARD HOUSE)</u> To supply and install Polyethylene (PE) tank c/w cover, tank support, 25mm thick water proof plywood, overflow pipe, scour pipe, warning pipe, balancing pipe, ball float valves, valves, plinth, sampling pipe, pipe and other necessary accessories; Tank Size: 1145mm(D) x 838mm (H) (100gallon)	Lot	1		
2.0	<u>PUMP & ASSOCIATED ELECTRICALWORKS</u>				
2.1	<u>SUCTION PUMP</u>				
a)	To supply and install Vertical Multistage Pump c/w associated valves, pressure gauges, stainless steel manifold pipe, electrode and sensor wiring control panel and pressure vessel. Pump Cap. Min. : 1.5 L/S @ 25m head	nos	2		
b)	Pump control Panel (VSD) c/w auto/manual switch, control wiring, indicator light and other relevent accessories.	Lot	1		
2.2	<u>HYDROPNEUMATIC BOOSTER PUMP</u>				
a)	To supply and install Vertical Multistage Pump c/w associated valves, pressure gauges, stainless steel manifold pipe, electrode and sensor wiring control panel and pressure vessel. Pump Cap. Min. : 1.0 L/S @ 10m head	nos	2		
b)	Pump control Panel (VSD) c/w auto/manual switch, control wiring, indicator light and other relevent accessories.	Lot	1		
A.2	COLD WATER PIPING				
1.0	<u>INCOMING PIPE</u>				
1.1	Incoming pipe from incoming suction tank to domestic tank c/w hangers, pipe sleeves thorough beam/slab/wall, supports, bracket, painting, connection, concealed works, elbow, tee, reducer, valve, bends, pipe clip, and all accessories and necessary works for the following pipe sizes: a) 50 mm (HDPE PN12.5)	Lot	1		
1.2	Incoming pipe from C&S details to stop cock c/w hangers, pipe sleeves thorough beam/slab/wall, supports, bracket, painting, connection, concealed works, elbow, tee, reducer, valve, bends, pipe clip, and all accessories and necessary works for the following pipe sizes: a) 25 mm (HDPE PN12.5) b) 20 mm (HDPE PN12.5)	Lot Lot	1 1		
1.3	All valves including gate valves, stop cock, angle stop valve, flexible hose, ball valve, pressure reducing valve, pressure gauge cover item 1.1 & 1.2	Lot	1		
TOTAL CARRIED FORWARD					

TOTAL BROUGHT FORWARD					
2.0	DELIVERY PIPE				
2.1	Delivery pipe from domestic tank to stop cock c/w hangers, pipe sleeves thorough beam/slab/wall, supports, bracket, painting, connection, concealed works, elbow, tee, reducer, valve, bends, pipe clip, and all accessories and necessary works for the following pipe sizes:				
	a) 50 mm (PR-R PN10)	Lot	1		
	b) 40 mm (PR-R PN10)	Lot	1		
	c) 32 mm (PR-R PN10)	Lot	1		
	d) 25 mm (PR-R PN10)	Lot	1		
	e) 20 mm (PR-R PN10)	Lot	1		
2.2	All valves including gate valves, stop cock, angle stop valve, flexible hose, ball valve, pressure reducing valve, pressure gauge cover item 2.1	Lot	1		
3.0	DISTRIBUTION PIPE				
	Internal distribution pipe c/w hangers, pipe sleeves thorough beam/slab/wall, supports, bracket, painting, connection, concealed works, elbow, tee, reducer, valve, bends, pipe clip, and all accessories and necessary works for the following pipe sizes:				
3.1	GUARD HOUSE				
	a) 25 mm (PVC-CLASS7)	Lot	1		
	b) 20 mm (PVC-CLASS7)	Lot	1		
	c) 15 mm (PVC-CLASS7)	Lot	1		
3.1.1	All valves including gate valves, stop cock, angle stop valve, flexible hose, ball valve, pressure reducing valve, pressure gauge cover item 3.1	Lot	1		
3.2	TOILET 1				
	a) 25 mm (PVC-CLASS7)	Lot	1		
	b) 20 mm (PVC-CLASS7)	Lot	1		
	c) 15 mm (PVC-CLASS7)	Lot	1		
3.2.1	All valves including gate valves, stop cock, angle stop valve, flexible hose, ball valve, pressure reducing valve, pressure gauge cover item 3.2	Lot	1		
3.3	CAFÉ 1 & WASH AREA				
	a) 20 mm (PVC-CLASS7)	Lot	1		
	b) 15 mm (PVC-CLASS7)	Lot	1		
3.3.1	All valves including gate valves, stop cock, angle stop valve, flexible hose, ball valve, pressure reducing valve, pressure gauge cover item 3.3	Lot	1		
3.4	CAFÉ 2, TOILET 2 & WASH AREA				
	a) 25 mm (PVC-CLASS7)	Lot	1		
	b) 20 mm (PVC-CLASS7)	Lot	1		
	c) 15 mm (PVC-CLASS7)	Lot	1		
3.4.1	All valves including gate valves, stop cock, angle stop valve, flexible hose, ball valve, pressure reducing valve, pressure gauge cover item 3.4	Lot	1		
3.5	OKU TOILET & WATER DISPENSER				
	a) 25 mm (PVC-CLASS7)	Lot	1		
	b) 20 mm (PVC-CLASS7)	Lot	1		
	c) 15 mm (PVC-CLASS7)	Lot	1		
3.5.1	All valves including gate valves, stop cock, angle stop valve, flexible hose, ball valve, pressure reducing valve, pressure gauge cover item 3.5	Lot	1		
TOTAL CARRIED FORWARD					

TOTAL BROUGHT FORWARD					
3.6	TOILET M, TOILET F, PRAYER F & PRAYER M				
	a) 32 mm (PVC-CLASS7)	Lot	1		
	b) 25 mm (PVC-CLASS7)	Lot	1		
	c) 20 mm (PVC-CLASS7)	Lot	1		
	d) 15 mm (PVC-CLASS7)	Lot	1		
3.6.1	All valves including gate valves, stop cock, angle stop valve, flexible hose, ball valve, pressure reducing valve, pressure gauge cover item 3.6	Lot	1		
3.7	CULINARY, KITCHEN, PUMP ROOM & BIN CENTRE				
	a) 20 mm (PVC-CLASS7)	Lot	1		
	b) 15 mm (PVC-CLASS7)	Lot	1		
3.7.1	All valves including gate valves, stop cock, angle stop valve, flexible hose, ball valve, pressure reducing valve, pressure gauge cover item 3.7	Lot	1		
3.8	TOILET MALE, FEMALE & PANTRY				
	a) 32 mm (PVC-CLASS7)	Lot	1		
	b) 25 mm (PVC-CLASS7)	Lot	1		
	c) 20 mm (PVC-CLASS7)	Lot	1		
	d) 15 mm (PVC-CLASS7)	Lot	1		
3.8.1	All valves including gate valves, stop cock, angle stop valve, flexible hose, ball valve, pressure reducing valve, pressure gauge cover item 3.8	Lot	1		
A.3	PROVISIONAL SUM FOR :				
A.3.1	WATER LANDSCAPE SYSTEM (DESIGN PROPOSED BY SPECIALIST)				
	To supply and install Transfer Pump (Duty & Standby), Pre-filtration c/w associated valves, pressure gauges, HDPE pipe, drain pipe, sensor valve, control panel, sensor wiring control panel and other neccessary accessories.	Lot	1		
A.3.2	RAIN WATER HARVESTING				
	To supply and install Water Tank (300gallon), First Flush Divert Filtration, Transfer Pump (standby and duty) c/w associated valves, pressure gauges, HDPE pipe, drain pipe, sensor valve, control panel, sensor wiring control panel and other neccessary accessories.	Lot	1		
TO SUMMARY					

NO	DESCRIPTION	UNIT	1	UNIT RATE	AMOUNT
B	SANITARY PLUMBING To complete supply, install, testing and commissioning of the following system and other ancillary works in accordance with the requirements of the specifications and drawings :-				
B.1	SANITARY PIPING (GROUND FLOOR) UPVC piping for internal soil pipe, waste pipe and anti syphonage pipe c/w fittings, pipe sleeves through beam/slab/wall, traps, joints, fittings, elbows, tee, reducer, bends, bracket, plug, cleaning eye, cap, bedding, high quality resin and connection to Manhole/Inspection Chamber etc as specified for:-				
B.1.1	GUARD HOUSE				
	<u>Vent Pipe</u>				
	a) 82 mm	Lot	1		
	<u>Branch Pipe</u>				
	b) 32 mm	Lot	1		
	c) 82 mm	Lot	1		
	d) 110 mm	Lot	1		
B.1.2	TOILET 1				
	<u>Soil/waste Stack Pipe</u>				
	a) 82 mm	Lot	1		
	<u>Vent Pipe</u>				
	b) 82 mm	Lot	1		
	<u>Branch Pipe</u>				
	c) 32 mm	Lot	1		
	d) 82 mm	Lot	1		
	e) 110 mm	Lot	1		
B.1.3	CAFÉ 1, HOSE REEL & WASH AREA				
	<u>Soil/waste Stack Pipe</u>				
	a) 110 mm	Lot	1		
	<u>Vent Pipe</u>				
	b) 82 mm	Lot	1		
	<u>Branch Pipe</u>				
	c) 32 mm	Lot	1		
	d) 82 mm	Lot	1		
	e) 110 mm	Lot	1		
	TOTAL CARRIED FORWARD				

TOTAL BROUGHT FORWARD					
B.1.4	CAFÉ 2, TOILET 2, HOSE REEL & WASH AREA				
	<u>Vent Pipe</u>				
	b) 82 mm	Lot	1		
	<u>Branch Pipe</u>				
	c) 32 mm	Lot	1		
	d) 82 mm	Lot	1		
	e) 110 mm	Lot	1		
B.1.5	OKU TOILET, HOSE REEL & WATER DISPENSER				
	<u>Vent Pipe</u>				
	a) 82 mm	Lot	1		
	<u>Branch Pipe</u>				
	b) 32 mm	Lot	1		
	c) 82 mm	Lot	1		
	d) 110 mm	Lot	1		
B.1.6	TOILET M, TOILET F, PRAYER F & PRAYER M				
	<u>Soil/waste Stack Pipe</u>				
	a) 82 mm	Lot	1		
	<u>Vent Pipe</u>				
	b) 82 mm	Lot	1		
	<u>Branch Pipe</u>				
	c) 32 mm	Lot	1		
	d) 82 mm	Lot	1		
	e) 110 mm	Lot	1		
B.1.7	CULINARY, KITCHEN, HOSE REEL, PUMP ROOM & BIN CENTRE				
	<u>Soil/waste Stack Pipe</u>				
	a) 82 mm	Lot	1		
	<u>Branch Pipe</u>				
	b) 32 mm	Lot	1		
	c) 82 mm	Lot	1		
	d) 110 mm	Lot	1		
TOTAL CARRIED FORWARD					

TOTAL BROUGHT FORWARD					
B.2	SANITARY PIPING (FIRST FLOOR) UPVC piping for internal soil pipe, waste pipe and anti syphonage pipe c/w fittings, pipe sleeves through beam/slab/wall, traps, joints, fittings, elbows, tee, reducer, bends, bracket, plug, cleaning eye, cap, bedding, high quality resin and connection to Manhole/Inspection Chamber etc as specified for:-				
B.2.1	TOILET MALE, FEMALE & PANTRY <u>Vent Pipe</u> a) 82 mm	Lot	1		
	<u>Branch Pipe</u> b) 32 mm	Lot	1		
	c) 82 mm	Lot	1		
	d) 110 mm	Lot	1		
B.2.2	HOSE REEL, AHU 1, AHU 2 & TANK ROOM <u>Branch Pipe</u> a) 82 mm	Lot	1		
B.2	ACCESSORIES				
1.0	Floor drain, floor trap, gully trap, grease trap, neutralization tank, stainless steel gratings bottle trap, vent cowl etc c/w excavation, brickwork, bedding, and all necessary accessories.	Lot	1		
2.0	600x600x150 precast/cast-in situ concrete slab for floor trap/gulley trap/grease trap/neutralization tank c/w reinforcement bar and etc.	Lot	1		
3.0	115mm thick brickwall to covered all exposed pipes including reinforced with a layer of 'Exmet' 65mm wide at every fourth course, plastering and painting works to the satisfactory of the Engineer.	Lot	1		
4.0	Inspection Chambers c/w excavation, bedding, medium duty grating cover and frame, steps, brickwall, forming inlet and outlet, internal plastering using High Alumina Cement of 20mm thick and all necessary accessories	Lots	8		
5.0	Connection to external sewer from inspection chamber to manhole including excavation, backfilling, back drop, spigot, socket rubber ring jointing, 150mm bend, M.S. Plate (where applicable) using 150 mm dia. Verified Clay Pipe to the satisfactory of engineer.	Lot	1		
TO SUMMARY					

NO	DESCRIPTION	UNIT	1	UNIT RATE	AMOUNT
C	AIR-CONDITIONING & MECHANICAL VENTILATION SYSTEM To complete supply, install, testing and commissioning of the following system and other ancillary works in accordance with the requirements of the specifications and drawings:-				
C.1	AIR-COOLED SPLIT UNIT SYSTEM Air-Cooled Split Unit System c/w outdoor unit, plinths, refrigerant piping, 6/8" insulation, bracket, fitting, remote control, wired control, power/control wiring, drain pipe, vibration isolation and all associated accessories at:Chamber etc as specified for:-				
1.0	<u>INVERTER SPLIT UNITS</u>				
	a) MBIP KIOSK (Min. Cap: 24,200 Btuh/each) Type: Ceiling Cassete	Lot	1		
	b) HOLDING ROOM (Min. Cap: 18,500 Btuh/each) Type: Ceiling Cassete	Lot	1		
	c) FOYER (Min. Cap: 24,200 Btuh/each) Type: Ceiling Cassete	Lot	1		
	d) OFFICE (Min. Cap: 9,000 Btuh/each) Type: Wall Mounted	Lot	1		
	e) CONTROL ROOM (Min. Cap: 9,000 Btuh/each) Type: Wall Mounted	Lot	1		
	f) STAFF ROOM (Min. Cap: 9,000 Btuh/each) Type: Wall Mounted	Lot	1		
	g) AV ROOM (Min. Cap: 9,000 Btuh/each) Type: Wall Mounted	Lot	1		
	h) SEVER ROOM (Min. Cap: 12,300 Btuh/each) Type: Wall Mounted	Lots	2		
	i) RECEPTION (Min. Cap: 18,500 Btuh/each) Type: Ceiling Cassete	Lot	1		
2.0	<u>VRV INDOOR UNITS</u>				
	a) INTERNET CENTRE & DIGITAL LIBRARY (Min. Cap: 24,200 Btuh/each) Type: Ceiling Cassete	Lots	6		
	b) MEETING ROOM (Min. Cap: 19,100 Btuh/each) Type: Ceiling Cassete	Lots	2		
	c) AHU 1 & 2 (Min. Cap: 304,000 Btuh/each) Type: Indoor Type	Lots	2		
3.0	<u>VRV OUTDOOR UNITS</u>				
	a) INTERNET CENTRE & DIGITAL LIBRARY (Min. Cap: 76,400 Btuh/each) Type: Wall Mounted	Lots	2		
	b) MEETING ROOM (Min. Cap: 38,200 Btuh/each) Type: Wall Mounted	Lot	1		
	c) VRV OUTDOOR 1 & 2 (Min. Cap: 305,000 Btuh/each) Type: Floor Mounted	Lots	2		
	TOTAL CARRIED FORWARD				

TOTAL BROUGHT FORWARD					
C.2 DUCTING SYSTEM	Supply and install rigid pre-insulate aluminium ducting c/w 1" pre-insulation foam, aluminium tape, duct seal, bracket, flexible, bolt and other accessories.				
a) AIR SUPPLY DUCTING		Lot	1		
b) AIR RETURN DUCTING		Lot	1		
c) FRESH AIR DUCTING		Lot	1		
d) EXHAUST AIR DUCTING		Lot	1		
C.3 CONTROL PANEL					
1.0	Air-conditioning control panel c/w auto/manual switch, start/stop switch, control wiring, indicator light, timer 12hour operation interlocking duty & standby, high temperature sensor and other relevant accessories:				
a) SERVER ROOM		Lot	1		
2.0	Air-conditioning control panel (VRV) c/w auto/manual switch, start/stop switch, control wiring, indicator light, thermostat, wiring remote and other relevant accessories:				
a) INTERNET CENTRE & DIGITAL LIBRARY		Lot	1		
3.0	Air-conditioning control panel (VRV) c/w auto/manual switch, start/stop switch, control wiring, indicator light, thermostat, wiring remote, fire signal wiring, motorised damper signal and other relevant accessories:				
a) AHU1		Lot	1		
b) AHU 2		Lot	1		
c) AHU 1 & 2 (CONTROL ROOM) c/w auto start air curtain		Lot	1		
C.4 ACCESSORIES					
1.0	To supply install motorised fire damper c/w wiring signal, bracket and necessary accessories.				
a) AIR SUPPLY DUCTING		Lot	1		
b) AIR RETURN DUCTING		Lot	1		
c) FRESH AIR DUCTING		Lot	1		
d) EXHAUST AIR DUCTING		Lot	1		
2.0	To supply and install exhaust box duct fan (5000cmh) c/w wiring signal, bracket and necessary accessories.	Lots	2		
3.0	To supply and install wall mounted exhaust (675cmh) c/w wiring, switch, auto gravity louvers, bracket and necessary accessories.	Lots	2		
4.0	To supply and install air supply diffuser, air return grill, fresh air grill, exhaust grill c/w filtration, flexible hose joint, seal, duct tape and necessary accessories.	Lot	1		
C.5 AIR-CURTAIN					
	To supply and install air curtain c/w wiring signal from AHU 1 & 2 control panel at control room, bracket and necessary accessories.				
a) Length 900mm with air throw 12ft		Lots	10		
b) Length 1200mm with air throw 12ft		Lots	24		
C.6 KITCHEN HOOD SYSTEM					
	Supply and install kitchen hood system c/w exhaust fan, hood, grease filter, aluminum ducting, bracket, sealer, bolt, wiring, control panel, switch and other accessories.				
a) CULINARY CLASS ROOM (min cap: 400CMH)		Lot	1		
b) KITCHEN (min cap: 400CMH)		Lot	1		
TO SUMMARY					

NO	DESCRIPTION	UNIT	1	UNIT RATE	AMOUNT
D	<u>FIRE PROTECTION SYSTEM</u>				
	To complete supply, install, testing and commissioning of the following system and other ancillary works in accordance with the BOMBA of the specifications and drawings :-				
D.1	HOSE REEL SYSTEM				
1.0	Hot-Dipped Galvanised Press Steel Hose Reel Tank c/w concrete plinths, level indicator, ladder, copper ball valve, internal stainless steel and external GI cat ladders, manhole cover, air vents, electrode sensors and other accessories Tank Size: 12.2m x 3.66m x 4.88m(H) (44,700Gallons)	Lot	1		
2.0	All Hose Reel pipe works Pre-paint 50mm G.I CL 'C' Piping from factory and fitting type from pump hose reel to building c/w fittings, pressure gauges, supporting hangers and brackets, valves, painting, pipe sleeves, making good of walls and floors, pipe wrapped with bituminous denso tap prior to backfilling (if buried) and all necessary accessories.	Lot	1		
3.0	Electrical Duty & Standby (Diesel) pump c/w valve, strainers, flexible pipe works, plinth and all accessories. Pump Cap. Min. : 30GPM @ 40m head	Lots	2		
4.0	Pump control Panel c/w auto/manual switch, control wiring, indicator light, pressure switch, wiring signal, dry contact and other relevant accessories.	Lot	1		
5.0	Hose Reel drum c/w 25mm diameter x 30.5m hose, jet, spray nozzle and all accessories.	Lot	1		
D.2	SPRINKLER SYSTEM				
1.0	Hot-Dipped Galvanised Press Steel Hose Reel (Compartment) Tank c/w concrete plinths, level indicator, ladder, copper ball valve, internal stainless steel and external GI cat ladders, manhole cover, air vents, electrode sensors and other accessories Tank Size: 1.22m x 3.66m x 2.44m(H) (2,400Gallons)	Lot	1		
2.0	All Wet Riser pipe works Pre-paint B.S. CL 'B' & G.I CL 'C' Piping from factory and fitting type from pump to building c/w fittings, pressure gauges, supporting hangers and brackets, valves, painting, pipe sleeves, making good of walls and floors, pipe wrapped with bituminous denso tap prior to backfilling (if buried) and all necessary accessories.	Lot	1		
	a) 150 mm (G.I CLASS C)	Lot	1		
	b) 150 mm (B.S. CLASS B)	Lot	1		
	c) 110 mm (B.S. CLASS B)	Lot	1		
	d) 80 mm (B.S. CLASS B)	Lot	1		
	e) 65 mm (B.S. CLASS B)	Lot	1		
	f) 40 mm (B.S. CLASS B)	Lot	1		
	g) 32 mm (B.S. CLASS B)	Lot	1		
	h) 25 mm (B.S. CLASS B)	Lot	1		
3.0	Electrical Duty & Standby (Diesel) horizontal centrifugal pump c/w valve, strainers, flexible pipe works, plinth and all accessories. Pump Cap. Min. : 2,250L/MIN @ 60m head	Lots	2		
4.0	Jockey pump c/w valve, strainers, flexible pipe works, plinth and all accessories. Pump Cap. Min. : 225L/MIN @ 66m head	Lot	1		
5.0	Pump control Panel c/w auto/manual switch, control wiring, indicator light, pressure switch, wiring signal, dry contact and other relevant accessories.	Lot	1		
6.0	Sprinkler Head c/w reducer, guard, cover, jointing and necessary accessories	Lot	1		
7.0	Control Valve c/w check valve, piping works, alarm valves, drain valve, flow gauge, pressure gauge, bracket and relevant accessories	Lot	1		
8.0	LPCB & FM Approvals Flow Meter c/w check valve, piping works, gate valves and relevant accessories	Lot	1		
9.0	4-ways Breeching Inlet c/w check valve, piping works, bracket, cabinet and relevant accessories	Lot	1		
10.0	All valves including gate valves, check valve, angle stop valve, flexible valve, ball valve, pressure reducing valve, pressure gauge, flow switch, orifice plate, drain valve and necessary accessories.	Lot	1		
TOTAL CARRIED FORWARD					

TOTAL BROUGHT FORWARD					
D.3	HFC AUTOMATIC SYSTEM (AHU 1 & AHU 2)				
1.0	HFC cylinders + Pilot cylinder c/w cylinder rack, valve, connection, piping work & accessories.	Lot	1		
2.0	All pipe works Pre-paint Galvanized Schedule 40' Piping from HFC cylinder c/w fittings, pressure gauges, supporting hangers and brackets, valves, painting, pipe sleeves and all necessary accessories.	Lot	1		
3.0	HFC control panel c/w auto/manual switch, control wiring, indicator light and other relevant accessories.	Lot	1		
4.0	To supply and install alarm bell, manual break glass, smoke detector, heat detector, fire curtain, discharge light, electrical works, strober sounder, abort station, manual release, wiring, signal cable and relevant accessories.	Lot	1		
D.4	WET CHEMICAL SYSTEM (CULINARY)				
1.0	Wet Chemical cylinders + Pilot cylinder c/w cylinder rack, valve, connection, piping work & accessories.	Lot	1		
2.0	All pipe works Pre-paint Galvanized Schedule 40' Piping from HFC cylinder c/w fittings, pressure gauges, supporting hangers and brackets, valves, painting, pipe sleeves and all necessary accessories.	Lot	1		
3.0	Wet Chemical control panel c/w auto/manual switch, control wiring, indicator light and other relevant accessories.	Lot	1		
4.0	To supply and install fusible link, nozzle, fusible link cable, motorised gas valve, gas detector, strober sounder, abort station, manual release, wiring, signal cable and relevant accessories.	Lot	1		
D.5	FIRE ALARM SYSTEM				
	To supply, install and testing the following item as per drawing and specification:-				
	a) Manual breakglass	Lot	1		
	b) Smoke detector	Lot	1		
	c) Fire alarm bell	Lot	1		
	d) Master alarm bell	Lot	1		
	e) Fire main switch	Lot	1		
	f) Cabling using 1 x 2C x 1.5 mm sq. PVC/Cu + E in G.I conduit for manual breakglass, alarm bell and master alarm bell.	Lot	1		
	g) Cabling using 1 x 7C x 2.5 mm sq. PVC/SWA/PVC/Cu + E in G.I conduit from Hose Reel Pump, Sprinkler Pump, HFC System, Wet Chemical System to MFAP	Lot	1		
	h) Cabling using 1 x 14C x 2.5 mm sq. PVC/SWA/PVC/Cu + E in G.I conduit from RAP to MFAP include underground works	Lot	1		
	i) Termination block for above ground / underground termination cabling works	Lot	1		
	j) Main Fire Alarm Panel (MFAP) c/w mimic diagram, back up Battery and telephone line to local Bomba Station up to end of one year maintenance period & other accessories	Lot	1		
	k) Repeater Alarm Panel (RAP) c/w mimic diagram, back up Battery & other accessories	Lot	1		
TO SUMMARY					

NO	DESCRIPTION	UNIT	1	UNIT RATE	AMOUNT
E	<u>LIFT SYSTEM</u> To complete supply, install, testing and commisioning of the following system and other ancillary works in accordance with the requirements of the specifications and drawings:-				
E.1	LIFT OKU To supply, install and testing the following item as per drawing and specification:- <ul style="list-style-type: none"> a) Lift shaft panel c/w lifting platfrom, frame, painting and accessories (design details must propose by vendor) b) Center opening landing doors includes frame and accessories c) Car operating panel (COP), hall laterns, position indicators and call buttons d) Driven Motor Lift c/w driven belting, screw shaft, locking device, emergency stopper and accessories e) Lifting Screw c/w mounting bracket and accessories f) Lift operation controls and shaft informations g) Lift guide rails and attachments h) Car operating panel (COP) for OKU c/w landing button, intercom and accessories 	Lot Lot Lot Lot Lot Lot Lot Lot	1 1 1 1 1 1 1 1		
E.3	ELECTRICAL AND OTHERS To supply, install and testing the following item as per drawing and specification:- <ul style="list-style-type: none"> a) Electrical Switchboard c/w cables and wiring b) Central control panel c/w intercom system, battery, charger and accessories c) Installation according to the schedule specifications 	Lot Lot Lot	1 1 1		
TO SUMMARY					

NO	DESCRIPTION	UNIT	1	UNIT RATE	AMOUNT
F	<u>MISCELLANEOUS</u>				
1.0	Testing and commissioning of the whole fire protection system to the satisfactory and acceptance Client and Engineer.	L/S	1		
2.0	Submission of five (5) Sets of Proposed Construction Drawings, Detailed "Shop Drawing", Documents - List of Material, Method of statement & Catalogues before commencement of installation for consultant approval and record.	L/S	1		
3.0	Submission of five (5) Sets of 'As Built Drawing' c/w softcopy(cd-rom) and 5 sets Documents - 'Operation Maintenance Manual' ,Warranty after completion of installation for consultant approval and record.	L/S	1		
4.0	Twenty Seven (12) months comprehensive maintenance and servicing during the defects liability period including attendance to emergency breakdown inclusive also of 27 months warranty on all materials and equipment and liaison with Local Authorities to acquire certificate (submission to BOMBA & JKKP).	L/S	1		
5.0	Other item deemed necessary but not included in this BQ, please specify: a) _____ b) _____ c) _____ d) _____				
TO SUMMARY					

ELECTRICAL WORKS

**PERMOHONAN PELAN LAMPU JALAN DI BAWAH AKTA 133 BAGI CADANGAN MENDIRIKAN SEBUAH HAB KOMUNITI
 YANG MENGANDUNGI:
 i. 1 BLOK HAB KOMUNITI BESERTA KEMUDAHAN 2 TINGKAT
 ii. 1 UNIT PONDOK PENGAWAL
 iii. 1 UNIT RUMAH SAMPAH BESERTA RUANG KITAR SEMULA
 iv. 1 UNIT RUMAH PAM
 v. 1 UNIT PENCAWANG PADAT
 DI ATAS LOT 66832, JALAN INDAH 5/8, TAMAN BUKIT INDAH, MUKIM PULAI, DAERAH JOHOR BAHRU, JOHOR DARUL
 TA'ZIM
 UNTUK MAJLIS BANDARAYA ISKANDAR PUTERI**

ELECTRICAL SYSTEM SUMMARY OF PRICE

ITEM	DESCRIPTION OF WORKS	CONTRACT AMOUNT (RM)
A	INFRA ELECTRICAL SYSTEM.	
B	LOW VOLTAGE SYSTEM.	
C	INFORMATION & COMMUNICATION TECHNOLOGY SYSTEM.	
D	LIGHTNING PROTECTION SYSTEM.	
E	SOLAR SYSTEM	
F	EXTRA LOW VOLTAGE SYSTEM 1.0 PUBLIC ADDRESS (PA) SYSTEM 2.0 AUDIO & VISUAL SYSTEM 3.0 INDOOR LED DISPLAY BOARD 4.0 STAGE LIGHTING SYSTEM 5.0 CCTV SYSTEM	
F	ELECTRIC VEHICLE (EV CHARGER)	
G	MISCELLANEOUS.	
H	PROVISIONAL SUM.	85,000.00
CARRIED FORWARD TO M&E SUMMARY (ITEM B)		

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
A	<u>INFRA ELECTRICAL SYSTEM.</u> Note: i) For these portion of works, the rates must include for the supplying, installing, testing, commissioning and transportating of a complete infra electrical system with clean up all the debris and surplus material during/after the installation process. ii) All quantities in this section are provisional. The final quantity shall be measured upon completion.				
1.0	TNB METER KIOSK.				
1.1	600A TNB Meter Kiosk c/w fuse, fuse holder, cable, copper busbar, earthing, earth chamber, RC concrete plinth and other accessories as per TNB requirements.	set	1		
2.0	EXTERNAL INFRA SERVICES				
2.1	Underground Ø150mm HDPE PN10 pipe sleeve from TNB meter kiosk & 600A MSB cable works as indicated in drawing, c/w depth not exceeding 1.2m excavation, compaction, back fill sand and other accesories	m	150		
2.2	Underground Ø100mm HDPE PN10 pipe sleeve from 600A MSB to Street Light Feeder Pillar (FP-CL) cable works as indicated in drawing, depth not exceeding 1.2m c/w excavation, compaction, back fill sand and other accesories	m	30		
2.3	Underground Ø100mm HDPE PN10 pipe sleeve from 600A MSB to Pit cable works as indicated in drawing, depth not exceeding 1.2m. (Future MBIP) c/w excavation, compaction, back fill sand and other accesories	m	30		
2.4	Ø100mm diameter double wall corrugated pipe laid underground c/w excavation, back-fill, compaction of soil surface and all other necessary works from MSB to CP-EV (Electric Vehicle)	m	95		
2.5	Ø100mm diameter double wall corrugated pipe laid underground c/w excavation, back-fill, compaction of soil surface and all other necessary works from 500A MSB to CP-WL (WATER LANDSCAPE)	m	25		
2.6	Ø100mm diameter double wall corrugated pipe laid underground c/w excavation, back-fill, compaction of soil surface and all other necessary works from 600A MSB to DB-GH	m	140		
2.7	Ø100mm diameter double wall corrugated pipe laid underground c/w excavation, back-fill, compaction of soil surface and all other necessary works from 600A MSB to DB-CW	m	30		
3.0	FEEDER PILLAR/CONTROL PANEL				
3.1	3-phase 36kA 100A MCCB for Street Light Feeder Pillar (FP-CL) c/w protection devices and electrical components as indicated in drawing, belt & body (EG metal) coated with epoxy powder, minimum of 36kA main earth bar, pre-cast concrete plinth, heat shrinkable insulation & lug for cable termination, Class 1 SPD and all necessary works.	set	1		
3.2	3-phase 36kA 100A MCCB for Control Panel for Electric Vehicle (CP-EV) c/w 2 Nos Isolator ,protection devices and electrical components as indicated in drawing, belt & body (EG metal) coated with epoxy powder, minimum of 36kA main earth bar, pre-cast concrete plinth, heat shrinkable insulation & lug for cable termination, Class 1 SPD and all necessary works.	set	1		
3.3	JB30 manhole c/w cover & all necessary accessories	nos	2		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
TOTAL BROUGHT FORWARD					
4.0	FINAL SUB MAIN CABLE				
A.1.6	1 x 2C x 25mm² PVC/SWA/PVC (Cu.) cable laid underground in double wall corrugated pipe from FP-CL to 1st compound light poles c/w 1C x 6mm² PVC (Cu.) cable as CPC, cable lug & cable termination and all necessary works.	m	40		
A.1.6	1 x 2C x 16mm² PVC/SWA/PVC (Cu.) cable laid underground in double wall corrugated pipe from 1st Pole to all compound light poles c/w 1C x 6mm² PVC (Cu.) cable as CPC, cable lug & cable termination and all necessary works.	m	500		
A.1.7	1 x 2C x 4mm² PVC/SWA/PVC (Cu.) cable laid underground in double wall corrugated pipe from Compound Lighting to junction box signage c/w 1C x 4mm² PVC (Cu.) cable as CPC, cable lug & cable termination and all necessary works.	m	10		
A.1.8	Underground Ø100mm double wall corrugated pipe sleeve from FP-CL to all compound light poles c/w excavation to required depth (at carriage way/turfing area/side table), back filled with earth to required level including compacting, backfilled with soil, sand embedding.	m	540		
A.1.9	Underground Ø100mm HDPE PN10 for every road/concrete slab crossing cable works as indicated in drawing, depth not exceeding 1.2m.	m	226		
A.1.10	Junction Box c/w all accessories	nos	2		
A.1.11	High quality 150W LED Floodlight c/w Electronic Control Gear (LED Driver), mounting bracket, anti -glare diffuser, Ingress protection at least IP66 for optical compartment and minimum IP43 for control gear and all necessary accessories as per authority requirement.	nos	2		
A.1.12	12 Meter Height , Flange Type Octagonal Hot Dip Galvanised Mid-hinged Steel Column c/w 2.5m single Arm, M24x570 J'Bolt & Nut, 1 no. of Flange Mounted Type Patented MBIP-CLP-12 Special Service Door, Double slot hinge with door stiffener and anti vandalism Locking Device, Concrete Base, Internal Wiring Using 2.5mm PVC/PVC cable, other accessories as per specification of MBIP and drawings.	nos	16		
A.1.13	12 Meter Height , Flange Type Octagonal Hot Dip Galvanised Mid-hinged Steel Column c/w 2.5m Double Arm, M24x570 J'Bolt & Nut, 1 no. of Flange Mounted Type Patented MBIP-CLP-12 Special Service Door, Double slot hinge with door stiffener and anti vandalism Locking Device, Concrete Base, Internal Wiring Using 2.5mm PVC/PVC cable, other accessories as per specification of MBIP and drawings.	nos	2		
A.1.14	Modular termination box (loop in loop out) c/w cut-out fuse/MCB assembled in solid panel, suitable for terminations up to 2 core 6mm ² PVC/SWA/PVC (Cu.) cable. The junction box shall be manufactured to IP54 with double layer transparent panel/cover.	nos	18		
A.1.15	Pre-cast R.C concrete footing for the poles/columns c/w endorsement of P.E C&S, galvanized type J bolt and nuts, through hole and encased 100mm dia. uPVC pipe sleeve for underground cable entry.	nos	18		
A.1.16	High quality 150W LED luminaire c/w Electronic Control Gear (LED Driver) and other necessary accessories. Ingress Protection of at least IP 66 for optical compartment and minimum IP43 for control gear compartment. BRAND: NEXUS or equivalent.	nos	20		
A.1.17	To install complete earthing system c/w heavy duty earth chamber, copper rod (to meet the specification of Suruhanjaya Tenaga), copper cable (green) and all necessary accessories.	lot	5		
TO SUMMARY OF PRICE (ITEM A)					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
B	<u>LOW VOLTAGE SYSTEM.</u>				
	Note: i) For these portion of works, the rates must include for the disconnection, dismantling, scraping, supplying, installing, testing, commissioning, making good works and transportation of the street light system complete with clean up all the debris and surplus material during/after the dismantle/installation process. ii) All quantities in this section are provisional. The final quantity shall be measured upon completion.				
1.0	MAIN SWITCH BOARD				
1.1	To supply, install and commissioning Floor Mounted Cubicle MSB with front and rear access c/w Base Plate at Bilik MSB (Form 2B, 50kA, 1 sec.) including cable terminations, CT's equipment c/w calibration certificate, MCB, MCCB, SPD Class II, cut-off fuses, IDMTL (Electronics based), earthing system, power factor, power energy meter, capacitor bank, busbar, ammeter, voltmeter, Led indicator light, etc for all unit below (contractor need to advise the MSB dimensions):-				
	(a) 600A 4P MCCB for MSB c/w epoxy coated painting	Lot	1		
	(b) To supply and install rubber mat 2.4m x 0.8m x 0.015m (thick)	Lot	1		
1.2	To supply and install solid earthing system for MSB c/w Main Earthing Bar Terminal, copper tape, copper jacketed steel core earth electrode, earth chamber with cover as per drawing and local authority requirement.	Lot	1		
1.3	Supply, install, testing and commissioning of a complete 200 kVAR Cubicle type floor mounted automatic power factor correction system in accordance with specification including 12 step automatic power factor regulator of the binary output type i.e 1: 1: 2: accessories. & all necessary accessories to complete the system.	Lot	1		
2.0	METERING PANEL				
2.1	Supply and install TNB metering panel c/w 4 nos. cut out & neutral link for Kedai, etc. as per drawing to TNB requirement	lot	1		
2.2	To supply and install solid earthing system for Meter Panel c/w Main Earthing Bar Terminal, copper tape, copper jacketed steel core earth electrode, earth chamber with cover as per drawing and local authority requirement.	lot	1		
3.0	DISTRIBUTION BOARD				
3.1	To supply, install, testing and commissioning the following metal clad wall mounted DISTRIBUTION BOARD (DB) c/w busbar, MCCBs, MCBs, RCCB, terminations, etc as per drawing and specification:				
	a) 60A TPN DB1/L-DWN using metalclad c/w accessories.	Set	1		
	b) 30A TPN DB1/P-DWN using metalclad c/w accessories	Set	1		
	c) 30A TPN DB2/L-DWN using metalclad c/w accessories	Set	1		
	d) 30A TPN DB2/P-DWN using metalclad c/w accessories	Set	1		
	e) 30A SPN DB-MSB using metalclad c/w accessories.	Set	1		
	f) 20A TPN ISOLATOR LED SCREEN c/w accessories	Set	1		
	g) 20A SPN DB-CCR using metalclad c/w accessories.	Set	1		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
	TOTAL BROUGHT FORWARD				
	h) 30A SPN DB-KIOSK1 using metalclad c/w accessories.	Set	1		
	i) 30A SPN DB-CF01 using metalclad c/w accessories.	Set	1		
	j) 30A SPN DB-CF02 using metalclad c/w accessories.	Set	1		
	k) 30A TPN DB-WL using metalclad c/w accessories.	Set	1		
	l) 30A TPN DB-EV using metalclad c/w accessories.	Set	1		
	m) 30A SPN DB-SHOP 1 using metalclad c/w accessories	Set	1		
	n) 30A SPN DB-SHOP 2 using metalclad c/w accessories	Set	1		
	o) 30A SPN DB-SHOP 3 using metalclad c/w accessories	Set	1		
	p) 30A SPN DB-SHOP 4 using metalclad c/w accessories	Set	1		
	q) 150A TPN DB-AHU1 using metalclad c/w accessories.	Set	1		
	r) 150A TPN DB-AHU2 using metalclad c/w accessories.	Set	1		
	s) 30A SPN DB-MFAP using metalclad c/w accessories.	Set	1		
	t) 30A SPN DB-H/R using metalclad c/w accessories.	Set	1		
	u) 30A TPN DB-CW using metalclad c/w accessories.	Set	1		
	v) 30A SPN DB-GH using metalclad c/w accessories.	Set	1		
	w) 30A TPN DB3/L-DWN using metalclad c/w accessories.	Set	1		
	x) 30A TPN DB3/P-DWN using metalclad c/w accessories.	Set	1		
	y) 30A SPN DB-PUMP using metalclad c/w accessories.	Set	1		
4.0	MAIN CABLING & SUB-MAIN CABLE.				
4.1	4 x 1C x 300mm ² XLPE/SWA/PVC Cu. cable laid U/G from TNB Meter Kiosk to 600A MSB c/w excavation, compaction, nylon marking, pipe sleeve to inside, back fill sand u/g base pvc plate, glandings, termination both ends with termination kits to TNB approval and other accessories.	m	150		
4.2	1 x 4C x 120mm ² XLPE/SWA/PVC (Cu.) cable laid underground in pipe sleeve from 600A MSB to Street Light Feeder Pillar (FP-CL) c/w excavation, compaction, nylon marking, pipe sleeve to inside, back fill, sand u/g base pvc plate, glandings, termination both ends and other accessories	m	30		
4.3	1 x 4C x 120mm ² XLPE/SWA/PVC (Cu.) cable laid underground in pipe sleeve from 600A MSB to Pit c/w excavation, compaction, nylon marking, pipe sleeve to inside, back fill, sand u/g base pvc plate, glandings, termination both ends and other accessories (Future MBIP)	m	30		
4.4	1 x 4C x 50mm ² PVC/SWA/PVC (Cu.) cable laid underground in pipe sleeve from 600A MSB to CP-EV (ELECTRIC VEHICLE CHARGER) c/w excavation, compaction, nylon marking, pipe sleeve to inside, back fill, sand u/g base pvc plate, glandings, termination both ends and other accessories	m	95		
4.5	1 x 4C x 16mm ² PVC/SWA/PVC (Cu.) cable laid underground in pipe sleeve from 600A MSB to CP-WL (WATER LANDSCAPE) c/w excavation, compaction, nylon marking, pipe sleeve to inside, back fill, sand u/g base pvc plate, glandings, termination both ends and other accessories	m	25		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
TOTAL BROUGHT FORWARD					
4.6	1 x 2C x 25mm ² PVC/SWA/PVC (Cu.) cable laid underground in pipe sleeve from 600A MSB to DB-GH c/w excavation, compaction, nylon marking, pipe sleeve to inside, back fill, sand u/g base pvc plate, glandings, termination both ends and other accessories	m	140		
4.7	To complete supply and install all pipe sleeve, cabling in Galvanised trunking/Cable Tray and earthing for the following item below c/w bracket, hanger, Copper Bridge, G.I angle bar and other accessories include hacking works as per drawing & specification from MSB to:-				
	a) 1 x 4C x 16mm ² PVC/PVC Cu. Cable + E to DB1/L-DWN	m	15		
	b) 1 x 4C x 16mm ² PVC/PVC Cu. Cable + E to DB1/P-DWN	m	15		
	c) 1 x 4C x 16mm ² PVC/PVC Cu. Cable + E to DB2/L-DWN	m	55		
	d) 1 x 4C x 16mm ² PVC/PVC Cu. Cable + E to DB2/P-DWN	m	55		
	e) 1 x 2C x 16mm ² PVC/PVC Cu. Cable + E to DB-MSB	m	5		
	f) 1 x 2C x 16mm ² PVC/PVC Cu. Cable + E to 20A TPN ISOLATOR (LCD SCREEN)	m	10		
	g) 1 x 2C x 16mm ² PVC/PVC Cu. Cable + E to DB-CCR	m	30		
	h) 1 x 2C x 16mm ² PVC/PVC Cu. Cable + E to DB-KIOSK	m	120		
	i) 1 x 2C x 16mm ² PVC/PVC Cu. Cable + E to DB-CF 01	m	80		
	j) 1 x 2C x 16mm ² PVC/PVC Cu. Cable + E to DB-CF 02	m	45		
	k) 1 x 4C x 70mm ² PVC/PVC Cu. Cable + E to CP-AHU1	m	50		
	l) 1 x 4C x 70mm ² PVC/PVC Cu. Cable + E to CP-AHU2	m	50		
	m) 1 x 4C x 16mm ² PVC/PVC Cu. Cable + E to DB3/L-DWN	m	15		
	n) 1 x 4C x 16mm ² PVC/PVC Cu. Cable + E to DB3/P-DWN	m	15		
	o) 1 x 4C x 25mm ² PVC/PVC Cu. Cable + E to Centralize Meter	m	35		
	p) 1 x 4C x 16mm ² PVC/PVC Cu. Cable + E to CP-CW	m	40		
4.8	To complete supply and install From MSB to all bellow laid U/G c/w excavation, compaction, nylon marking, pipe sleeve to inside, back fill, sand u/g base pvc plate, glandings, termination both ends and other accessories :-				
	a) 1 x 2C x 16mm ² PVC/SWA/PVC Cu. Cable + E to CP- MFAP	m	45		
	b) 1 x 2C x 16mm ² PVC/SWA/PVC Cu. Cable + E to CP-H/R	m	45		
	c) 1 x 2C x 16mm ² PVC/SWA/PVC Cu. Cable + E to DB-PUMP	m	35		
4.9	To complete supply and install all pipe sleeve, cabling in Galvanised trunking/Cable Tray and earthing for the following item below c/w bracket, hanger, Copper Bridge, G.I angle bar and other accessories include hacking works as per drawing & specification from Meter to:-				
	a) 1 x 2C x 16mm ² PVC/PVC Cu. Cable + E to DB-SHOP 1	m	70		
	b) 1 x 2C x 16mm ² PVC/PVC Cu. Cable + E to DB-SHOP 2	m	65		
	c) 1 x 2C x 16mm ² PVC/PVC Cu. Cable + E to DB-SHOP 3	m	55		
	d) 1 x 2C x 16mm ² PVC/PVC Cu. Cable + E to DB-SHOP 4	m	45		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
TOTAL BROUGHT FORWARD					
5.0	FINAL SUB-CIRCUIT WIRING.				
5.1	GROUND FLOOR				
5.1.1	WIRING-GROUND FLOOR				
5.1.1.1	Lighting point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC) for T8/linear	nos	336		
5.1.1.2	Lighting point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC) for DOWNLIGHT	nos	58		
5.1.1.3	Lighting point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC) for WALL LIGHT	nos	42		
5.1.1.4	Lighting point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC) for SIGNAGE	nos	17		
5.1.1.5	Lighting point using 2C x 4.0mm ² PVC (Cu.) in concealed conduit c/w 1C x 4.0mm ² PVC (Cu.) green cable as (CPC) for HI-BAY	nos	28		
5.1.1.6	Lighting point using 2C x 4.0mm ² PVC (Cu.) in concealed conduit c/w 1C x 4.0mm ² PVC (Cu.) green cable as (CPC) for METAL HALIDE	nos	4		
5.1.1.7	Lighting point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC) for KELUAR/EMERGENCY LIGHT	nos	49		
5.1.1.8	Fan point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC). (CEILING/WALL/EXHAUST FAN)	nos	54		
5.1.1.9	Fan point using 2C x 4.0mm ² PVC (Cu.) in concealed conduit c/w 1C x 4.0mm ² PVC (Cu.) green cable as (CPC) for HLVS FAN	nos	2		
5.1.1.10	Power point using 2C x 2.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 2.5mm ² PVC (Cu.) green cable as (CPC) for 13A 3-pin S/S/O.	nos	73		
5.1.1.11	Power point using 2C x 4mm ² PVC (Cu.) in concealed conduit c/w 1C x 4mm ² PVC (Cu.) green cable as (CPC) for A/C	nos	5		
5.1.1.12	Power point using 2C x 10mm ² PVC (Cu.) in concealed conduit c/w 1C x 10mm ² PVC (Cu.) green cable as (CPC) for ISOLATOR	nos	1		
5.1.2	ELECTRICAL FITTINGS GROUND FLOOR				
5.1.2.1	LUMINAIRES:				
	i) Surface Mounted Direct To Wall/Ceiling Surface Mounted Bare Channel (1x36W T8 L.E.D) c/w anti corrosive type, control gear, lamp housing and mounting accessories & all necessary accesories	nos	32		
	ii) 1 x 36W bare Channel Wall light c/w Vandal Proof & accessories	nos	4		
	iii) Surface Mounted/Hanging/Ceiling Recessed Mounted LED Linear Light Black/White (1 x 50W) (Daylight) c/w anti corrosive type, control gear, lamp housing and mounting accessories & all necessary accesories	nos	220		
	iii) Surface Mounted Diffuser Luminaire (2x36W T8 L.E.D) c/w anti corrosive type, control gear, lamp housing and mounting accessories & all necessary accesories	nos	32		
	iv) Ceiling Recessed Mounted Diffuser Luminaire (2x36W T8 L.E.D) c/w anti corrosive type, mirror optic Louvered, control gear, lamp housing and mounting accessories & all necessary accesories	nos	34		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
	TOTAL BROUGHT FORWARD				
	v) Ceiling Recessed Mounted Diffuser Luminaire (1x36W T8 L.E.D) c/w anti corrosive type, mirror optic Louvered, control gear, lamp housing and mounting accessories & all necessary accesories	nos	14		
	vi) Recessed Downlight Luminaire (2 x 18W PLC Lamps) c/w Reflector in Silver Aluminium Finish, anti corrosive type, control gear, lamp housing and & all necessary accesories	nos	32		
	viii) Surface Mounted Downlight Luminaire (2 x 26W PLC Lamps) c/w Reflector in Silver Aluminium Finish, anti corrosive type, control gear, lamp housing and & all necessary accesories	nos	16		
	ix) (1 x 25W Dimmable Halogen Downlight) c/w Dimmer Lighting Switch & all necessary accesories	nos	10		
	x) 150W Surface Mounted Metal Halide Luminaire c/w Reflector in Silver Aluminium Finish, anti corrosive type, control gear, lamp housing and & all necessary accesories	nos	4		
	xi) 55W PLC Lamps Surface Mounted Direct To Wall Luminaire c/w anti corrosive type, control gear, lamp housing, & all necessary accesories	nos	34		
	xiii) 1 x 100W ECO GEN 2 L.E.D Hi-Bay c/w suspended chain,anti corrosive type, control gear, lamp housing, & all necessary accesories	nos	8		
	xiv) 1 x 250W ECO GEN 2 L.E.D Hi-Bay c/w suspended chain,anti corrosive type, control gear, lamp housing, & all necessary accesories	nos	20		
	xv) Jabatan Bomba approved KELUAR light (flush mounted) c/w accessories.	nos	11		
	xvi) BOMBA and JKR approved Non-maintained, self-contained rechargeable ceiling recessed LED Emergency Light luminaire c/w clear prismatic diffuser, sealed NiCd battery of minimum 3 hour backup duration etc.	nos	38		
5.1.2.2	FANS:				
	i) 18" wall fan c/w mounting bracket & all necessary accessories	nos	10		
	ii) 26" Industrial wall fan c/w mounting bracket & all necessary accessories	nos	10		
	iii) 1500mm Dia ceiling fan c/w hook, regulator and accessories	nos	14		
	iv) Exhaust Fan c/w all necessary accessories	nos	10		
	v) 24" HVLS Fan c/w hook, regulator and accessories	nos	2		
5.1.2.3	SWITCHES:				
	i) 1-gang 13A 3-pin switched socket outlet (flushed) (Metalclad)	nos	73		
	ii) 1-gang 15A 3-pin switched socket outlet (flushed) (Metalclad)	nos	5		
	iii) 1 gang, 1 way switch (flushed) (Metalclad)	nos	48		
	iv) 2 gang, 1 way switch (flushed) (Metalclad)	nos	2		
	v) 20A SPN isolator c/w all necessary accessories (Metalclad)	nos	1		
	vi) Metal clad type switch centre c/w mounting bracket, body earth & accessories	nos	9		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
TOTAL BROUGHT FORWARD					
5.0	FINAL CIRCUIT WIRING.				
5.2	FIRST FLOOR				
5.2.1	WIRING-FIRST FLOOR				
5.2.1.1	Lighting point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC) for T8	nos	117		
5.2.1.2	Lighting point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC) for DOWNLIGHT	nos	8		
5.2.1.3	Lighting point using 2C x 4.0mm ² PVC (Cu.) in concealed conduit c/w 1C x 4.0mm ² PVC (Cu.) green cable as (CPC) for METAL HALIDE	nos	2		
5.2.1.3	Lighting point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC) for KELUAR/EMERGENCY LIGHT	nos	14		
5.2.1.4	Fan point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC). (CEILING/WALL/EXHAUST FAN)	nos	8		
5.2.1.5	Power point using 2C x 2.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 2.5mm ² PVC (Cu.) green cable as (CPC) for 13A 3-pin S/S/O/SWITCHING/SC	nos	50		
5.2.1.6	Power point using 2C x 4mm ² PVC (Cu.) in concealed conduit c/w 1C x 4mm ² PVC (Cu.) green cable as (CPC) for A/C	nos	13		
5.1.1.7	Lighting point using 2C x 4.0mm ² PVC (Cu.) in concealed conduit c/w 1C x 4.0mm ² PVC (Cu.) green cable as (CPC) for FLOODLIGHT	nos	2		
5.2.2	ELECTRICAL FITTINGS-FIRST FLOOR				
5.2.2.1	LUMINAIRES:				
	i) Surface Mounted Direct To Wall/Ceiling Surface Mounted Bare Channel (1x36W T8 L.E.D) c/w anti corrosive type, control gear, lamp housing and mounting accessories & all necessary accesories	nos	53		
	ii) Ceiling Recessed Mounted Diffuser Luminaire (1x36W T8 L.E.D) c/w anti corrosive type, control gear, lamp housing and mounting accessories & all necessary accesories	nos	59		
	iii) Ceiling Recessed Mounted Diffuser Luminaire (2x36W T8 L.E.D) c/w anti corrosive type, mirror optic Louvered, control gear, lamp housing and mounting accessories & all necessary accesories	nos	5		
	iv) Recessed Downlight Luminaire (2 x 18W PLC Lamps) c/w Reflector in Silver Aluminium Finish, anti corrosive type, control gear, lamp housing and & all necessary accesories	nos	8		
	v) 100W Surface Mounted Metal Halide Luminaire c/w Reflector in Silver Aluminium Finish, anti corrosive type, control gear, lamp housing, WeatherProof (IP65) & all necessary	nos	2		
	vi) High quality 150W LED Floodlight c/w Electronic Control Gear (LED Driver), mounting braket, anti -glare diffuser, Ingress protection at least IP66 for optical compartment and minimum IP43 for control gear and all necessary accesories as per authority requirement.	nos	2		
	vii) Jabatan Bomba approved KELUAR light (flush mounted) c/w accessories.	nos	12		
	viii) BOMBA and JKR approved Non-maintained, self-contained rechargeable ceiling recessed LED Emergency Light luminaire c/w clear prismatic diffuser, sealed NiCd battery of minimum 3 hour backup duration etc.	nos	13		
5.2.2.2	FANS:				
	i) Exhaust Fan c/w all necessary accessories	nos	8		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
	TOTAL BROUGHT FORWARD				
5.2.2.3	SWITCHES:				
	i) 1-gang 13A 3-pin switched socket outlet (flushed) (metalclad)	nos	50		
	ii) 1-gang 15A 3-pin switched socket outlet (flushed) (metalclad)	nos	13		
	iii) 1 gang, 1 way switch (flushed) (metalclad)	nos	16		
	iv) 2 gang, 1 way switch (flushed) (metalclad)	nos	1		
	vi) Metal clad type switch centre c/w mounting bracket, body earth & accessories	nos	2		
	vii) Junction Box c/w all accessories	nos	2		
5.0	FINAL CIRCUIT WIRING.				
5.3	GUARD HOUSE				
5.3.1	WIRING-GUARD HOUSE				
5.3.1.1	Lighting point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC) for T8	nos	6		
5.3.1.2	Lighting point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC) for KELUAR/EMERGENCY LIGHT	nos	1		
5.3.1.3	Fan point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC). (CEILING/WALL/EXHAUST FAN)	nos	2		
5.3.1.4	Power point using 2C x 2.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 2.5mm ² PVC (Cu.) green cable as (CPC) for 13A 3-pin S/S/O.	nos	4		
5.3.2	ELECTRICAL FITTINGS - GUARD HOUSE				
5.3.2.1	LUMINAIRES:				
FL1	i) Surface Mounted Direct To Wall/Ceiling Surface Mounted Bare Channel (1x36W T8 L.E.D) c/w anti corrosive type, control gear, lamp housing and mounting accessories & all necessary accessories	nos	6		
	ii) BOMBA and JKR approved Non-maintained, self-contained rechargeable ceiling recessed LED Emergency Light luminaire c/w clear prismatic diffuser, sealed NiCd battery of minimum 3 hour backup duration etc.	nos	1		
	FANS:				
	i) 18" wall fan c/w mounting bracket & all necessary accessories	nos	1		
	ii) Exhaust Fan c/w all necessary accessories	nos	1		
5.3.2.2	SWITCHES:				
	i) 1-gang 13A 3-pin switched socket outlet (flushed)	nos	4		
	ii) 1 gang, 1 way switch (flushed)	nos	4		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
	TOTAL BROUGHT FORWARD				
5.0	FINAL CIRCUIT WIRING.				
5.4	PUMP HOUSE				
5.4.1	WIRING-PUMP HOUSE				
5.4.1.1	Lighting point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC) for T8	nos	3		
5.4.1.2	Lighting point using 2C x 1.5mm ² PVC (Cu.) in concealed conduit c/w 1C x 1.5mm ² PVC (Cu.) green cable as (CPC) for KELUAR/EMERGENCY LIGHT	nos	1		
5.4.2	ELECTRICAL FITTINGS-PUMP HOUSE				
5.4.2.1	LUMINAIRES:				
FL1	i) Surface Mounted Direct To Wall/Ceiling Surface Mounted Bare Channel (1x36W T8 L.E.D) c/w anti corrosive type, control gear, lamp housing and mounting accessories & all necessary accessories	nos	3		
	ii) BOMBA and JKR approved Non-maintained, self-contained rechargeable ceiling recessed LED Emergency Light luminaire c/w clear prismatic diffuser, sealed NiCd battery of minimum 3 hour backup duration etc.	nos	1		
5.4.1.2	SWITCHES:				
	i) 1 gang, 1 way switch (flushed)	nos	3		
6.0	EARTHING.				
6.1	Earthing for electrical system c/w, complete heavy duty earth chamber, copper tape (25mm x 3mm) from MSB to earth earth chamber, A clamp, sufficient copper rod, rod coupling and all necessary accessories/works.	lot	1		
	Note:				
	i) MSB and SPD earthing system must be install independently.				
	ii) Ohm reading of each earthing system must comply with S.T requirement.				
7.0	ELECTRICAL PROTECTION RELAY SCHEME				
7.1	Calibration of all protection relays in all switchboard before handover process c/w fault calculation, endorsed test report by electrical service engineer, valid calibration seal and all necessary documents/works.	lot	1		
TO SUMMARY OF PRICE (ITEM B)					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
C	<u>INFORMATION & COMMUNICATION TECHNOLOGY SYSTEM.</u>				
	Note: i) For these portion of works, the rates must include for the supplying, installing, testing, commissioning and transportating of a complete infra I.C.T system with clean up all the debris and surplus material during/after the installation process. ii) All quantities in this section are provisional. The final quantity shall be measured upon completion.				
1.0	EXTERNAL TELECOMMUNICATION WORKS				
1.1	To supply and install JRC7 Manhole c/w cover as per local authority requirements and approval c/w excavation, compaction, back fill sand and other accesories .	Nos	1		
1.2	To supply and install telephone pit (600mm x 600mm x 600mm)) c/w cover as per drawing and specification c/w excavation, compaction, back fill sand and other accesories .	Nos	2		
1.3	Underground 2-way Ø100mm PVC telephone duct as indicated in drawing, depth not exceeding 1.2m with concrete slab 150mm thick with 2 layer BRC A10 /w warning tape, pull rope as per drawing and specification.	m	120		
1.4	Underground 2-way Ø100mm G.I pipe sleeve class C for every road crossing cable works as indicated in drawing, depth not exceeding 1.2m.	m	15		
1.5	Road cutting for cable-trenching by using diamond-cutting machine, concrete slab 150mm thick with 2 layer BRC A10 and reinstatement.	m	15		
1.6	150mm thick sand bedding for theØ100mm G.I pipe sleeve class C pipe sleeve. Note: Road cutting works shall be deemed to include preparation of surfaces, excavation for bedding, multiple handling, disposal of surplus excavated material (including unsuitable material), upholding sides of excavation, allowance for working space, back filling, reinstatement of original surface unless covered by separate item and cart away surplus excavated materials to contractor's own dump site.	m	15		
2.0	INTERNAL TELECOMMUNICATION WORKS				
2.1	TM approved Main Fibre Termination Box (MFTB)	no	1		
2.2	Supply, installation and laying of 2C X 1 mode fibre optic cable from Server room to MBIP Kiosk, Office Room, Meeting Room, Staff Room, Lobby, Internet Cente, AV Room, Control Room and Server Room.	lot	1		
2.3	19" Equipment Rack, 24U floor standing at Server Room c/w cooling fan, extension cable, sliding tray and all accessories.	lot	1		
2.4	Supply and install Fibre Patch Panel and tags at Server room c/w tray, connector and all accessories as per specification.	lot	1		
2.5	Supply and install Fibre Wall Switch at Server Room c/w tray, connector and all accessories as per specification.	no	1		
2.6	Minimum 5kVA rackmount type Uninterruptible Power Supply for Utility Box at ICT room c/w lightning and surge protection, able backup for min 2 hours and c/w cabling, termination and all accessories.	no	1		
2.7	Supply and install Fibre Wall Socket (FWS) at MBIP Kiosk, Office Room, Meeting Room, Staff Room, Lobby, Internet Centre, AV Room, Control Room and Server Room	Lot	9		
2.8	Supply and install Optic Network Unit (ONU) at MBIP Kiosk, Office Room, Meeting Room, Staff Room, Lobby, Internet Centre, AV Room, Control Room and Server Room	Lot	9		
2.9	Supply and installation of all cabling using Flexible Fibre Optic Cable including terminations from Fibre Termination Box (FTB) to Fibre Wall Socket (FWS) for MBIP Kiosk, Office Room, Meeting Room, Staff Room, Lobby, Internet Centre and Server Room	Lot	7		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
	TOTAL BROUGHT FORWARD				
2.10	Supply and installation of all cabling using Flexible Fibre Optic Cable including terminations from Fibre Termination Box (FTB) to Optic Network Unit (ONU) for MBIP Kiosk, Office Room, Meeting Room, Staff Room, Lobby, Internet Centre and Server Room	Lot	7		
2.11	Wall mounted 800Mbps internet access point c/w all necessary accessories.	nos	10		
2.12	Single line basic telephone c/w all necessary accessories.	no	8		
2.13	Supply and installation of all lateral cabling using CAT 3 UTP Cable telephone cable including all terminations c/w telephone socket outlet (RJ11) at as follows:				
	a) MBIP Kiosk	Nos	1		
	b) Office Room	Nos	1		
	c) Meeting Room	Nos	1		
	d) Lobby	Nos	1		
	e) Internet Centre	Nos	1		
	f) AV Room	Nos	3		
	g) Control Room	Nos	1		
2.14	Supply and installation of all lateral cabling using CAT 5E/6 Cable including all terminations c/w telephone socket outlet (RJ45) at as follows:				
	a) MBIP Kiosk	Nos	1		
	b) Office Room	Nos	1		
	c) Meeting Room	Nos	1		
	d) Lobby	Nos	1		
	e) Internet Centre	Nos	1		
	f) AV Room	Nos	3		
TO SUMMARY OF PRICE (ITEM C)					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
D	<u>LIGHTNING PROTECTION SYSTEM.</u>				
	<p>i) The rates shall include for the supply, delivery, installation, erection, testing and commissioning for the complete system with internal wiring, making good and etc as per S.T specifications and for the necessary completion of the system.</p> <p>ii) All quantities are provisional. Final measurement shall be done at site.</p>				
1.0	Copper Tape (25mm x 3mm)	m	200		
2.0	Copper Tape Saddle (25mm x 3mm)	lot	1		
3.0	Copper earth electrode 2 x (16mm centre point x 1500mm)	nos	4		
4.0	Exothermic welding / cold pressure welding connection	lot	1		
5.0	Pre-cast concrete earth inspection chamber c/w removeable concrete cover/lid (heavy duty)	nos	4		
6.0	Test joint	nos	4		
7.0	Air terminal	nos	10		
8.0	Air terminal base	nos	10		
9.0	DC tape clip	lot	1		
10.0	Square tape clamp	lot	1		
11.0	Plate type test clamp	lot	1		
12.0	Rod coupling	lot	1		
13.0	Driving stud	lot	1		
TO SUMMARY OF PRICE (ITEM D)					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
F	<u>EXTRA LOW-VOLTAGE</u> Note: i) For these portion of works, the rates must include for the supplying, installing, testing, commissioning and transporting of a complete automatic boom gate system with clean up all the debris and surplus material during/after the installation process. ii) All quantities in this section are provisional. The final quantity shall be measured upon completion.				
1.0	SYSTEM (PA SYSTEM)				
1.1	Wiring System System cabling for speaker points wiring in UPVC trunking and UPVC conduit concealed.				
1.1.1	a) Speaker point using 1 x 22 AWG twisted pair cable for Box/Horn speaker.	nos	24		
1.1.2	b) Microphone point using 1 x 22 AWG twisted pair cable c/w all accessories	nos	2		
1.1.3	Supply and install wiring point for ceiling speaker using 2 x 1.5mm pvc cable in G.I conduit and other accessories.	nos	24		
1.2	Equipment (Supply and install the equipments as per drawing and specification)				
	a) Box Speaker 400W c/w matching transformer, mounting bracket and accessories.	nos	6		
	b) Ceiling speaker 3W c/w matching transformer, mounting bracket and accessories	nos	15		
	c) 480W 100V Line Power Amplifier	Set	1		
	d) VCD/DVD/CD player & USB input c/w other accessories	Set	1		
	e) AM/FM tuner c/w other accessories	Set	1		
	f) Modular type mixer	Set	1		
	g) Amplifier Monitoring Unit	Set	1		
	h) 24V Back Up Power Supply / Battery c/w charger and accessories.	Set	1		
	i) 19" Equipment rack c/w ventilation panels, blank panels, fans switch-socket outlets and accessories, lockable door, Surge Protector Device and castor wheel	nos	1		
	j) Installation, termination & interacking c/w accessories such as plug , bracket, connector and etc. of all above equipment/system.	nos	1		
	k) Supply and install of the following :-				
	Handle Mic	Set	2		
	Tie clip microphone	Set	2		
	Mic floor / Table stand	Set	2		
	Complete Portable And Wireless P.A systems	Set	2		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
	TOTAL BROUGHT FORWARD				
2.0	AUDIO VISUAL SYSTEM				
2.1	Wiring				
	a) Loudspeaker point c/w other necessary accessories using 1 x 16 AWG twisted pair cable	nos	27		
	b) 1 x 18 AWG 2 core screened audio signal cable from equipment rack to microphone point	nos	4		
	c) LCD Projector point using 5 x RG59 coaxial cable from Projector to rack in G.I. conduit / trunking	nos	2		
	d) Projector lift point using 15 x 2.5 mm sq PVC cable c/w other necessary from lift to control switch in G.I. conduit / trunking	nos	2		
	e) AV Panel point using 5 x RG59 coaxial cable & 1 x 18AWG 2 core screened cable, from AV panel to rack in G.I. conduit / trunking	nos	2		
	f) Motorised screen point using 6 x 1.5 mm sq PVC cable c/w other necessary from screen to control switch in G.I. conduit / trunking	nos	2		
	g) Cabling in conduit/trunking using RG59/U coaxial cable from video receptacle panel to equipment rack	set	2		
	h) Cabling in conduit/trunking using AWG 22 2 core screened cable from video receptacle panel to equipment rack	set	2		
	i) Power cabling in conduit/trunking for motorised screen, projector, pantograph	set	2		
2.2	Equipment (Supply and install the equipments as per drawing and specification)				
	a) 12-channel Audio Mixing Console c/w 24bit digital signal	nos	1		
	b) 2 IN 6 OUT Digital Signal Processor	nos	1		
	c) 350W @ 8 Ohms Dual channel power amplifier	nos	1		
	d) 350W @ 8 ohms dual channel power amplifier for FOH full range speaker	nos	1		
	e) 350W @ 8 ohms dual channel power amplifier for Delay full range speaker	nos	3		
	f) 350W @ 8 ohms dual channel power amplifier for Front fill range speaker	nos	1		
	g) 350W @ 8 ohms dual channel power amplifier for stage monitor speaker	nos	2		
	h) 300W 15" FOH full range speaker	nos	2		
	i) 300W 15" Delay full range speaker	nos	6		
	j) 300W 12" Front fill full range speaker	nos	2		
	k) 300W 12" stage monitor speaker	nos	4		
	l) 800W 15" active subwoofer	nos	4		
	m) 90W self powered monitor speaker	nos	2		
	n) Speaker mount brackets & installation	nos	20		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
	TOTAL BROUGHT FORWARD				
	o) Antenna splitter	nos	2		
	p) Microphone receptacle panel c/w 1 x XLR connector and recessed box	nos	4		
	q) Automatic voice-over ducking module	nos	1		
	r) Wireless handheld microphone system with up to 1440 ch. selectable UHF frequency, rack mount diversity receiver and transmitter	nos	1		
	s) Dynamic handheld microphone c/w 10 meter microphone extension cable and both end XLR connectors	nos	2		
	t) Microphone floor stand c/w boom arm	nos	2		
	u) Wall receptacle panel c/w 1 x XLR connector	nos	4		
	v) Interface for overriding signal and audio from PA system	set	1		
	w) Professional mixing console table	set	1		
	x) 4500 Ansi Lumens LCD Projector c/w lens, and necessary accessories	nos	2		
	y) Pantograph projector lift system c/w control panel and other necessary accessories	nos	2		
	z) 10' (W) x 8' (H) fibreglass matt white motorised screen c/w flying bracket, up/down/stop control switch and other necessary accessories	nos	2		
	aa) AV Receptacle panel c/w 1 No of VGA connector and 1 No of audio mini jack connector and recessed box	nos	2		
	ab) Digital video scaler	nos	2		
	ac) 8 x 4 composite video matrix switcher c/w stereo audio, front panel LED indicator, RS232 remote control	no	1		
	ad) 19" Equipment rack c/w ventilation panels, blank panels, fans switch-socket outlets and accessories, lockable door, Surge Protector Device and castor wheel	nos	1		
	af) Installation, termination & interacking c/w accessories such as plug , bracket, connector and etc. of all above equipment/system.	nos	1		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
	TOTAL BROUGHT FORWARD				
3.0	INDOOR LED DISPLAY BOARD				
3.1	<p>To supply & install, testing and commissioning electronic information display c/w power, all necessary works & accessories for complete installation and operation.</p> <p>System components consisting of:</p> <ul style="list-style-type: none"> - High Density layout, Pixel Pitch: 6mm, Color Processing 16-bit - Weather Resistance : IP65 Front / IP54 Rear - Color Processing : 16-bit , Pixel Configuration : RGB 3-in-1 SMD2525 - Equipped with video processor that supports SDI/HDI input and video switcher that allow multiple switches - LED Lifetime : 100,000 hours - Display Intensity : 4500 nits (cd/m2) adjustable - Dimming Capability : 8-bit - Video Compatibility : PAL,NTSC, HDTV - Service access : Front/Rear - Minimum viewing distance : 6m - Panel Dimension: 52 nos panel with 960mm (w) x 960mm (h), Panel Depth: 175mm - Module Dimension : 192mm (w) x 192mm (h) - Operating System : Windows 10 - Video Processor : Compatible & latest standard for electronic display - Data transmission To Display : UTP Cat 5/6 up to 100m/ Fiber Optic Cable - Color capability : 281 trillion + - Color Temperature : 3,500 - 9500 degree K adjustable - Refresh rate : > 1,920+ Hz - AC Power Supply Panel - Hanging Bracket - All system wiring & connection - LED Display Sending Box including sending card for PC 	Lot	1		
4.0	STAGE LIGHTING & CURTAIN				
4.0	<p>STAGE LIGHTING AND STAGE CURTAIN (DEWAN)</p> <p>To allow Provisional Sum of RM 40,000 (Ringgit Malaysia : Forty Thousand Only) for supply and install, testing and commissioning of stage lighting and stage curtain system to be deduct wholly or part if required as instructed by S.O/Client/Consultant.</p>	L/s	-		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
	TOTAL BROUGHT FORWARD				
5	CCTV SYSTEM <i>Integrated security system shall consist CCTV surveillance system, Vehicle Access System, Door Access System, Accessibility for pedestrian and car owner must be of programmable type. There shall be one card access to all security gates. Window base software device shall capable handling up to 1,000,000 card holder profile, The system can be connected through multiple network environemnt eg : LAN, WAN, PSTN & ETC</i>				
5.1	To supply, deliver and install 24U Equipment floor standing rack with CCTV console, table and chair at Office Room	lot	1		
5.2	To supply, deliver and install PC workstation c/w 32" LED screen, i7 processor and graphic card, remote viewer software and other necessary accessories at control room	lot	2		
5.3	Supply and install 4TB hard disk (motion recording and 30 days storage)	lot	2		
5.4	Supply and install 4MP, WDR, IP67 IR Bullet Camera (weatherproof housing) c/w support , bracket and necessary accessories	lot	14		
5.5	Supply, lay and terminate CAT 6 cable (POE support) in concealed PVC conduit for video signal from 8 channel NVR recorder to individual CCTV camera c/w necessary termination, data surge protection and necessary accessories	lot	14		
5.6	8 port Gigabit POE Switches c/w 1 SFP port	lot	14		
5.7	SFP single mode fiber module transceiver i) Gigabit 1G SFP single mode fiber module transceiver set c/w splicing and termination work ii) Gigabit 10G SFP single mode fiber module transceiver set c/w splicing and termination	lot	14		
5.8	License & Software c/w installation and programming for all PC workstation	lot	2		
6.0	TESTING AND COMMISSIONING				
6.1	On completion of the ELV installation, test all cable, G.I piping, fitting etc. as described in JKR Specification, make good everything in perfect working order to entire satisfaction of the S.O and Local authorities	L/s	-		
TO SUMMARY OF PRICE (ITEM F)					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
G	<u>ELECTRIC VEHICLE</u> Note: i) For these portion of works, the rates must include for the supplying, installing, testing, commissioning and transportating of a complete automatic boom gate system with clean up all the debris and surplus material during/after the installation process. ii) All quantities in this section are provisional. The final quantity shall be measured upon completion.				
1.0	To allow all necessary works for complete electric vehicle charger c/w including all necessary protection/earthing system and accessories according to the Engineer's instruction and manufacturer's detail	lot	2		
2.0	To supply and install 20A SPN isolator c/w all necessary works & accessories to complete all system	lot	2		
TO SUMMARY OF PRICE (ITEM G)					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
H	<u>MISCELLANEOUS.</u>				
1.0	AUTHORITIES.				
1.1	Liasion with Tenaga Nasional Berhad and MBIP for installation of TNB meter (including all necessary procedure i.e submission of endorsed form A,G & H, site pre-inspection, inspection & etc)	L/S	L/S		
1.2	Liasion with Telekom Malaysia Berhad (TM) and MBIP for obtaining certificate of acceptance and I.C.T/Telephone line (including all necessary procedure i.e submission of endorsed forms, site pre-inspection, inspection & etc)	L/S	L/S		
2.0	PRELIMINARY.				
2.1	Submission of the following documents before commencement of dismantle/installation works for consultant approval and record:				
	i) Submission of "Detailed Working/Shop Drawings" c/w USB flash drive.	sets	2		
	ii) Submission of "Approval & Sample of Material"	lot	1		
	iii) Submission of "Technical Catalogue"	sets	2		
	iv) Submission of "Work Methode of Statement"	sets	2		
3.0	Testing, Commissioning and Maintenance.				
3.1	All site and pre-commissioning tests in accordance with specification requirements including provision of power, fuel, instruments and labour required for all electrical system	lot	1		
3.2	Testing & Commisioning of the whole works must be in accordance to the specification. The testing shall include the following works:				
	i) Submission of a copy test record form to client before carry out the testing at site	lot	1		
	ii) To provide all equipment test required	lot	1		
	iii) To provide Testing Equipment and at least 2 competent workers at site during Testing & Commisioning.	lot	1		
	iv) To allow for factory acceptance test of the street light system for at least 2 representatives of the client/consultant. The contractor shall provide for all transportation, meals and all direct and indirect expenses.	lot	1		
4.0	UPON COMPLETION.				
4.1	Submission of the following documents after commencement of dismantle/installation works for consultant approval and record:				
	i) Submission of "As-Built Drawing" c/w USB flash drive.	sets	3		
	ii) Submission of "Warranty Certificate"	sets	3		
	iii) Submission of "Operation Maintenance & Manual"	sets	3		
	iv) Submission of "Test Report"	sets	3		
4.2	Allowance to conduct training for client.	lot	1		
4.3	To supply, deliver and handover 10% spare equipment as per MBIP requirments as specified in all installations :-				
i)	12 Meter Height , Flange Type Octagonal Hot Dip Galvanised Mid-hinged Steel Column c/w 2.5m single Arm, M24x570 J'Bolt & Nut, 1 no. of Flange Mounted Type Patented MBIP-CLP-12 Special Service Door, Double slot hinge with door stiffener and anti vandalism Locking Device,Concrete Base,Internal Wiring Using 2.5mm PVC/PVC cable, other accessories as per specification of MBIP and drawings.	nos	2		
ii)	12 Meter Height , Flange Type Octagonal Hot Dip Galvanised Mid-hinged Steel Column c/w 2.5m Double Arm, M24x570 J'Bolt & Nut, 1 no. of Flange Mounted Type Patented MBIP-CLP-12 Special Service Door, Double slot hinge with door stiffener and anti vandalism Locking Device,Concrete Base,Internal Wiring Using 2.5mm PVC/PVC cable, other accessories as per specification of MBIP and drawings.	nos	1		
TOTAL CARRIED FORWARD					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
	TOTAL BROUGHT FORWARD				
iii)	High quality 150W LED luminaire c/w Electronic Control Gear (LED Driver) and other necessary accessories. Ingress Protection of at least IP 66 for optical compartment and minimum IP43 for control gear compartment. BRAND: NEXUS or equivalent.	nos	2		
5.0	ELECTRICAL PROTECTION SCHEME.				
5.1	Allow for fees and charges for the employment of an electrical Services Contractor registered under Electricity Regulations 1994 to study and submit proposal (with relevant data and calculations) for the electrical protection scheme for the whole electrical installation in the Contract Works. Thereafter, if the proposal is agreeable by the S.O.'s Rep., he shall check, test and calibrate accordingly all protective relays and device provided in the Contract Works to the requirements of Electricity Regulations 1994. He shall also prepare, duly sign and submit	lot	1		
TO SUMMARY OF PRICE (ITEM G)					

NO	DESCRIPTION	UNIT	QTY	UNIT RATE (RM)	AMOUNT (RM)
I	<u>PROVISIONAL SUM.</u>				
I.1	<p>Include the following provisional sum to be expended if seen be fitting the site condition wholly or in part if not required:</p> <p>i) Provide a provisional sum of Eighty Five Thousand Ringgit Malaysia only (RM85,000) for TNB Compact Sub-station or work in connection only to be used as required by TNB which include the following items below or S.O's instruction:</p> <ul style="list-style-type: none"> - Conducting joint inspection with representative of TNB. - Preparation of 42 copies of pre-computatution plan with certified land surveyor endorsement to the location of TNB compact sub-station base. - 2 copies of endorsed earth test result. 	-	-	-	85,000.00
TO SUMMARY OF PRICE (ITEM H)					85,000.00

BILL NO. 5 – EXTERNAL WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>DEMOLITION WORKS</u></p> <p><u>(ALL PROVISIONAL)</u></p> <p>Note :</p> <p>The Contractor shall be held to have visited the site. Inspected the existing premises and ascertained the nature of the demolitions to be carried out. No claims extra payments in this respect will be entertained. Contractor's price shall be deemed included for all item mention's in general note.</p> <p>The Contractor's attention is drawn to close proximity of the surrounding buildings near or adjoining the site and the close proximity of the public throughfare.</p> <p>The Contractor under their own capacity shall engage a specialist Contractor to carry out the demolition works including all existing piles and provides all necessary equipment's, professional personnel to execute the abovesaid works as directed by the S.O.</p> <p>Unless otherwise stated advised by the appointed specialist consultant the Contractor shall furnish his method of statement to the S.O as described and to execute demolition works and any other unforeseen structures findings as directed by the S.O.</p> <p>The Contractor shall provide sufficient staging to support the whole area involved in the demolition works.</p> <p>Unless or otherwise required by the S.O the Contractor should take all the necessary precaution that all demolition as described apply to the specified sections as showing in the drawings.</p> <p>The works on site shall generally be carried out in such manner as to cause the minimum of inconvenience to adjoining or neighbouring owners or to the public. The safety of the adjacent or neighbouring building and the public shall be of paramount importance during the execution of the works and all necessary precautions shall be taken. The Contractor will be held responsible and is to indemnify the owner for any claims or series of claims which may arise out of the carrying out of the works.</p> <p>Before commencing any works, the Contractor shall ascertain the existance and position of water and other services from the relevant authorities and arrange for the diversions or terminations of the services. The Contractor shall allow for paying all costs and charges in connection therewith.</p>				
	B5.1/1	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>DEMOLITION WORKS (Cont'd)</u></p> <p>All old materials and debris arising from the demolitions and alterations are to become the property of the Contractor who shall forthwith remove the same from the buildings and clear away from site.</p> <p>The buildings to be demolished are indicated in the drawings. The Contractor shall satisfy himself as to the nature of works and make allowance for any demolition required over and above the approximate nett area given and make good all works disturbed as necessary.</p> <p>The Contractor shall provide three (3) copies complete dilapidations report with coloured photos of the works before and after demolition works is carried out.</p> <p>The Contractor will be required to repair or replace at his own expenses any parts or complete items which is the opinion the S.O have been damaged as a result of insufficient care in removing, handling and protecting.</p> <p>The Contractor shall allow for protection and support of all demolition works and subsequent reconstruction.</p> <p><u>Demolish existing works including brickwall, roof truss, roof covering, fittings, column, windows, finishes including breaking up structure and substructure, based slab, fencing, steel column baseds and frame, any other related works and remove all debris from site to a tip to be provided by the Contractor at his own expenses as indicated in the drawings as described :-</u></p>				
A	1- Gerai 1	LS			
B	2- Gerai 2	LS			
C	3- Kabin 2 nos	LS			

D	Allow for reposition of water supply, electrical cabling, telephone cabling and poles and any other services (including underground services) and arrange for the diversions or terminations of the services. The Contractor shall liaise with relevant Authorities before commencement of any termination or diversion.	LS			
	B5.1/2	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>DEMOLITION WORKS (Cont'd)</u>				
	<u>Clearing works</u>				
A	Allow for taking over the site and clear the buildings and affected area of all rubbish, debris, unused furnitures, equipments, electrical fittings, remove and cart away to an approved dumping ground to be found by the Contractor and inclusive payment of all permits and fees to local authorities	LS			
B	The Contractor is to allow here for other works under the element of demolition works which are not listed above but shown on the drawings and visible during site visit. Please specify :- <u>(END OF ALL PROVISIONAL)</u>	LS			
	B5.1/3	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B5.1/1	.	.	.	
	PAGE B5.1/2	.	.	.	
	PAGE B5.1/3	.	.	.	
	<u>BILL NO. 5.1 - DEMOLITION & MAKING GOOD WORKS</u> TOTAL CARRIED TO BILL SUMMARY				
	B5.1/S				

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>Specification and General Labour Clauses:-</u></p> <p>Note:- The whole of the works are to be carried out in a manner approved by the S.O.</p> <p><u>(ALL PROVISIONAL)</u></p> <p><u>SITE CLEARANCE</u></p> <p><u>Before commencing site clearance, the contractor shall ascertain the existence and position of water and other services from the relevant authorities and arrange for the diversion or termination of the services. The Contractor shall allow for paying all costs and charges in connection there with</u></p> <p>A Allow for taking over the site and clear the area and including encroachment area of all rubbish, debris, top soil, lalang, undergrowth, creepers, shrubs, bushes and cut down and remove existing trees and stumps including grubbing uproots and cart away to an approved dumping ground to be found by the Contractor and was permitted by the local authority. (2.01 Acre)</p> <p><u>CUTTING DOWN TREES</u></p> <p><u>To supply necessary labour, machineries and equipment to complete the following works :</u></p> <p>Cutting down trees with specific size of diameter of tree trunk, all palms, undergrowth, shrubs, bushes and all other unwanted plants, including grubbing up roots, clearing from site, backfilling and compacting cavities with excavated material and cart away all tree trunk and debris to Contractor's own dump</p> <p><u>a) Trees</u></p> <p>B Various trunk diameter</p> <p><u>EARTHWORK</u></p> <p>Note : -</p> <p><u>The rates for excavation to formation level shall include for excavating below water table level, excavating in whatever soil except rock. The rates shall also include all multiple handling on the site.</u></p>	Item			
		NO	12		
	B5.2/1	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>EARTHWORK (Cont'd)</u></p> <p><u>The rates for excavation to formation level shall include for excavating below water table level, excavating in whatever soil except rock. The rates shall also include all multiple handling on the site.</u></p> <p><u>The measurement of all excavations and subsequent disposals shall be those before excavations. All excavations are measured nett. The increase in bulk after excavation shall be allowed for in the Contractor's rates.</u></p> <p><u>The Contractor shall allow for consolidation by roller as directed by the S.O.</u></p>				
A	<p>Bulk excavation to required formation level and fill in the excavated material to area of filling and compacted to 95% of the maximum dry density as determined using BS1377 Test No.13 and required formation level as described all as shown in the drawings and including the formation of slopes. The rate shall include carrying out field density tests as described in the specification or directed by the S.O.</p>	M3	1,410		
B	<p>Ditto and remove surplus excavated material from site to the Contractor's own dumping ground inclusive of payment of all permits, fees, deposits, etc to the local authority</p>	M3	320		
	<p><u>SEDIMENT FENCE WITH EARTH DYKE AND EARTH DRAIN</u></p>				
C	<p>Allow for construction of sediment fence complete with 1.5m star picket at maximum 3m centres, with self supporting geotextile, including earthdyke and earthdrain all as per Engineer's drawing no. IRFA/PD/23002/ESCP-DET/4/5</p>	M	370		
	<p><u>SAND BAG BARRIER</u></p>				
D	<p>Supply and lay sand bag barrier, comprising of woven fabric sand bag filled with coarse sand (minimum weight of 18kg per bag), with minimum width of 1200mm and minimum height of 450mm high, 100mm diameter PVC pipe for drainage and other related works. All as per Engineer's drawing no. IRFA/PD/23002/ESCP-DET/4/5</p>	M	80		
	B5.2/2	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>TEMPORARY EARTH DRAIN (TYPE A)</u>				
A	1000mm wide berm drain 'V' shaped laid to fall complete with concrete, formwork and including all necessary excavation and others related works. All as per Engineer's drawing no. IRFA/PD/23002/ESCP-DET/3/5	M	370		
B	Extra for forming check dam including all necessary other related works. All as per Engineer's drawing no. IRFA/PD/23002/ESCP-DET/3/5	No	5		
	<u>HEAVY DUTY INTERLOCKING PAVER</u>				
C	80mm thick approved concrete paving blocks as specified, on and including 50mm thick sand bedding, 300mm thick compacted crusher run, including all necessary excavation, compaction and disposal of surplus excavated material off-site. All as per drawing no. IRFA/PD/23002/ESCP-DET/3/5	M	104		
	<u>WASH TROUGH</u>				
D	Wash trough overall size 12000mm long x 7860mm wide x 750mm high constructed of 250mm thick reinforced concrete slab, 150mm thick concrete wall, with 20mm thick plastering, reinforced with and including 10mm and 32mm diameter high tensile bar reinforcement, 50mm thick lean concrete, 305x165x38.69kg/m UB Stanchion, 1500mm x 1500mm discharge outlet, constructed of 150mm thick mass concrete wall, with 20mm thick plastering, with and including all necessary excavation, formwork, complete with 300mm block drain outlet, providing waterjet complete with piping and connection, all as per drawing no. IRFA/PD/23002/ESCP-DET/3/5	No.	1		
	<u>STOCKPILE AREA</u>				
E	Allow for construction of stockpile complete with earth bank including all necessary excavation, formwork and disposal of surplus excavated material off site to S.O Approval as per Engineer's drawing no. IRFA/PD/23002/ESCP-DET/3/5	Item			
	B5.2/3	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
B	<p><u>WET SEDIMENT BASIN</u></p> <p>Allow for construction for sediment basin complete with excavation, temporary earth embankment, outlet of gravel-filled geotextile covered, outlet control riser, trash rack / anti-vortex device, temporary manhole and maintenance during construction period. upon completion, remove all granular material, compacted with earth backfill and all necessary works as shown on Engineer's Drawing IRFA/PD/23002/ESCP-DET/4/5</p> <p>Wet sediment basin (Approximately 526M2)</p>	NO	1		
C	<p><u>TEMPORARY WATERWAY CROSSING</u></p> <p>1200mm RC pipe laid to fall as specified temporary water way crossing complete with concrete, formwork and including all necessary excavation and others related works. All as per Engineer's drawing no. IRFA/PD/23002/ESCP-DET/4/5</p> <p>-----</p>	M	8		
D	<p>The Contractor is to allow here for other works under the element of demolition works which are not listed above but shown on the drawings and visible during site visit. Please specify :-</p> <p>.....</p> <p>.....</p> <p>.....</p> <p>.....</p> <p><u>(END OF ALL PROVISIONAL)</u></p>				
	B5.2/4	TO COLLECTION			

[illegible]

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>Specification and General Labour Clauses:-</u></p> <p>For description of Materials, Workmanship and General Labour applicable to this Bill see "specification".</p> <p><u>NEW ROAD WORKS</u></p>				
A	Excavate to road formation level average 465mm deep commencing from formation level and remove from site	M2	3,900		
B	Grade over surface of excavation and filling to gradients crossfalls and rolled as described	M2	3,900		
C	50mm (Consolidated thickness) of compacted sand sub, spread and levelled over road formation ready to receive crushed aggregate road base Type II	M2	3,900		
D	300mm thick (consolidated thickness) of crushed aggregate road base Type II as road base, spread, levelled and rolled as described	M2	3,900		
E	Prepare and apply spray 80/100 penetration prime coat at 4.5 litre to every meter square on the surface of crusher run	M2	3,900		
F	65mm thick asphaltic concrete base course (ACB20) as binder course of dense premix bituminous macadam as described, spread, levelled and rolled to falls and chamber.	M2	3,900		
G	Prepare and apply spray 80/100 penetration tack coat at 4.5 litre to every meter square on the surface of binder course	M2	3,900		
H	50mm thick asphaltic concrete wearing course base (ACW14) as described	M2	3,900		
J	Cutting in and bonding new premix road to existing road and including labour and material for making good works	M	70		
	B5.3/1	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>ROAD KERB</u>				
	<u>Precast concrete Grade 30/20 including all moulds finished fair on exposed faces :-</u>				
A	300mm wide x 375mm high kerb with channel piece and rounded on one edge cast in 600mm length bedded in mass concrete bedding Grade 15/20 complete with reinforcement and with all necessary lean concrete, channel slab excavation as per Engineer's drawing no. IRFA/PD/23002/RM&S-DET/4/4 (Type B1)	M	795		
B	500mm wide x 375mm high kerb with channel piece and rounded on one edge cast in 600mm length bedded in mass concrete bedding Grade 15/20 complete with reinforcement and with all necessary lean concrete, channel slab excavation as per Engineer's drawing no. IRFA/PD/23002/RM&S-DET/4/4 (Type B2)	M	35		
C	<u>Extra for 300mm x 150mm scupper opening as per drawing</u>	No	155		
D	Prepare and paint two coats non reflective road paint of black and white girth 250mm in alternative length of 600mm on road kerb	M	830		
	<u>Road Gully</u>				
E	Road gully overall size 530mm x 300mm x 375mm high cast in-situ road gully including excavation, all necessary formwork and forming opening for 237mm diameter concrete pipe (measured separately) and 430mm x 180mm concrete grating and painting as per Engineer drawing no. IRFA/PD/23002/R&D-DET/4/6 (Type B1)	No	117		
F	Road gully overall size 530mm x 300mm x 375mm high cast in-situ road gully including excavation, all necessary formwork, and 430mm x 180mm concrete grating and painting as per Engineer drawing no. IRFA/PD/23002/R&D-DET/4/6 (Type B2)	No	38		
	<u>Scupper Pipe</u>				
G	225mm diameter RC pipe laid to slope in 100mm thick concrete surround (Grade 25) including jointing or bend to road gully and storm water pipe and all necessary excavation and formwork	M	233		
	B5.3/2	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>PRECAST CONCRETE WHEEL STOP</u>				
	<u>Precast concrete Grade 30/20 including all moulds finished fair on exposed faces :-</u>				
A	160mm wide x 160mm high kerb with channel piece and rounded on one edge cast in 600mm length bedded in mass concrete bedding Grade 15/20 fixed with 12mm diameter STD pipe of 19mm diameter rod reinforcement and with all necessary lean concrete, channel slab excavation as per Engineer's drawing no. IRFA/PD/23002/RM&S-DET/4/4	M	124		
	<u>ROAD FURNITURE</u>				
	<u>Prepare and apply one coat primer and one coat reflectorised thermoplastic road paint. All as per Engineer's drawing no. IRFA/PD/23002/RM&S-DET/4/4</u>				
B	100mm wide centre line / lane line on finished road surface as per detail drawing	M	75		
C	300mm wide stop line ditto	M	15		
D	150mm wide edge line ditto	M	670		
E	150mm x 300mm length, give way line	M	75		
F	100mm wide line for motorcycle parking lines overall size 2.00m x 1.00m wide ditto	No	22		
G	Ditto car parking lines overall size 5.00m x 2.50m wide ditto	No	60		
H	Ditto OKU car parking lines overall size 5.00m x 3.80m wide complete with logo ditto	No	2		
J	Approved single straight way arrow ditto	No	10		
K	Approved turn right arrow ditto	No	7		
L	Approved turn left or right arrow ditto	No	2		
M	Approved staright & turn right arrow ditto	No	1		
	<u>Road Sign</u>				
N	Approved traffic 'BERHENTI' sign (RP.1) (grade high intensity) including mild steel post,excavation, formwork and concrete base as per Engineer's detail drawing No. IRFA/PD/23002/RM&S-DET/3/4	No	2		
	B5.3/3	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>Road Sign</u>				
A	Approved traffic 'No Entry' sign (RP.4) (grade high intensity) including mild steel post,excavation, formwork and concrete base as per Engineer's detail drawing No. IRFA/PD/23002/RM&S-DET/3/4	No	2		
B	Approved 'Speed Limit' sign (RP.7a), ditto.	No	1		
C	Approved 'Direction to Follow' sign (RP.1a), ditto.	No	1		
D	Approved 'Crossing for Disabled' sign (WD.34), ditto.	No	1		
E	Approved motorcycle parking sign (GI.4a), ditto.	No	1		
F	Approved chevron sign (WD44a), ditto.	No	1		
G	Approved chevron sign (WD44b), ditto.	No	2		
	<u>HEAVY DUTY INTERLOCKING PAVER WALKWAY</u>				
H	80mm thick approved concrete paving blocks as specified, on and including 50mm thick sand bedding, 300mm thick compacted crusher run, 150mm thick sand sub-base including all necessary excavation, compaction and disposal of surplus excavated material off-site. All as per drawing no. IRFA/PD/23002/ESCP-DET/3/5	M	300		
	<u>CEMENT RENDER WALKWAY</u>				
J	50mm thick approved concrete cement render as specified, on and including 110mm thick concrete, BRC A8, 50mm thick sand bedding, 300mm thick compacted crusher run, 150mm thick sand sub-base including all necessary excavation, compaction and disposal of surplus excavated material off-site. All as per drawing no. IRFA/PD/23002/ESCP-DET/3/5	M	20		
	<u>Testing</u>				
K	Allow for all necessary inspections and testing (including coring and compaction tests) including submission of reports and also pay all necessary fees and deposits including liaison for the inspection and approval	ITEM			
	<u>California Bearing Ratio (CBR) Test</u>				
L	The contractor shall carry out california bearing ratio (CBR) tests on sub grade all in accordance to requirement of the specification and submit testing report to the S.O at location approved by the S.O.	ITEM			
	<u>(END OF ALL PROVISIONAL)</u>				
	B5.3/4	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u> PAGE B5.3/1 PAGE B5.3/2 PAGE B5.3/3 PAGE B5.3/4	.	.	.	
	<u>BILL NO. 5.3 - ROAD WORKS</u> TOTAL CARRIED TO BILL SUMMARY <div>B5.3/S</div>				

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>Specification and General Labour Clauses:-</u></p> <p>For description of Materials, Workmanship and General Labour applicable to this Bill see "specification".</p> <p><u>(ALL PROVISIONAL)</u></p> <p><u>OPEN DRAIN</u></p> <p><u>Supply and lay precast U-shaped drain with capping beam and include in all necessary excavation, 150mm thick crusher run, 150mm thick RC wall, 75mm diameter PVC pipe weephole, 230mm x 230mm aggregate to be encased with geotextile, precast concrete grating (if necessary). All as shown in as per Engineer's drawing no. IRFA/PD/23002/R&D-DET/3/6 and S.O approval</u></p> <p><u>Drain depth not exceeding 2.5m deep</u></p>				
A	<p>450mm x 300mm wide precast concrete U-shaped drain</p> <p><u>Supply and lay block drain with brickwall and include in all necessary excavation, lean concrete, concrete base with BRC, sawn formwork, plastering, weephole, precast concrete grating (if necessary), backfilling and disposal of surplus excavated material from site all as shown in as per Engineer's drawing no. IRFA/PD/23002/R&D-DET/3/6 and S.O approval</u></p> <p><u>Drain depth not exceeding 1.50m deep</u></p>	M	260		
B	<p>300mm x 300mm PC Block Drain</p> <p><u>Supply and lay cut-off drain / trench, with and including in all necessary excavation, concrete base, sawn formwork, reinforcement bars, plastering, 355mm width precast concrete heavy duty grating with stainless steel bolt and disposal of surplus excavated material from site all as shown in as per Engineer's drawing no. IRFA/PD/23002/R&D-DET/3/6 and S.O approval</u></p> <p><u>Drain depth not exceeding 1.50m deep</u></p>	M	16		
C	<p>300mm cut-off drain / trench, average 520mm high.</p>	M	12		
	B5.4/1	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>PIPE CULVERT</u></p> <p><u>Supply material and labour to lay precast concrete pipe ('SIRIM' Approved Class Z pipes or other equal and approved) with 450mm thick well compacted crusher run, 150mm thick concrete base, 100mm thick concrete haunching or concrete surround, all necessary excavation, formwork, mesh fabric reinforcement, sand bedding, crusher run backfilling and disposal of surplus earth out of the site and including all necessary temporary or permanent timber/steel piling for the works, all in accordance to the engineer's drawing and S.O approval</u></p> <p><u>For depth exceeding 1.50m and not exceeding 3.00m deep</u></p>				
D	900mm diameter pipe laid in trench.	M	21		
E	600mm diameter pipe laid in trench.	M	470		
	<p><u>REINFORCED CONCRETE (R.C) SUMPS</u></p> <p><u>Construct and complete R.C sump including all excavation, backfilling and remove surplus excavated materials from site, 230mm thick RC wall with plaster on one side, 230mm thick concrete base, lean concrete, reinforcement bars, cement rendering, approved cast iron cover overall size 762mm x 762mm complete with hinges including all necessary formwork complete all as per drawing Engineer's drawing no.IRFA/PD/23002/R&D-DET/3/6 and S.O.approval</u></p> <p><u>For depth exceeding 1.50m and not exceeding 3.00m deep</u></p>				
F	Size 1210mm x 1210mm	No	2		
G	Size 1360mm x 1360mm	No	17		
H	Size 1660mm x 1660mm	No	3		
	B5.4/2	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>RUBBISH TRAP</u>				
	<u>Supply and install approved galvanised iron rubbish trap (to suit size of the sump), complete with galvanised netting, inlet opening to be equal with the size of the culvert, handle & hinges for maintenance purposes, with and including all necessary fittings and accessories. All as per drawing Engineer's drawing no.IRFA/PD/23002/R&D-DET/3/6 and S.O.approval</u>				
A	Size 1360mm x 1360mm	No	1		
B	Size 1660mm x 1660mm	No	2		
	<u>UNDERGROUND DETENTION POND</u>				
C	Supply and deliver bakau pile, average size 100mm diameter at 6.0m long	No.	3888		
D	Prepare, level and compact base to drive bakau pile as shown in the Engineer's drawings and as directed by the S.O.	M2	344		
E	Install and drive only bakau piles as shown in the drawings and as directed by the S.O. (6m depth)	No.	3888		
F	Supply, install and construct underground on site detention overall size 43.0m (L) x 8.0m (W) x 1.95m (H) depth comprising of 2 rows of box culvert with lid size 3.6m (W) x 1.5m (H), 300mm thick compacted crusher run, 200mm thick RC wall, 0.6m x 0.6m opening for maintenance with heavy duty MS grating covered and outlet D.C.P overall size 3.0m (L) x 1.90m (W) x 4.0m (h), comprising of 200mm thk RC slab & wall, 230mm RC primary outlet, 0.9m (W) x 0.6m (H) spillway opening, stepiron for maintenance, 840mm x 840mm heavy duty cover, with and including all necessary excavation, get out, level and compact and trimming slopes and protection, including all necessary making good and maintenance, desilting throughout the contract period and removal and necessary backfilling on completion all as indicated on plan and drawing no. IRFA/PD/23002/R&D/OSD-DET/5/6 & 6/6	No.	1		
	B5.4/3	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>UNDERGROUND DETENTION POND (Cont'd)</u>				
A	Approved OSD Advisory sign (grade high intensity) including mild steel post,excavation, formwork and concrete base as per Engineer's detail drawing No. IRFA/PD/23002/OSD-DET/6/6	No	2		
	<u>BOX CULVERT</u>				
B	Supply and deliver bakau pile, average size 100mm diameter at 6.0m long	No.	568		
C	Prepare, level and compact base to drive bakau pile as shown in the Engineer's drawings and as directed by the S.O.	M2	45		
D	Install and drive only bakau piles a shown the drawings and as directed by the S.O. (6m depth)	No.	568		
	<u>Supply material and labour to lay precast concrete box culvert ('SIRIM' Approved culvert or other equal and approved) with 200mm thick well compacted crusher run as base, all necessary excavation, formwork, mesh fabric reinforcement, sand bedding, crucher run backfilling and disposal of surplus earth out of the site and including all necessary temporary of permanent timber/steel piling for the works, all in accordance to the engineer's drawing and S.O approval (if necessary). All as shown in as per Engineer's drawing no. IRFA/PD/23002/R&D-DET/3/6 and S.O approval</u>				
	<u>For depth not exceeding 1.50m deep</u>				
E	900mm x 900mm box culvert laid in trench.	M	42		
	<u>Testing</u>				
F	Allow for testing of drainage system during laying and on completion all as described and make good any defect and leave the whole in perfect working order to the entire satisfaction of the S.O	ITEM			
G	Allow drain connection to existing drain & main drain ditto.and pay all fees, deposits and permits to the relevant authorities for construction and completion of the works	ITEM			
	<u>(END OF ALL PROVISIONAL)</u>				
	B5.4/4	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u> PAGE B5.4/1 PAGE B5.4/2 PAGE B5.4/3 PAGE B5.4/4	.	.	.	
	BILL NO. 5.4 - SURFACE WATER DRAINAGE TOTAL CARRIED TO BILL SUMMARY B5.4/S				

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>Specification and General Labour Clauses:-</u></p> <p>For description of Materials, Workmanship and General Labour applicable to this Bill see "specification".</p> <p><u>(ALL PROVISIONAL)</u></p> <p><u>Note :</u></p> <p>All excavations are measured from formation level unless otherwise stated</p> <p><u>EXCAVATION WORK</u></p> <p><u>Excavate trench for pipes exceeding 1.50m and not exceeding 3.0m deep, get out, part return, fill in, ram and remove surplus excavated materials from site:-</u></p>				
A	225mm diameter pipe and 825 mm wide and average depth 1.80m deep	M	320		
B	Approved well compacted 20mm thick crushed rock to vitrified clay pipes (measured separately) All as per drawing Engineer's drawing no.IRFA/PD/23002/SEW-DET/2/4 and S.O.approval	M3	70		
C	Approved Grade 20/20 asp specified mass concrete backfill to vitrified clay pipes (measured separately) All as per drawing Engineer's drawing no.IRFA/PD/23002/SEW-DET/2/4 and S.O.approval	M3	57		
D	Approved compacted selected backfilling to top of pipes including compaction to the satisfaction of the S.O. All as per drawing Engineer's drawing no.IRFA/PD/23002/SEW-DET/2/4 and S.O.approval	M3	280		
	<p><u>PIPEWORK</u></p> <p><u>Vitrified clay pipes and special fittings to BS 65 and BS 540 with spigotted and socketted joints effected with flexible rubber rings including Y-joint and bedded in bed (measured seperately)</u></p>				
E	225mm diameter pipe laid in trench (measured separately)	M	320		
	B5.5/1	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>PRECAST CONCRETE MANHOLES</u></p> <p><u>Supply and install 'SIRIM' approved precast reinforced concrete manhole in position and installed strictly in accordance with the manufacturer's instructions including all excavation backfilling and remove surplus excavated materials from site, complete with precast eccentric rest platform, concrete chamber ring laid on 150mm thick concrete surround Grade 20, 400mm thick concrete base Grade 25, a layer of BRC A8, 50mm thick lean concrete, standard manhole D.I/C.I frame and cover to BS 497, precast concrete cover slab, 450mm wide 25mm diameter galvanised iron cat ladder, 25.4mm thick rendering sulphate resistant cement mortar and plastering, 150mm concrete surround, concrete encasement, half round vitrified clay pipe complete all as shown in detail Engineer's drawing no. All as per drawing Engineer's drawing no. IRFA/PD/23002/SEW-DET/2/4 and S.O. approval</u></p> <p><u>For depth not exceeding 1.50m deep</u></p> <p>A 1220mm diameter (internal size)</p> <p><u>For depth exceeding 1.50m and not exceeding 3.00m deep</u></p> <p>B 1220mm diameter (internal size)</p> <p><u>TESTING</u></p> <p>C Allow for testing with CCTV the whole of the sewerage system in the present of the S.O. or his representative or by other means before trenches are completely filled in, make good any default test again on completion including discharging to the nearest drain as engineer drawing and leave the whole system in perfect working order to the entire satisfaction of the S.O. and the Local Authorities and after the CCTV test and inspection, contractor to submit a report and a color video tape record of the inspection to Local Authority within seven days</p>	No	4		
		No	4		
		ITEM			
	B5.5/2	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>TESTING (Contd')</u>				
D	To conduct leakage test and flow test to consruted sewer lines as required by local authorities and S.O. All sewer pipes to be flushed, clean prior to any test	ITEM			
E	Allow tapping from block manhole (Internal) to external manhole including pipe, etc.	ITEM			
F	Allow tapping from last manhole to existing manhole, including piping works, etc.	ITEM			
	<u>(END OF ALL PROVISIONAL)</u>				
	B5.5/3	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B5.5/1	.	.	.	
	PAGE B5.5/2	.	.	.	
	PAGE B5.5/3	.	.	.	
	BILL NO. 5.5 - SEWERAGE TOTAL CARRIED TO BILL SUMMARY				
	B5.5/S				

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>(ALL PROVISIONAL)</u></p> <p><u>Specification and General Labour Clauses :</u></p> <p>For Description of Materials, Workmanship and General Labours applicable to this Bill see "Preambles To All Trades".</p> <p><u>Note :</u></p> <p>All excavation are measure from formation level unless otherwise stated</p> <p><u>EXCAVATION WORK</u></p> <p><u>Excavate pipe not exceeding 1.50m deep, get out, part return, fill in, well ram and remainder load and cart away from site, level, grade and ram bottom, trim sides and including planking and strutting and removed surplus material from site</u></p>				
A	25mm diameter distribution pipe and average 1200mm deep	M	6		
B	75mm diameter distribution pipe and average 1200mm deep	M	180		
C	150mm diameter hydrant pipe and average 1200mm deep	M	375		
	<p><u>CONCRETE WORK</u></p> <p><u>Mass Concrete Grade 15:-</u></p>				
D	Thrust block for 150mm x 150mm x 150mm diameter tee overall size 525mm x 300mm x 750mm high including all necessary excavation and sawn formwork.	No	4		
E	Ditto for 150mm diameter pipe x 90 degree horizontal bend overall size 675mm x 412.5mm (average) x 600mm high ditto	No	6		
F	Thrust block for 75mm x 75mm x 75mm diameter tee overall size 525mm x 300mm x 750mm high including all necessary excavation and sawn formwork.	No	1		
G	Ditto for 75mm diameter pipe x 90 degree horizontal bend overall size 675mm x 412.5mm (average) x 600mm high ditto	No	3		
	B5.6/1	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>POLYALUMINIUM (P.A) PIPE</u>				
	<u>Polyaluminium (P.A) pipe to for the following :</u>				
A	75mm diameter distribution pipe laid in trench (measured separately)	M	180		
B	25mm diameter distribution pipe laid in trench (measured separately)	M	6		
C	<u>Extra for</u> 75mm x 75mm x 75mm tee	No	1		
D	<u>Extra for</u> 75mm diameter x 90 degree bend	No	3		
E	<u>Extra for</u> 25mm diameter x 90 degree bend	No	1		
	<u>MILD STEEL PIPES</u>				
	<u>Steel pipes and fitting to B.S. 534 and flanges to B.S 4504:-</u>				
F	150mm diameter hydrant pipe laid in trench (measured separately)	M	375		
	<u>Mild steel pipes and fitting jointed with flanged joints or mechanical coupling joints as described :-</u>				
G	150mm x 150mm x 150mm diameter tee and jointing to pipes (measured separately).	No	4		
H	150mm diameter x 90 degree bend and jointing to pipes (measured separately).	No	6		
J	150mm diameter pillar fire hydrant (double outlet type to the S.O. and authorities approval and including jointing to extension pipe (measured separately) with and including painting one coat metallic primer two coats of gloss paint in signal yellow and 900mm x 900mm x 75mm thick Grade D concrete apron surround finished fair including all necessary	No	3		
K	Allow tee off from 150mm diameter pipe to fire hydrant.	No	4		
	<u>Valve and fitting</u>				
	Valve to BS 5163 jointed to main pipes or fittings and including all necessary spigot adaptor pipes, extension pieces, joint fitting couplings and ductile iron detachable joints as required				
L	Supply and install 150mm Diameter sluice valve including flanged joints and rubber gaskets	NO	7		
	B5.6/2	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>Valve and fitting (Cont'd)</u> Valve to BS 5163 jointed to main pipes or fittings and including all necessary spigot adaptor pipes, extension pieces, joint fitting couplings and ductile iron detachable joints as required				
A	Supply and install 75mm Diameter sluice valve including flanged joints and rubber gaskets	NO	2		
B	Supply and install 25mm Diameter sluice valve including flanged joints and rubber gaskets	NO	1		
	<u>Valve Chamber</u> Valve Chamber average size 1200mm x 1200mm x 1500mm deep constructed of 100mm thick precast block with 19mm thick cement plaster to exposed faced, 50mm thick screed, 150mm thick concrete grade 15 base with 12mm chippings fill and 25mm diameter MS bar staggered steps at 225mm centres, cover with 150mm thick concrete slab at the top and 530mm x 605mm unbreakable steel plate cover single seal hinged with steel frame complete with key and locking gear of heavy patterned type with reinforced concrete block top & bottom including forming pipe outlet and inlet and including all excavation, formwork, backfill and all as per Engineer's detail drawing.				
C	Sluice valve Precast reinforced concrete (Grade 20) as described with splayed top inscribed with countersunk including all moulds, finishing fair on exposed faces, painting post in oil based paint all to approval and fixing firmly in position onto ground.	NO	10		
D	Indicator post with 'Sluice Valve' sign 150mm x 62mm x 750mm high	NO	10		
E	Indicator post with 'Hydrant' sign 150mm x 62mm x 750mm high	NO	3		
	<u>METER</u>				
F	Supply and install approved bulk meter complete with all accessories, fittings and fixings. All as per drawings.	No	1		
	B5.6/3	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>Testing and Commissioning</u>				
A	Allow for sectional hydraulic testing of piping during laying and on completion all as described and make good any defects and leave the whole in perfect working order to the entire satisfaction of the S.O.	ITEM			
B	Allow for sterilising commissioning and scouring of main pipes as described with all related works.	ITEM			
C	Allow tapping for existing water reticulation and make good any defect and leave the whole in perfect working order to the entire satisfaction of the S.O	ITEM			
	<u>(END OF ALL PROVISIONAL)</u>				
	B5.6/4	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B5.6/1	.	.	.	
	PAGE B5.6/2	.	.	.	
	PAGE B5.6/3	.	.	.	
	PAGE B5.6/4	.	.	.	
	BILL NO. 5.6 - WATER RETICULATION TOTAL CARRIED TO BILL SUMMARY				
	B5.6/S				

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
A	<p><u>ALL PROVISIONAL</u></p> <p><u>PERIMETER FENCING</u></p> <p><u>Anti-Climb & Anti-Cut Fencing</u></p> <p>1800mm overall high anti-climb and anti-cut fencing, complete with 75mm diameter mild steel post, 150mm high concrete base, reinforced concrete as described footing and other end capped with post cap including all necessary angle iron, post cap, stainless steel bolts, nuts and washer, painting, excavation, reinforcement, and formwork as per drawing no. E3/1088/2022/MBIP/PKD/FD/WD-01</p> <p><u>Entrance Statement Brickwall</u></p> <p><u>300mm Thick brickwall in clay bricks, laid on cement and sand (1:3) mortar and reinforced with 'Exmet' brick reinforcement at every fourth course, stiffeners and mild steel bonding, plaster and paint on both side with approved finishes complete with reinforced concrete base, reinforcement, formworks, dowel bars, precast concrete block decorative wall panel and all necessary fixing accessories in accordance with S.O's satisfaction as per Architect's drawing drawing no. E3/1088/2022/MBIP/PKD/FD/WD-01</u></p>	M	310		
B	<p>Overall size 7.0m x 2.0m high</p> <p><u>ENTRANCE STATEMENT SIGNAGE</u></p> <p><u>Supply and install various height lettering (315mm, 180mm, 105mm and 75mm high) and MBIP logo (405mm high), using 1.2mm thick polycarbonate back lit lighting box-up for lettering and logo, individual wall plug to be fitted on entrance brickwall, all to be use font type 'Arial Bold', colour and patterned background all as per S.O approval to manufacturer's detail and Architect's Drawing No. E3/1088/2022/MBIP/PKD/SD/DD-15</u></p>	M2	15		
C	<p>" HAB KOMUNITI @ BUKIT INDAH PERPUSTAKAAN DIGITAL (DIGITAL LIBRARY) " (complete with MBIP logo & MBIP lettering) (at Entrance Statement Brickwall)</p>	No.	1		
	B5.7/1	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
A	<p><u>SLIDING GATE</u></p> <p>Supply and install approved mild steel sliding gate overall size 7000mm x 1000mm high, constructed of 50mm x 100mm mild steel main frame with painted finish, mild steel wire mesh with painted finish, 10 nos. of mild steel heavy duty wheels / roller set, manual lockset and complete with track and roller, including all necessary stainless steel bolts and nuts, locking plate, slash bolt, etc. finish with painting, as per drawing no. E3/1088/2022/MBIP/PKD/FD/WD-01</p> <p><u>FOLDING GATE</u></p> <p><u>Supply and install approved mild steel folding gate, constructed of 50mm x 100mm mild steel main frame with painted finish, mild steel wire mesh with painted finish, self closing door hinges and complete with track and roller, including all necessary stainless steel bolts and nuts, locking plate, slash bolt, etc. finish with painting, as per drawing no. E3/1088/2022/MBIP/PKD/FD/WD-01</u></p>	No.	1		
B	Folding gate, overall size 3.0m x 1.8m high	No.	3		
C	Folding gate, overall size 1.8m x 1.0m high	No.	8		
	<p><u>PLANTER BOX</u></p> <p><u>Construct and complete planter box, complete with excavation work, sub structure and super structure work, brickwall with 20mm thick plastering on both side and the surface to be decorate including approved pebble wash finish, 20mm diameter spout pipe discharge, 250mm high top soil and all other necessary works all as per Architect's Drawing E3/1088/2022/MBIP/PKD/FD/WD-01,02,03</u></p>				
D	Overall size 4.8m x 1.0m x 1.0m	No.	7		
E	Overall size 2.1m x 1.0m x 1.0m	No.	1		
F	Overall size 0.8m x 1.0m x 1.0m	No.	1		
	B5.7/2	TO COLLECTION			

[illegible]

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>ALL PROVISIONAL</u>				
	<u>FLAG POLES</u>				
A	<p>Allow for construction of 3 nos of Flag Post 6000mm high comprising of stainless steel 'Kepala Tiang - Kubah Krom' with 50mm diameter stainless steel pipe welded in clear anodise (silver), stainless steel flash collar at top with 50mm diameter stainless steel pipe mechanically cleaned & chemically etched with 1 coat of epoxy primer and 2 coats polyurethane finish coats in silver alumn with heavy duty stainless steel pulley system with stainless steel aircraft cable, shock spring, counter weight, beaded retainer ring & snaps to secure flag with stainless steel ball bearing complete with stainless steel cleat with deep satin lustre fin (including stainless steel cleat screws) and stainless steel flash collar, with groundset collar or shoe base collar, foundation sleeve with 5000mm x 1210mm thick base slab with floor finishes and concrete beam surround, complete with all necessary work as per Architect Drawing No. E3/1088/2022/MBIP/PKD/MH/WD-01</p>	No	1		
	<p><u>BILL NO. 5.8 - ANCILLARY BUILDING</u> TOTAL CARRIED TO BILL SUMMARY</p> <p>B5.8/S</p>				

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>Specification and General Labour Clauses:-</u> For description of Materials, Workmanship and General Labour applicable to this Bill see "specification". <u>(ALL PROVISIONAL)</u> <u>RESURFACE OF EXISTING ROADWORKS</u>				
A	Scrapping off existing road work at 65mm thick from surface and remove all debris from site to a tip to be provided by the Contractor at his own expenses all as per shown in the drawings	M2	1,260		
B	Prepare and apply spray 80/100 penetration tack coat at 4.5 litre to every meter square on the surface of binder course	M2	1,260		
C	50mm thick asphaltic concrete wearing course base (ACW14) as described	M2	1,260		
D	Cutting in and bonding new premix road to existing road and including labour and material for making good works	M	70		
	<u>ROAD FURNITURE</u> <u>Prepare and apply one coat primer and one coat reflectorised thermoplastic road paint. All as per Engineer's drawing no. IRFA/PD/23002/RM&S-DET/4/4</u>				
E	100mm wide centre line / lane line on finished road surface as per detail drawing	M	300		
F	150mm wide edge line ditto	M	300		
G	Approved single straight way arrow ditto	No	8		
H	Approved turn right arrow ditto	No	3		
J	Approved straight & turn right arrow ditto	No	1		
K	Approved straight & turn left arrow ditto	No	1		
	<u>Road Sign</u>				
L	Approved traffic 'Give Way' sign (RP.13) (grade high intensity) including mild steel post, excavation, formwork and concrete base as per Engineer's detail drawing No. IRFA/PD/23002/RM&S-DET/3/4	No	1		
	B5.9/1	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>Road Sign</u>				
A	Approved traffic 'Road Juntion on the Left' sign (WD.27c) (grade high intensity) including mild steel post,excavation, formwork and concrete base as per Engineer's detail drawing No. IRFA/PD/23002/RM&S-DET/3/4	No	1		
B	Approved 'Road Juntion on the Right' sign (WD.27b), ditto.	No	1		
C	Approved 'AWAS' sign (WD.17), ditto.	No	1		
D	Approved chevron sign (WD44a), ditto.	No	1		
	B5.9/1	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u>				
	PAGE B5.9/1	.	.	.	
	PAGE B5.9/2	.	.	.	
	BILL NO. 5.9 - EXTERNAL WORK OUTSIDE BOUNDRY				
	TOTAL CARRIED TO BILL SUMMARY	B5.9/S			

EXTERNAL WORKS

ITEM	DESCRIPTION	UNIT	QTY	RATE (RM)	AMOUNT (RM)
	<div><div><u>BILL SUMMARY</u></div><div><u>PAGE</u></div></div>				
A	DEMOLITION & MAKING GOOD WORKS	B5.1/S	.	.	.
B	SITE CLEARANCE & EARTHWORKS	B5.2/S	.	.	.
C	ROAD WORKS	B5.3/S	.	.	.
D	SURFACE WATER DRAINAGE	B5.4/S	.	.	.
E	SEWERAGE	B5.5/S	.	.	.
F	WATER RETICULATION	B5.6/S	.	.	.
G	FENCING & GATES	B5.7/S	.	.	.
H	ANCIILLARY BUILDING	B5.8/S	.	.	.
J	EXTERNAL WORKS OUTSIDE BOUNDARIES	B5.9/S	.	.	.
	<u>BILL NO. 5 - EXTERNAL WORK</u> TOTAL CARRIED TO FINAL SUMMARY B5/S				

BILL NO. 6 – LANDSCAPING WORKS

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
A	<p><u>SOFTSCAPE WORKS (ALL PROVISIONAL)</u></p> <p><u>GENERAL NOTES</u></p> <p>a) All plant materials in nursery intended to be brought to site must be pre-inspected and approved by client representative and Landscape Architect representative</p> <p>b) In situation that the Contractor fails to source the specified plant materials from their nursery, and if the client managed to source the said plant on behalf of the contractor, deduction shall be made from the payment due to the contractor.</p> <p>Note : (All plants supplied are to be in polybags, established, healthy and good specimens)</p>				
1	<p><u>PLANTS MATERIALS</u></p> <p>To supply, deliver, handle, set in position, plant planting material and to lay 50mm thick plant-based, organic, mulching to planting bed, all plants including excavation of planting pits, carting off excess and dispose off site, handling, setting of plan planting for the following : As per Dwg No : DICD22138/2022/MBIP-DBI/MP-01 (LS)</p>				
1.A	<u>TREES</u>				
i	Syzygium polyanthum (Salam) 5.0m Overall ht, 75mm trunk diameter no top cut is allowed; all in natural form; single trunk and multi branches & healthy	nos	16		
1.B	<u>SHRUBS</u>				
i	Tabernaemontana divaricata (Pinwheel Flower) 300mm ht, 300mm c.c, healthy , bushy.	nos	442		
ii	Hibiscus rosa-sinensis (Bunga raya) 300mm ht, 300mm c.c, healthy , bushy.	nos	1404		
1.C	<u>TURFING</u>				
i	<p>Axonopus compressus (Cow grass)- close turfing</p> <p>To supply and lay Axonopus compressus (95% purity), min sod size of 300mm x 300mm, with min 20mm thk root & soil intact. Rate to include min. 50mm thk top soil laid over the planting area. Prior to soiling the ground shall be graded with a minimum fall of 2% to the nearest drain and or water discharge outlet to avoid water ponding. The turf shall be maintained immediately upon being laid and shall remain healthy & green throughout the contract period.</p>	m2	1,433		
	B6/1	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
2	<u>SOFTSCAPE WORKS (ALL PROVISIONAL)</u>				
2.A	<u>PLANTING OPERATION</u>				
i	<u>STAKING</u>				
2.B	To supply & install double stakes for trees using hardwood timber of 50mm x 50mm x 2400mm length each (500mm in ground and 1900 mm exposed) with 2 pieces of horizontal timber support of 25mm x 50mm each. The stakes shall be installed neatly and firmly. The point of contact between the trunk and upper horizontal support shall be padded with suitable material & secured with plastic coated tie to S.O approval <u>SOIL MIX</u> Supply and lay soil mix for planting holes comprising of 3 parts top soil, 3 parts plant-based organic matter and 1 kg C.I.R.P. per cu.yd or other approved mix to the Landscape Architect direction including loading, unloading , mixing on site, filling into excavated planting holes (measured separately), lightly ramming and all other works in connection. <i>Additional note : The Contractor shall herein, provide a warranty plants planted with the prescribed mix will remain throughout the defect liability period and shall undertake to replace any unhealthy plant as necessary</i>	set	16		
i	1.0m x 1.0m x 1.0m for trees	m3	16		
ii	0.3m x 0.3m x 0.3m for shrubs	m3	50		
	B6/2	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>HARDSCAPE WORKS (ALL PROVISIONAL)</u></p> <p><u>GENERAL NOTES</u></p> <p>The Contractor is to confirm with the Landscape Architect specification of hardscape material prior work commencement to ensure that their quality meets the minimum requirements herein. Whilst every effort has been made to ensure accuracy, The Contractor shall verify all quantities and shall consult the Construction drawings and Specifications herein provided. Any discrepancies shall be expeditiously highlighted to the Landscape Architect, prior to Tender award.</p> <p>All structural, mechanical and electrical works described herein are to be designed, detailed, checked, verified and endorsed by the clients Professional Engineer.</p> <p>Contractor to submit all sample of material, mock ups, and shop drawings for client and Landscape Architect's approval.</p> <p>Site setting out and adjustment of location (if any) shall be reconfirm by Landscape Architect prior commencement of works.</p>				
A	<p><u>WALKWAY</u></p> <p>To construct and complete 1.5m width (minimum) x 100mm thk. concrete walkway (Gred 20 with BRC A6) with concrete broom finish and braille tiles Sunway Paving Solution FL M33 - P02 & FL M32 - P02 or equivalent (size 300x300x40mm per piece) all as per standard requirement by MBIP,complete with thermoplastic graphic symbol, 10mm groove lines at 6m c/c for expansion joint ; 100mm thk well compacted hardcore, compacted subgrade including necessary excavation, formwork complete to Landscape Architect's approval.</p>	m2	100		
B	<p><u>CONCRETE RAMP</u></p> <p>To construct and complete cast in situ RC ramp (Gred 20 with BRC A6) with smooth concrete bare finish and braille tiles Sunway Paving Solution FL M33 - P02 & FL M32 - P02 or equivalent (size 300x300x40mm per piece) all as per standard requirement by MBIP,complete with 10mm groove lines expansion joint ; 100mm thk well compacted hardcore, compacted subgrade including necessary excavation, formwork complete to Landscape Architect's approval.</p>	m2	10		
	B6/3	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>HARDSCAPE WORKS (ALL PROVISIONAL)</u></p> <p><u>BOLLARD</u></p> <p>A To construct and complete 900mm height x 300mm wide Triangle RC Bollard with Shanghai plaster finish on all exposed sides; including all necessary ecavation, formwork, concrete footing, reinforcement bar,and all other associated works to complete the construction. All finishes to LA's and Client approval satisfaction.</p> <p><u>ROOT BARRIER</u></p> <p>B To supply and lay approved 1.0m width HDPE root barrier materials at all designated trees as per shown in plan (5 mrun per tree), circularly around the root ball of the tree to LA's and Client approval satisfaction.</p>	nos	6		
		mrun	16		
	B6/4	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
A	<p><u>MAINTENANCE WORKS</u></p> <p>To supply material, machine, labour and transportation and other necessary items to carry out the landscape maintenance work which include the following : (The contractor to provide at least 2 permanent workers on site at all times during maintenance period)</p> <p>Maintenance works during defect liability period for landscape overall common landscape area</p> <p>To all new planting areas</p> <p><u>Watering</u> Watering all plant materials and quantity of water applied at all times shall be sufficient to penetrate to a minimum depth of 8" at a rate which prevent saturation of the soil (2 times daily or as and when required except on rainy days)</p> <p><u>Weeding and Forking</u> Keep all planting areas free from weeds and undesirable grasses by methods and materials (Once a month & as and when required)</p> <p><u>Desease and Insect Pest Control</u> To treat plants from any desease and pest using the anti pest /fungus as approved by the S.O. (Once a month)</p> <p><u>Pruning and repair</u> To prune and repair existing trees and new planted trees all as per instructed by the S.O. The amount of pruning shall be limited to the minimum necessary to remove dead or injured twigs and branches and or compensate for the loss of roots as a result of transplanting (Once a month & as and when required)</p> <p><u>Fertilizing</u> 15:15:15 + plant-based organic matter as specified by the LA. at a rate recommended by the manufacturers. Fertilizers shall be uniform in composition, dry and free flowing. (Once every two weeks)</p> <p><u>Mulching</u> Organic & nutrient-rich mulching as approved by the LA (All new planting bed and when required)</p>	MONTH	12		
	B6/5	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p><u>MAINTENANCE WORKS (ALL PROVISIONAL) - cont'd</u></p> <p><u>Guying/Staking (All new trees and palms and when required)</u> All plants to be supported in accordance to the local practice. The rubber tire trees ties should be loosened as the trees or palms grow (All new trees and palms and when required)</p> <p><u>Replacement of dead/sick plants</u> Dead / sick plants area to be replaced with the same type and size as specified by the S.O. (Inspection and change to be done accordingly)</p> <p>All waste materials shall be continuously and promptly removed and all reasonable precautions taken to avoid damage to existing structures, plants and grass. (Daily)</p> <p>During the maintenance period, the Contractor will be required to replace any dying or vandalised/damaged plants either by human or animals to the original sizes and true to types at his own cost and it is the contractor's responsibility for the safe custody of all the trees, shrubs and plants etc until it is handed over to the Employer after the maintenance period expires.</p> <p><u>Grass Cutting (Fortnightly)</u> The contractor shall mow all grass area to a 25mm ht. The contractor shall remove all the grass clippings during or immediately after mowing (Fortnightly)</p> <p><u>Unsatisfactory Maintenance</u> maintenance fees due to the Contractor shall be deducted proportionately or with a recommended amount that the S.O finds reasonable and fair if the plantings areas are</p>				
	B6/6	TO COLLECTION			

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<u>COLLECTION</u> PAGE B6/1 PAGE B6/2 PAGE B6/3 PAGE B6/4 PAGE B6/5 PAGE B6/6	. . . . . .	. . . . . .	. . . . . .
	<u>BILL NO. 6 - LANDSCAPING WORKS</u> TOTAL CARRIED TO BILL SUMMARY B6/S				

BILL NO. 7 – PROVISIONAL SUMS

PROVISIONAL SUM

Bill No. 7

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (RM)	AMOUNT (RM)
	<p>Note:</p> <p><u>Include the following Provisional Sums to the expended as directed by the S.O. or deducted wholly or in part if not required :-</u></p> <p><u>CHILDREN PLAYGROUND</u></p> <p>A Provide the Provisional Sum of Ringgit Malaysia : Three Hundred Thousand Only (RM 300,000.00) for Children Playground all as per S.O. approval.</p> <p><u>INTERIOR DESIGN (I.D.) WORKS & FURNITURE</u></p> <p>B Provide the Provisional Sum of Ringgit Malaysia : Five Hundred Fifty Thousand Only (RM 550,000.00) for Interior Design (I.D.) Works & Furniture all as per S.O. approval.</p> <p><u>KITCHEN EQUIPMENT</u></p> <p>D Provide the Provisional Sum of Ringgit Malaysia : Fifty Thousand Only (RM 50,000.00) for Kitchen Equipment all as per S.O. approval.</p> <p><u>REMOVABLE SEATING</u></p> <p>E Provide the Provisional Sum of Ringgit Malaysia : Four Hundred Fourty Thousand Only (RM 440,000.00) for Removable Seating all as per S.O. approval.</p> <p><u>SUPERVISION CLERK OF WORKS (COW)</u></p> <p>F Provide the Provisional Sum of Ringgit Malaysia : One Hundred Fifty Thousand Only (RM 150,000.00) for Supervision Clerk of Works (COW) all as per S.O. approval. * (refer Appendix A for requirement)</p>	ITEM			300,000.00
		ITEM			550,000.00
		ITEM			50,000.00
		ITEM			440,000.00
		ITEM			150,000.00
	<p><u>BILL NO. 7 - PROVISIONAL SUM</u></p> <p>TOTAL CARRIED TO FINAL SUMMARY</p>	B7/S			1,490,000.00

Description for minimum requirement for Supervision Clerk of Works

The Clerk of Works for supervision shall be constantly on the Site and must be a competent, efficient, suitably qualified with two (2) years working experience works and be a qualified member of the professional group (viz. Engineer or Architect), having a comprehensively theoretical background with a suitable qualification minima is Diploma holder in related fields. He must be capable of receiving instructions in English and/or Bahasa Malaysia and in default, it shall be the responsibility to provide replacement for them and all wages and other expenses in connection with the employment of such replacement clerk of works. The appointment shall be approved by the S.O.