#### JABATAN KERJA RAYA MALAYSIA

# MENGGANTI JAMBATAN GANTUNG DI KG. REKOH, ROMPIN, PAHANG

#### **SENARAI KUANTITI**

Kami seperti nama syarikat di bawah mengesahkan tawaran harga yang tersenarai di dalam senarai kuantiti ini adalah sama sepertimana di dalam Borang Tender yang dihasilkan di dalam sistem dan sebarang percanggahan akan menyebabkan tawaran kami ditolak.

A. Nama Syarikat: Nama Petender

B. CIDB/UPKJ/PUKONSA No.: No.Pendaftaran Petender

C. Harga Tawaran: Harga Tawaran Petender

D. No. Siri Tender: **JKR/CJ/23073/2024** 

E. Tarikh Cipta Senarai Kuantiti: 20/11/2024

Senarai kuantiti ini dikeluarkan oleh BKUB, CJ. Sebarang pertanyaan boleh berhubung dengan pegawai yang menyediakan tender dan maklumat pegawai untuk dihubungi boleh didapati di laman iklan.

# **JABATAN KERJA RAYA MALAYSIA**

# MENGGANTI JAMBATAN GANTUNG DI KG. REKOH, ROMPIN, PAHANG

# **SENARAI KUANTITI**

No. Tender: JKR/CJ/23073/2024

# **RINGKASAN TENDER**

# MENGGANTI JAMBATAN GANTUNG DI KG. REKOH, ROMPIN, PAHANG

ITEM	DESCRIPTION	PAGE NO.	AMOUNT(RM)
	OENEDAL ITEMO	DO 4 5/5	
1	GENERAL ITEMS	BQ 1 - 5/5	
2	DEMOLITION AND SITE CLEARANCE	BQ 2 - 1/1	
3	EARTHWORKS	BQ 3 - 3/3	
4	DRAINAGE WORKS	BQ 4 - 1/1	
5	PAVEMENT WORKS	BQ 5 - 4/4	
6	ROAD FURNITURE	BQ 6 - 3/3	
7	GEOTECHNICAL WORKS	BQ 7 - 3/3	
8	STRUCTURES - BRIDGE WORKS	BQ 8 - SUM 1/1	
9	TRAFFIC MANAGEMENT AND CONTROL	BQ 9 - 3/3	
10	ENVIRONMENTAL PROTECTION AND ENHANCEMENT WORKS	BQ 10 - 4/4	
11	ROUTINE MAINTENANCE WORKS	BQ 11 - 5/5	
12	OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT	BQ 12 - 1/1	
13	PROVISIONAL SUM	BQ 13 - 1/1	
14	PROVISIONAL SUM TO BE EXECUTED BY CLASS G1 & G2 BUMIPUTERA CONTRACTORS	BQ 13A - 1/1	
15	PRIME COST SUM	BQ 14 - 1/1	
	Invested P.L.	a ka Banasa Tasa ka	
	Jumlah di baw	a ke Borang Tender	-

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
	A100	CONTRACTUAL REQUIREMENTS				
	A110	Bond				
А	A111	Performance Bond; Banker's/Insurance/Financial Institution Guarantee*	sum			
	A120	<u>Insurances</u>				
В	A121	Insurance of the Works.	sum			
С	A122	Public Liability Insurance.	sum			
D	A123	SOCSO/Workmen Compensation Insurance.	sum			
		Statutory Obligations				
E	A140	Statutory obligation (Compliance with law, regulations or by laws, or any order of directive issued by public authorities).	sum			
	A200	SO REQUIREMENTS				
		Facilities Rate shall be deem to include the provision of water supply, electricity and communication facilities.				
F	A211	Establishment and Removal of Office as per Specification.	sum			
		a) JKR Design (Category 2) as per drawing with floor area of $173\text{m}^2$ .				
		OR				
		b) New Relocatable Type with floor area of 173m <sup>2</sup> .				
		OR				
		c) Rental of Shop Lot with floor area of 173m <sup>2</sup> .				
G	A212	Maintenance of Office.	mth	24		
		Material Testing Laboratory Services				
н	A219	The contractor shall provide an accredited laboratory approved by Department of Standard Malaysia. The laboratory shall be equipped according to the type of tests with the necessary equipment and staff required to carry out the tests as identified in <b>Appendix 1D</b> (List of Laboratory	nr	10		
	•	Page Total carried to S	Summary o	f Bill No. 1		

<sup>\*</sup> Do not price if tenderer opt for Perfomance Guarantee Sum

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
	A221	SO REQUIREMENTS (cont'd)  Establishment and Removal of Office Equipment  Provision and removal of office equipment upon completion as per Specification (Appendix 1E). Equipment to be				
		reverted to the Contractor after completion.				
Α	A221.1	2 No. Computer.	sum			
В	A221.2	1 No.High Desktop Computer With BIM Software	sum			
С	A221.3	3 No. A4 & A3 Laser et Colour Printer	sum			
D	A221.4	1 No. Copier Machine	sum			
Е	A221.5	1 No. Projector.	sum			
F	A222	Maintenance of Office Equipment.	mth	24		
		Services for the SO's Representative				
		Provision of suitable tarnsport services as listed in APPENDIX 1C of the Specification and Appendix A4 of the Contractual Requirements for the duration of contaract				
G	A231	1 no. of four wheel drive (4WD) vehicle	sum			
		Maintenance of Vehicle				
Н	A232	Operation and maintenance of 1 no. of four wheel drive (4WD) vehicle	mth			
	A240	Attendance for the SO's Representative				
J	A241	Provide 1 no. of driver	man-mth	24		
K	A245	Provide 1 no. of licensed Security guard.	man-mth	24		
	A250	Submission of Documents				
L	A254	Works programme ; To provide and update works programme using Microsoft Project to produce Critical Path Method (CPM) and Works Breakdown Structure (WBS) etc. by the planner including providing supply of (1 copy) Microsoft Project Software (latest version) or equivalent as specified in Special Provision to the Standard Specification for Road Works: Work Programme Specification, to be submitted for consent before commencement of works.	sum			
	A260	<u>Miscellaneous</u>				
М	A262	Project signboard.	nr	1		
N	A263	As built drawings and Bridge Inventory Card for approval by SO as per Specification.	sum			
		Page Total carried to S	Summary o	f Bill No. 1		

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
	A260	SO REQUIREMENTS (cont'd)  Miscellaneous (cont'd)				
А	A269	Project report in 10 sets comprising of progress report and quality control report. All the reports to be converted/scanned to a digital copy (in pdf format or equivalent and stored in CD) and to be enclosed with each set of the Project Report including compilation of:	mth	24		
		Progress photographs and Video recording; (i) Photographic and Video capture of work progress on ground using camera.				
		(ii) Aerial Photography and Aerial Video capture of work progress using Drone or Unmanned Aerial Vehicle / UAV.				
	A300	PROJECT REQUIREMENTS				
В	A310	Survey and Setting Out Setting out by licensed Surveyor.	sum			
С	A321	Quality Assurance/Quality Control (QA/QC) QA/QC Plan as per Specification.	sum			
D	A360	Clearance of Site Upon Completion Clearance of site upon completion as per Specification. Rate shall be deemed to include making good all affected	sum			
	A500	CONTRACTOR'S REQUIREMENTS				
	A510	Contractor's Facilities				
		Item shall be deemed to include the provision of water supply, electricity, and sanitary facilities and their continuing operation and maintenance.				
E	A511	Establishment, maintenance and removal of office as per specification.	sum			
F	A512	Provision and maintenance of office equipment; remove upon completion.	sum			
G	A515	Establishment, maintenance and removal of stores as per specification.	sum			
Н	A516	Establishment, maintenance and removal of workshop as per specification.	sum			
J	A517	Establishment, maintenance and removal of workmen accomodation as per specification.	sum			
	1	Page Total carried to S	Summary o	f Bill No. 1	I	

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
	A500	CONTRACTOR'S REQUIREMENTS (cont'd)				
		Temporary Works				
А	A521	Access Road Construct, maintain and remove temporary access roads including temporary crossing; fixed charge.	sum			
В	A539	Temporary Work Provide, maintain and remove all temporary works and other related works for execution of all works; fixed charge excluding piling and other specialist works.	sum			
		Site Management				
		Site Management (inclusive all staff) Provide, maintain and removal of supervision; fixed and time related charges.				
С	A551	Supervision	sum			
D	A552	Administration	sum			
Е	A553	Labour team	sum			
		Mobilisation and Demobilisation				
F	A560	Mobilisation and demobilisation of any construction plants and equipments; fixed charge excluding piling and other specialist works.	sum			
		Page Total carried to S	Summary o	of Bill No. 1		
rago rotal carried to callinary of bill No. 1						

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		Summary of Bill No. 1 : General Items				
		Page BQ1 - 1/5				
		Page BQ1 - 2/5				
		Page BQ1 - 3/5				
		Page BQ1 - 4/5				
		Total of Bill No. 1 carried to	o Summary	of Tender		
<u> </u>						

# Bill NO. 2 - DEMOLITION AND SITE CLEARANCE (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		GENERAL CLEARANCE				
		Above Ground				
Α	E110	General clearance all type of vegetation.	ha	1		
		TREES				
В	E220	Trees of girth: exceeding 1 m to not exceeding 2 m.	nr	6		
		<u>STRUCTURES</u>				
		Brickwork and Masonry				
С	E421.1	Below ground – Exisiting drain (Approximately 50m long).	sum			
D	E421.2	Below ground – Existing sump (Approximately 1.5m x 1.5m x 1.5 deep sump).	sum			
		No Predominant Material (Complete Overall of Bridge Structure)				
E	E491.1	Above ground – Existing Suspension Bridge (Jambatan Gantung at approximately 60m length)	sum			
F	E491.2	Below ground - Abutment, pier and all foundation of existing bridge up to river bed level.	sum			
		DISMANTLE AND SEND TO STORE FOR REUSE AS DIRECTED BY S.O.				
		<u>Metal</u>				
G	E441.1	Above ground – Road lighting poles and all lamp post shall become the property of the Government and shall be delivered to the store at JKR Daerah Rompin.	sum			
Н	E441.2	Above ground – All existing road signage along the alignment. The signboard shall become the property of the Government and shall be delivered to the store at JKR	sum			
	<u>l</u>	Total of Bill No. 2 carried to	Summary	of Tender		

# **BILL NO. 3 - EARTHWORKS (PROVISIONAL QUANTITY)**

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		EXCAVATION Stringing of Tongoil				
А	F111.1	Stripping of Topsoil  Topsoil of average depth of 150 mm and disposed to the Contractor's dumpsite as approved by the S.O.	m²	9,760		
В	F111.2	Topsoil of average depth of 150 mm and stockpile for re-use as top soil for turfing and top of road verge area.	m²	1,470		
		EXCAVATE, LOAD, HAUL AND DEPOSIT				
		Cut to Fill				
		Excavation in cut shall be deemed to include trimming and preparation of excavated surface and transportation from source to place of fill.				
		Excavation in hard mass and rock mass shall be deemed to include trial excavation (direct method) and point load test (indirect method) as per latest JKR Standard Specification for Roadworks.				
С	F121	Excavate in earth from original ground level to form embankment.	m <sup>3</sup>	100		
		EXCAVATE, LOAD, HAUL AND DISPOSE				
		Excavation in cut shall be deemed to include trimming and preparation of excavated surface and transportation from source to place of dispose.				
		Excavation in hard mass and rock mass shall be deemed to include trial excavation (direct method) and point load test (indirect method) as per latest JKR Standard Specification for Roadworks.				
		Cut and Dispose				
D	F131	Excavate in earth material to disposal site approved by the S.O.	m <sup>3</sup>	50		
		Page Total Carried to S	Summary o	f Bill No. 3		

# **BILL NO. 3 - EARTHWORKS (PROVISIONAL QUANTITY)**

FILLING  SPREAD, GRADE AND COMPACT  The following items for filling shall include compaction, testing and confirmation material and additional filling necessitated by settlement or penetration into underlying material as applicable.  Embankments  A F321 Using suitable excavated material as per Specification to form embankment.  B F322 Imported material from Contactor's own source as per Specification to form embankment.	
A F321 Using suitable excavated material as per Specification to form embankment.  B F322 Imported material from Contactor's own source as per m³ 6,000	
form embankment.  B F322 Imported material from Contactor's own source as per m³ 6,000	
Specification to form embankment.	
LANDSCAPING	
Items for landscaping shall be deemed to include digging, planting media, bedding, stalking, protection, watering, weeding, required fertilising, and replacement of dead item until the vegetation is established.	
C F410 Close turfing to slopes as per specification. m <sup>2</sup> 3,420	
Page Total Carried to Summary of Bill No. 3	

# **BILL NO. 3 - EARTHWORKS (PROVISIONAL QUANTITY)**

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		Summary of Bill No. 3 : Earthworks				
		Page BQ3 - 1/3				
		Page BQ3 - 2/3				
		Total of Bill No. 3 carried to	o Summary	of Tender		

#### BILL NO. 4 – DRAINAGE WORKS (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		SURFACE DRAIN				
		Excavation				
Α	Q111	Depth not exceeding 1.5m.	m	645		
		Embankment Toe Drains				
В	Q250	Toe Drain <b>TD2</b> ; cast in-situ reinforced concrete grade C20/25; 1000mm wide x 600mm deep.	m	545		
		Cascade Drain				
С	Q260	Cascade drains <b>OD2</b> ; cast in-situ concrete block drain 750mm wide × 400mm deep; at slope with handrails.	m	100		
		Shoulder Drain				
D	Q290	Shoulder drain <b>SD1</b> ; cast in-situ concrete grade C20/25; 300mm wide x 300mm deep x 100mm thick.	m	90		
		SUMPS				
		Excavation				
E	Q141	Earth commencing from existing ground level (size 2750mm x 2750mm width x 1.5m depth).	m <sup>3</sup>	145		
		Sump at Cut				
F	Q710.1	Bricks sumps; 1500mm x 1500mm; including galvanised mild steel grating cover as per Drawing.	nr	2		
		Sump at Fill				
G	Q710.2	Bricks sump; 1500mm x 1500mm; including galvanised mild steel grating cover as per Drawing.	nr	10		
		Total of Bill No. 4 carried to	Summary	of Tender		

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		FLEXIBLE PAVEMENT In accordance to latest Standard Specification for Road Works hereafter referred to as the Specification (rate to include all the tests required).  NEW PAVEMENT at CH0 to CH125				
		Subgrade Preparation				
А	R110	Earth material to receive road pavement to achieve design CBR as stated in the Drawing. Rate to include clearing, grubbing, stripping top soil, scarifying, levelling, and compaction of the top 300 mm of the subgrade including proof rolling test.		900		
		Carriageway and Unpaved Shoulder				
		<u>Sub-Base</u>				
В	R221	200mm thick granular material with a CBR value of not less than 30%, complying with grading limits of the Specification.	m <sup>2</sup>	1,250		
		<u>Roadbase</u>				
С	R320	200mm thick crushed aggregates with a CBR value of not less than 80%, complying with the Specification.	$m^2$	1,250		
		Bituminious Pavement Courses				
D	R520	Bituminous prime coat to be applied at a rate of 0.5 - 1.0 litre per square metre as per Specification.	m <sup>2</sup>	1,250		
E	R530	Bituminous tack coat to be applied at a rate of 0.25 - 0.55 litre per square metre as per Specification.	m <sup>2</sup>	1,250		
		Asphaltic Concrete				
F	R541	130mm thick Binder Course (AC28) as per Specification.	$m^2$	875		
G	R551	50mm thick Wearing Course (AC14) as per Specification.	$m^2$	1,847		
		Fill Material on Unpaved Shoulder				
		The following items for filling shall include compaction, and additional filling necessitated by settlement or penetration into underlying material as applicable.  Sub-Base				
Н	R410	200mm thick imported material from Contactor's own source as per Specification.	m <sup>2</sup>	1,080		
		Page Total carried to S	Summary o	f Bill No. 5	<u> </u>	

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
Α	R110	FLEXIBLE PAVEMENT (Cont'd)  NEW PAVEMENT at CH325 to CH800  Subgrade Preparation  Earth material to receive road pavement to achieve design CBR as stated in the Drawing. Rate to include clearing, grubbing, stripping top soil, scarifying, levelling, and compaction of the top 300 mm of the subgrade including proof rolling test.	m²	3,250		
		Carriageway				
		<u>Sub-Base</u>				
В	R221	150mm thick granular material with a CBR value of not less than 30%, complying with grading limits of the Specification.	m <sup>2</sup>	2,500		
		Roadbase				
С	R320	250mm thick crushed aggregates with a CBR value of not less than 80%, complying with the Specification.	$m^2$	2,500		
		Bituminious Pavement Courses				
D	R520	Bituminous prime coat to be applied at a rate of 0.5 - 1.0 litre per square metre as per Specification.	$m^2$	2,500		
E	R530	Bituminous tack coat to be applied at a rate of 0.25 - 0.55 litre per square metre as per Specification.	m²	2,500		
		Asphaltic Concrete				
F	R551	50mm thick Wearing Course (AC14) as per Specification.	$m^2$	2,500		
		Fill Material on Unpaved Shoulder				
		The following items for filling shall include compaction, and additional filling necessitated by settlement or penetration into underlying material as applicable.				
		<u>Sub-Base</u>				
G	R410	200mm thick imported material from Contactor's own source as per Specification.	m²	1,300		
		Page Total carried to S	Summary o	of Bill No. 5		

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		TREATMENT TO EXISTING PAVEMENT				
		<u>Overlay</u>				
А	R520	Bituminous prime coat to be applied at a rate of 0.5 - 1.0 litre per square metre as per Specification.	m²	1,000		
		Asphaltic Concrete				
В	R551	50mm thick Wearing Course (AC14), as per Specification.	$m^2$	1,000		
		Page Total carried to S	Summary o	f Bill No. 5		
	rago rotal carried to cultillary of bill No. 5					

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)			
		Summary of Bill No. 5 : Pavement Works							
		Page BQ5 - 1/4							
		Page BQ5 - 2/4							
		Page BQ5 - 3/4							
	<u> </u>	Total of Bill No. 5 carried to	o Summarv	of Tender					
		. 5.2 5. 2 15. 5 641164		Total of Bill No. 5 carried to Summary of Tender					

# **BILL NO. 6 - ROAD FURNITURE (PROVISIONAL QUANTITY)**

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
	R800	ROAD FURNITURE  Warning and Regulatory Traffic Signs  Traffic signs shall generally be in accordance with the latest version of Arahan Teknik (Jalan) 2A/87. Post mounted signages shall be deemed to include foundations, support posts, purlins frame and connections, excavation, preparation of surfaces, disposal of excavated material, upholding sides of excavation, backfilling, concrete, reinforcement, and ioints.				
А	R811	Non-illuminated high intensity prismatic retro-reflective sheeting mounted on aluminium composite sign plate for type WD 24 sign size 900mm x 300mm as per Drawing.		12		
		TRAFFIC BARRIER  (To be executed by G1 contractor)				
	1	Page Total carried to S	Summary o	f Bill No. 6		

# **BILL NO. 6 - ROAD FURNITURE (PROVISIONAL QUANTITY)**

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		PAVEMENT MARKINGS				
		Hot-applied reflectorised thermoplastic road markings.				
		Pavement markings shall generally be hot-applied reflectorised thermoplastic and in accordance with <u>the latest version of Standard Specification for Road Works:</u> Section 6: Road Furniture (Road Markings)				
		Intermittent line				
Α	R823.1	Type 1 Continuity line: 150mm wide intermittent line with 1000mm line and 1000mm gap.	m	10		
В	R823.2	Type 2 Give way line: 200mm wide intermittent line with 300mm line and 300mm gap.	m	20		
С	R823.3	Type 5 [centre/lane line (rural area)]: 100mm wide intermittent line with 2700mm line and 4500mm gap.	m	600		
		Continuous Line				
D	R822.1	Type 6 Edge line: 150mm wide continous line.	m	1,050		
E	R822.2	Type 10 Double line: 100mm wide continous double line.	m	205		
		DELINEATORS				
F	R833.1	Retroreflective roadstud as per Drawing.	nr	200		
G	R833.2	Reflective plate on parapet.	nr	100		
	1	Page Total carried to S	Summary o	of Bill No. 6	<u> </u>	

# **BILL NO. 6 - ROAD FURNITURE (PROVISIONAL QUANTITY)**

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		Summary of Bill No. 6 : Road Furniture				
		Page BQ6 - 1/3				
		Page BQ6 - 2/3				
				<u> </u>		
		Total of Bill No. 6 carried to	o Summary	of Tender		

# BILL NO. 7 - GEOTECHNICAL WORKS (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		The description stated in the Bill of Quantities (BQ) are not comprehensive and reference shall made to:				
		1) General Conditions and Drawings. 2) Specifications. 3) Malaysian Civil Engineering Standard Method of Measurement 2nd. Edition (MyCESSM 2).				
		4) A Guide to Malaysian Civil Engineering Standard Method of Measurement 2nd. Edition (MyCESSM 2).				
		<ul> <li>5) Preambles and Method of Measurement by JKR Malaysia.</li> <li>6) For embankment fill, please refer to BQ Bill No. 3 - Earthworks.</li> </ul>				
		These rates and prices inserted shall be deemed to have allowed for compliance with the above stipulations and other documents forming part of the Contract.				
		GROUND TREATMENT				
		UNSUITABLE MATERIAL / SOFT SOIL REPLACEMENT AND/OR STABILITY				
		The following items shall include of supply and lay geotextile and PVD, filling and compact suitable material/sand layer.  *** Embankment fill refer to BQ3 - Earthwork ***				
		Removal of Unsuitable Material and/or Soft Soil Layer				
		Item for removal of unsuitable material and/or soft soil shall be deemed to include cost of : carrying out Mackintosh Probe/JKR Probe to determine depth of soft soil; - carrying out trial pit to determine unsuitable material including appropriate tests as per Specification.				
А	F135.1	Remove unsuitable material and/or soft soil as shown on the Drawing or as directed by the S.O. to disposal site approved by the S.O., max. depth: 1.0 m.	$m^3$	392		
В	F135.2	Remove unsuitable material and/or soft soil as shown on the Drawing or as directed by the S.O. to disposal site approved by the S.O., max. depth: 3.0 m.	m <sup>3</sup>	6,235		
		Page Total carried to S	Summary o	f Bill No. 7		

# BILL NO. 7 - GEOTECHNICAL WORKS (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		GROUND TREATMENT (Contn'd)				
		UNSUITABLE MATERIAL / SOFT SOIL REPLACEMENT AND/OR STABILITY (Contn'd)				
		Geotextile.				
		Item for geotextile shall be deemed to include cost of storage at site with neccessary protection against exposure to direct sun.				
Α	G570.1	Non-woven geotextile, Type NW13 with minimum design strength of 13 kN/m as separator as per Specification.	$m^2$	2,470		
В	G570.2	Woven geotextile with minimum design strength of 100/50 kN/m as soil reinforcement as per Specification.	m²	2,470		
		Replacement of Unsuitable Material and/or Soft Soil				
		Items for filling shall include filling earth in layers, compaction, and additional filling necessitated by settlement or penetration into underlying material as applicable.				
С	F332.1	Imported suitable material from Contractor's own source with grading limits as per Specification to replace unsuitable material. (To max. depth 1m)	m <sup>3</sup>	392		
D	F332.2	Imported suitable material from Contractor's own source with grading limits as per Specification to replace unsuitable material. (To max. depth 3m)	m <sup>3</sup>	6,235		
		Page Total carried to S	Summary o	of Bill No. 7		

# BILL NO. 7 - GEOTECHNICAL WORKS (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		Summary of Bill No. 7 : Geotechnical Works				
		Page BQ7 - 1/3				
		Page BQ7 - 2/3				
				/ <b>-</b> ·		
		Total of Bill No. 7 carried to	o Summary	of Tender		

# BILL NO. 8 - STRUCTURES SUMMARY OF BIL NO. 8

No	Code No.	Description	From Page	Amount (RM)
		SUMMARY OF BILL NO. 8		
		BILL NO. 8: BRIDGE WORKS		
	8.1	Temporary Bridge Crossing.	BQ8.1 - 1/1	
	8.2	Piling Works.	BQ8.2 - 3/3	
	8.3	Substructure.	BQ8.3 - 8/8	
	8.4	Superstructure.	BQ8.4 - 5/5	
	8.5	Miscellaneous Works.	BQ8.5 - 3/3	
		Total of Bill No. 8 carried to	o Summary of Tender	

# BILL NO. 8 - STRUCTURES 8.1 - TEMPORARY BRIDGE CROSSING (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		TEMPORARY BRIDGE CROSSING (FOR CONTRACTOR'S USE)				
		Contractor shall propose the configuration, dimensions, material and method of construction of this temporary access and crossing and must seek approval from related agencies.				
		Design and shop drawing shall be endorsed by Professional Engineer with Practising Certificate (PEPC) to be submitted and approved by S.O for the purpose of payment.				
		Temporary Bridge Crossing				
Α	A560	Mobilisation and demobilisation; fixed charge to and from both river banks and to access site area.	sum			
В	A522.1	Design, supply, install and construct temporary bridge over Sg. Keratong; fixed charge.	sum			
С	A522.2	Remove upon completion temporary bridge over Sg. Keratong; fixed charge	sum			
D	A522.3	Maintain temporary bridge for duration of contract period; time related charge.	sum			
	<u> </u>	Total of Bill No. 8.1 carried to S	Summary o	f Bill No. 8	<u> </u>	

#### BILL NO. 8 - STRUCTURES 8.2 - PILING WORKS (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		Items for piling work shall be deemed to include piling records and disposal of excavated and surplus materials and sonic logging pipes (ø15-35mm) as shown in the Drawing.				
		350MM DIAMETER MICROPILE				
		Items for micro piles shall be deemed to include temporary casings, stabilising agent, and enlarged bases.				
Α	H110	Plant and Equipment Provision of all necessary piling plant and equipment, transportation to the site, handling, assembling, and removal of the site after completion of operation.	sum			
В	H120	Moving and handling of all piling plant and equipment within the site and from location to location as often as is, and whenever necessary for the execution of the whole piling operation.	sum			
С	H130	Provision of temporary staging for piling work at the banks / abutment and pier.	sum			
		Working Piles 350mm diameter micro pile as a working pile.				
D	H251	Boring in earth as per Drawing for 112 nos. of pile points.	m	2,396		
E	H252	Boring through rock as per Drawing for 48 nos. of pile points.	m	230		
F	H258	12mm thick mild steel permanent casings.	m	192		
		High tensile reinforcement straight bars.				
G	H254.1	Nominal diameter not exceeding 20mm.	t	22		
Н	H254.2	Nominal diameter exceeding 20mm.	t	79		
		High tensile reinforcement helical bars.				
1	H254.2	Nominal diameter not exceeding 20 mm.	t	13		
J	H216	Concreted length with grade C32/40 with minimum cement replacement of pulverized fly ash (PFA) up to 25% as per Drawing and Specification.	m	2,626		
K	H217	Cut-off piles.	nr	112		
L	H218	Preparing heads.	nr	112		
		Page Total Carried to Su	mmary of	Rill No. 9.2		

#### BILL NO. 8 - STRUCTURES 8.2 - PILING WORKS (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		350MM DIAMETER MICROPILE (Cont'd)				
		Pile Tests				
А	H510.1	Initial static load test (maintain load test) on working 350mm diameter micro pile; up to two times working load of 850kN.	nr	1		
В	H510.2	Subsequent static load test (maintain load test) on working 350mm diameter micro pile; up to two times working load of 850kN.	nr	3		
С	H510.3	Subsequent static load test (maintain load test) on working 350mm diameter micro pile; up to two times working load of 750kN.	nr	2		
D	H520	Pile Dynamic Analyzer (PDA) Test.	nr	5		
E	H530	Pile Integrity Test.	nr	5		
	I	Page Total Carried to Su	mmary of	Bill No. 8.2		

#### BILL NO. 8 - STRUCTURES 8.2 - PILING WORKS (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		Summary of Bill No. 8.2 - Piling Works				
		Page BQ8.2 - 1/3				
		Page BQ8.2 - 2/3				
		Total of Bill No. 8.2 carried to	Summary o	of Bill No. 8		

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		TEMPORARY WORKS.				
		Temporary Staging and Working Platform				
		Design and proposed shop drawing shall be endorsed by Professional Engineer with Practising Certificate (PEPC) to be submitted and approved by S.O.				
Α	A560	Mobilisation and demobilisation; to and from both river banks and to access site area fixed charge including all necessary works for the purpose of construction of the abutments and pier.	sum			
В	A527.1	Design, supply, install and construct temporary staging and working platform at abutment and pier; fixed charge including excavation, handling, disposal of excavated soils and debris, shoring, levelling, driving, allowing for access way platform with safety features, decking, platform accessories and all necessary works for the purpose of construction of the abutments and pier.	sum			
С	A527.2	Remove temporary staging and working platform upon completion; fixed charge includes removal and reinstatement of the site.	sum			
D	A527.3	Maintain temporary staging and working platform for duration of construction; time related charge.	sum			
		Cofferdams				
		Design and proposed shop drawing shall be endorsed by Professional Engineer with Practising Certificate (PEPC) to be submitted and approved by S.O.				
Е	A560	Mobilisation and demobilisation; to and from both river banks and to access site area; fixed charge including all neccesary works for the purpose of construction of the abutments and piers.	sum			
F	A523.1	Design, supply, install and construct cofferdams over Sg. Keratong; fixed charge including excavation, handling, disposal of excavated soil and debris, shoring, levelling, driving, interlocking sheet pile, allowing for access platform and all necessary works for the purpose of construction of the abutments and piers.	sum			
G	A523.2	Remove upon completion; cofferdams for the purpose of construction of abutments and piers over Sg. Keratong; fixed charge includes removal and reinstatement of the site.	sum			
Н	A523.3	Maintain cofferdam for duration of construction; time related charge.	sum			
		Page Total Carried to Su	mmary of	Bill No 82	I	

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		TEMPORARY WORKS (Contn'd)				
		Temporary Pumping and Dewatering				
А	A524.1	Install pumping and dewatering at Sg. Keratong; fixed charge including all neccesary works for the purpose of construction of the abutments and piers.	sum			
В	A524.2	Remove upon completion; pumping and dewatering at Sg. Keratong; fixed charge includes removal and reinstatement of the site.	sum			
С	A524.3	Operation and maintenance of pumping and dewatering for duration of construction; time related charge.	sum			
		Page Total Carried to Su	mmary of	Bill No. 8.3		

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		ABUTMENTS				
		Earthwork				
		Cut to Fill Excavation in cut shall be deemed to include trimming and preparation of excavated surface and transportation from source to place of fill.				
Α	F121	Excavate in earth material from original ground level.	$m^3$	220		
		Cut and Dispose Excavation in cut shall be deemed to include trimming and preparation of excavated surface and transportation from source to place of disposal.				
В	F131	Excavate in earth material to disposal site approved by the S.O. outside of boundary - contractor dump site.	m <sup>3</sup>	40		
		Filling The following items for filling shall include compaction, testing and confirmation material and additional filling necessitated by settlement or penetration into underlying material as applicable.				
С	F341	Using suitable excavated material as per Specification.	$m^3$	220		
D	F342.1	Imported earth material from Contactor's own source as per Specification	m <sup>3</sup>	40		
E	F342.2	Imported material well - graded granular backfill material (crushed aggregate) behind abutment from contractors own source as per Specification.	m <sup>3</sup>	182		
		Grouted Stone Pitching Steps				
		Hand rail Item for hand rail shall be deemed to include fixing to other work, supply of fixing components, and drilling or cutting of other work.				
F	L240.1	Galvanised mild steel handrail of 100mm x 50mm x 5mm thickness and 900mm high.	m	30		
G	L240.2	Galvanised mild steel handrail post of 50mm x 50mm x 5mm thickness and 900mm high.	m	30		
	1	Page Total Carried to Su	mmary of	Bill No. 8.3	ı	

Grade C16// Mass concre Stone Mass Natural stor pointed for s finish. Imported m Specification Gabion Rate shall I terrain 1000 211 2.0 m x 1.0 wire gauge shown in the	one Pitching Steps (Cont'd)  20 Concrete  ate 300mm thick footing for pitching steps.  Anny Step  are masonry jointed in (1:3) cement motar flush  aterial — mining / river sand material as per  after for sand bedding for masonry step.  be deemed to include geofabric filter material  for equivalent.  m x 1.0 m rock-filled gabion with PVC-coated  size of 2.7 mm as per Specification and as	r m³	2 30 5 100 495	
Grade C16// Mass concre  Stone Mass Natural stor pointed for s finish.  Imported m Specification  Gabion Rate shall t terrain 1000  211 2.0 m x 1.0 wire gauge shown in the	20 Concrete sete 300mm thick footing for pitching steps.  20 Property Step sete and the masonry jointed in (1:3) cement motar flush step. Rate shall be deemed to include fair facing sterial — mining / river sand material as pen for sand bedding for masonry step.  20 Property Step step and the shall be deemed to include fair facing sterial — mining / river sand material as pen for sand bedding for masonry step.  21 Property Step step and the shall be deemed to include geofabric filter material for equivalent.  22 Property Step and the shall be deemed to include geofabric filter material for equivalent.  23 Property Step and the shall be deemed to include geofabric filter material for equivalent.  24 Property Step and the shall be deemed to include fair facing attention and as a shall be deemed to include geofabric filter material as pen attention and as a shall be deemed to include geofabric filter material as pen attention and as a shall be deemed to include fair facing attention and as a shall be deemed to include fair facing attention and as a shall be deemed to include geofabric filter material as pen attention and as a shall be deemed to include geofabric filter material as pen attention and as a shall be deemed to include geofabric filter material as pen attention and as a shall be deemed to include geofabric filter material as pen attention attention and as a shall be deemed to include geofabric filter material as pen attention attentio	m <sup>2</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	30 5	
Stone Mass Natural stor pointed for s finish.  Imported m Specification  Gabion Rate shall t terrain 1000  2.11 2.0 m x 1.0 wire gauge shown in the	provided and thick footing for pitching steps.  The step of the masonry jointed in (1:3) cement motar flush step. Rate shall be deemed to include fair facing atterial — mining / river sand material as pen for sand bedding for masonry step.  The deemed to include geofabric filter material or equivalent.  The mining / river sand material as pen for sand bedding for masonry step.  The deemed to include geofabric filter material or equivalent.  The mining / river sand material as pen for sand bedding for masonry step.  The deemed to include geofabric filter material or equivalent.  The mining / river sand material as pen for sand bedding for masonry step.	m <sup>2</sup> m <sup>3</sup> m <sup>3</sup> m <sup>3</sup>	30 5	
Natural storpointed for sinish.  Imported m Specification  Gabion Rate shall terrain 1000  2.11 2.0 m x 1.0 wire gauge shown in the wire gauge a wire gauge a	the masonry jointed in (1:3) cement motar flush step. Rate shall be deemed to include fair facing aterial — mining / river sand material as pen for sand bedding for masonry step.  The deemed to include geofabric filter material or equivalent.  The mining / river sand material as pen for sand bedding for masonry step.  The deemed to include geofabric filter material or equivalent.  The mining / river sand material as pen sand bedding for masonry step.	r m³	5	
Specification  Gabion Rate shall I terrain 1000  2.0 m x 1.0 wire gauge shown in the  Rock-filled g wire gauge a	n for sand bedding for masonry step.  De deemed to include geofabric filter material or equivalent.  m x 1.0 m rock-filled gabion with PVC-coated size of 2.7 mm as per Specification and as drawing.  gabion mattress, 300mm thick with PVC-coated gabion mattress, 300mm thick with PVC-coated	l d m³	100	
Rate shall I terrain 1000 2.11 2.0 m x 1.0 wire gauge shown in the Rock-filled wire gauge a	or equivalent.  m x 1.0 m rock-filled gabion with PVC-coated size of 2.7 mm as per Specification and as drawing.  gabion mattress, 300mm thick with PVC-coated	d m³		
wire gauge shown in the 212 Rock-filled of wire gauge a	size of 2.7 mm as per Specification and as drawing.  gabion mattress, 300mm thick with PVC-coated	5		
wire gauge a		m <sup>2</sup>	495	
Subsurface		1		
Item for su	Drains bsurface drains shall be deemed to include fabric, lining, and filter material.	)		
	ins; 150mm diameter HDPE perforated pipe ggregate (20mm – 40mm) wrapped with lter.		30	
	s; 150mm diameter UPVC pipe including fittings de bends, filter fabric and concrete surround.	. m	20	
Permeable	Layer			
	k permeable layer comprising of 20mm - 40mm % river sand and 50% of crushed aggregate as ation.		85	
	15 Concrete Lean concrete blinding.	m²	15	
		ummanyat	Dill No. 9.2	
11		150mm thick Lean concrete blinding.	150mm thick Lean concrete blinding.  m <sup>2</sup>	150mm thick Lean concrete blinding.  m <sup>2</sup> 15

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		ABUTMENTS (Cont'd)				
		Bituminous / Coal Tar Paint Coating Prepare and apply two (2) coats of bituminous / coal tar paint to:				
А	N631	Exposed surfaces: Smooth concrete surfaces of class F2 of abutment and wingwalls.	$m^2$	55		
В	N641	Buried surfaces: Rough concrete surfaces of class F1 of abutment, wingwalls and approach slab.	$m^2$	180		
С	G580	Supply and lay geofabric/geogrid or equivalent in according to Drawing.	m²	165		
		In Situ Concrete Design Mix For Abutment, Wing walls, Parapet Wall and Approach Slab				
D	l111.1	Grade C12/15 Concrete Lean concrete blinding, 50mm thick to approach slab.	$m^2$	90		
Е	l111.2	Lean concrete blinding, 50mm thick to abutment and wing walls.	m²	67		
F	l172	Grade C32/40 Concrete Reinforced concrete with minimum cement replacement of pulverized fly ash (PFA) up to 25% at bridge abutment, wing walls, parapet/kerb wall, and approach slab as per Drawing and Specification.	m <sup>3</sup>	215		
		Formwork For Abutment, Wing walls, Parapet Wall and Approach Slab.				
		Rate for formwork shall be deemed to include the projections and intrusions and any temporary staging required.				
G	l511.1	Sides F1: Rough finish for buried surfaces of abutment, wingwalls and approach slab.	m²	138		
Н	I511.2	F2: Fair finish for exposed surfaces of abutment, wingwalls and approach slab.	m²	266		
I	I511.3	F3: Smooth finish for exposed surfaces for parapet wall.	$m^2$	24		
		Page Total Carried to Su	mmary of	Bill No. 8.3		

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		ABUTMENTS (Cont'd)				
		Reinforcement For Abutment, Wing walls, Parapet Wall and Approach Slab.				
		High Tensile Bars				
Α	1624	Nominal diameter: 12mm.	t	1		
В	1625	Nominal diameter: 16mm.	t	14		
С	1626	Nominal diameter: 20mm.	t	3		
D	1627	Nominal diameter: 25mm.	t	8		
E	1628	Nominal diameter: 32mm.	t	15		
F	1716	Galvanised dowels bar – plain, 16mm diameter x 1200mm long high tensile bars at 200mm centre to centre at approach slab.	nr	63		
G	1717	Galvanised dowels bar – sleeved and capped, 32mm diameter x 1500mm long high tensile bars at diaphragm/shear key.	nr	12		
		PIERS				
		Earthwork				
		Cut to Fill Excavation in cut shall be deemed to include trimming and preparation of excavated surface and transportation from source to place of fill.				
Н	F121	Excavate in earth material from original ground level.	$m^3$	400		
		Cut and Dispose Excavation in cut shall be deemed to include trimming and preparation of excavated surface and transportation from source to place of disposal.				
I	F131	Excavate in earth material to disposal site approved by the S.O. outside of boundary - contractor dump site.	$m^3$	50		
		Filling The following items for filling shall include compaction, testing and confirmation material and additional filling necessitated by settlement or penetration into underlying material as applicable.				
J	F341	Using suitable excavated material as per Specification.	m <sup>3</sup>	400		
		Page Total Carried to Su	mmary of	Bill No. 83		

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		PIERS (Contn'd)				
		In Situ Concrete Design Mix For Pilecap, Pier Column and Pier Head.				
Α	l1111	Grade C12/15 Concrete Lean concrete blinding, 50mm thick to pilecap.	$m^2$	135		
В	l174	Grade C32/40 Concrete Reinforced concrete with minimum cement replacement of pulverized fly ash (PFA) up to 25% to pilecap, piers column and piers crosshead as per Drawing and Specification.	m <sup>3</sup>	620		
		Formwork For Pilecap, Pier Column and Pier Head. Rate for formwork shall be deemed to include the projections and intrusions and any temporary staging required.				
С	I511	Sides F1: Rough finish for buried surfaces of pilecaps.	$m^2$	190		
D	I531	Sides and Soffit F3: smooth finish to piers column and pier head.	$m^2$	1,057		
		Reinforcement For Pilecap, Pier Column and Pier Head.				
		High Tensile Bars.				
E	1625	Nominal diameter: 16mm.	t	22		
F	1626	Nominal diameter: 20mm.	t	36		
G	1627	Nominal diameter: 25mm.	t	20		
Н	1628	Nominal diameter: 32mm.	t	82		
1	1717	Galvanised dowels bar – sleeved and capped, 32mm diameter x 1500mm long high tensile bars at diaphragm/shear key.	nr	9		
		Page Total Carried to Su	mmary of	Bill No. 8.3		

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)	
		Summary of Bill No. 8.3 - Substructure					
		Page BQ8.3 - 1/8					
		Page BQ8.3 - 2/8					
		Page BQ8.3 - 3/8					
		Page BQ8.3 - 4/8					
		Page BQ8.3 - 5/8					
		Page BQ8.3 - 6/8					
		Page BQ8.3 - 7/8					
	Total of Bill No. 8.3 carried to Summary of Bill No. 8						

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		POST-TENSIONED PRESTRESSED BEAMS AND RC BEAM.				
		TEMPORARY STAGING AND WORKING PLATFORM FOR BEAM LAUNCHING.				
		Design and proposed shop drawing shall be submitted and approved by S.O.				
A	A560	Mobilisation and demobilisation; to and from both river banks and to access site area fixed charge including all plant, equipment, crane and all necessary works for operation of beam launching to its final position.	sum			
В	A527.1	Design, supply, install and construct temporary staging and working platform over Sg. Keratong; fixed charge including installation, handling, assembling and other related works for the purpose of beam launching operation to its final position.	sum			
С	A527.2	Remove temporary staging and working platform upon completion over Sg. Keratong; fixed charge includes removal and reinstatement of the site.	sum			
D	A527.3	Maintain temporary staging and working platform for duration of construction; time related charge.	sum			
		Post-Tension Prestressed Beams				
		Item for prestressed beam shall be deemed to include supply, erection, launching to its final position, machineries and all temporary works required as shown in the drawings.				
		Rate for prestressed shall be deemed to include tendon, ducts, jacking, grouting, anchorage and other components and tasks ancillary to prestressing.				
E	1430	Grade C40/50 precast prestressed post-tensioned beam, T-Section 42m long as per Drawing and Specification.	nr	4		
		Precast Reinforced Concrete Beams				
		Item for Precast Reinforced Concrete Beam shall be deemed to include supply, casting, erection, reinforcement, formwork, joints, finishes, placing, compaction and launching to its final position.				
F	1420	Grade C32/40 Reinforced Concrete Beam, T-Section 15m long as per Drawing and Specification.	nr	50		
		Page Total Carried to Su	mmary of	Bill No. 9.4		

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		DECK SLAB AND DIAPHRAGM				
		Cast in-situ Concrete For Deck Slab and Diaphragm				
		In Situ Concrete Design Mix				
А	l178	Grade C32/40 Concrete Reinforced concrete with minumum cement replacement of pulverized fly ash (PFA) up to 25% to bridge deck and diaphragm as per Drawing and Specification.	m <sup>3</sup>	415		
		Formwork For Deck Slab And Diaphragm				
		Rate for formwork shall be deemed to include the projections and intrusions and any temporary staging required.				
В	l515	Side F2: Fair finish to deck slabs and diaphragm.	$m^2$	220		
С	l525	Soffit F3: Smooth finish to cement board as permanent formwork as shown in Drawing including all temporary struts or barcings.	m <sup>2</sup>	515		
		Reinforcement For Deck Slab And Diaphragm				
		High Tensile Bars				
D	1624	Nominal diameter: 12 mm.	t	5		
E	1625	Nominal diameter: 16 mm.	t	104		
F	1626	Nominal diameter: 20 mm.	t	20		
G	1627	Nominal diameter: 25 mm.	t	5		
	ı	Page Total Carried to Su	mmary of	Bill No. 8.4	1	

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		METAL PARAPET				
		Metal Parapet Connection and Joints.				
		Item for handrail and post shall be deemed to include fixing to other work, supply of fixing components and drilling or cutting of other work.				
		Item for metal parapet wall shall be deemed to include supply, erect, connections, joints and accessories for wall joints.				
		Metal parapets wall including anchorage, hooks etc. with ribbed finish as per Drawing.				
Α	L250.1	Type (A - Material) as shown in Dawing.	m	372		
В	L250.2	Type (B - Material) as shown in Drawing (Lighting Post Support).	m	12		
		In Situ Concrete Parapet Wall / Kerb.				
С	l178	Grade C32/40 Concrete Reinforced concrete with minimum cement replacement of pulverized fly ash (PFA) up to 25% to parapet wall/kerb as per Drawing and Specification.	m <sup>3</sup>	96		
		Formwork.				
		Rate for formwork shall be deemed to include the projections and intrusions and any temporary staging required.				
D	I514	Sides F3: smooth finish to walls.	$m^2$	565		
		Reinforcement.				
E	1623	High Tensile Bars. Nominal diameter: 10mm.	t	1		
F	1624	Nominal diameter: 12mm.	t	6		
G	1625	Nominal diameter: 16mm.	t	4		
	1	Page Total Carried to Su	mmarv of	Bill No. 8.4	•	
		. ago rotal carried to ou		110. 0.4		

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		BRIDGE BEARING				
		ELASTOMER LAMINATED RUBBER BEARING				
		Item for bearing shall be deemed to include supply, install, mortar grout, epoxy mortar and all temporary work.				
Α	V415.1	400mm x 510mm x 66mm thick elastomer laminated rubber bearing as shown in Drawing.	nr	8		
В	A322.1	Testing of materials; 400mm x 510mm x 66mm thick Laminated Elastomeric bearings at Rubber Research Institute of Malaysia all in accordance with BS5400 part 9: 1983.	nr	1		
С	V415.2	200mm x 350mm x 39mm thick elastomer laminated rubber bearing as shown in Drawing.	nr	20		
D	A322.2	Testing of materials; 200mm x 350mm x 39mm thick Laminated Elastomeric bearings at Rubber Research Institute of Malaysia all in accordance with BS5400 part 9: 1983.	nr	1		
		PLAIN RUBBER STRIP Supply and install the following bearings inclusive of mortar grout, epoxy mortar and all temporary work.				
Е	V414	400mm wide x 25mm thick x 13,000mm length plain rubber strip bearing as shown in Drawing.	nr	2		
	•	Page Total Carried to Su	mmary of	Bill No. 8.4		

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)	
		Summary of Bill No. 8.4 - Superstructure					
		Page BQ8.4 - 1/5					
		Page BQ8.4 - 2/5					
		Page BQ8.4 - 3/5					
		Page BQ8.4 - 4/5					
	Total of Bill No. 8.4 carried to Summary of Bill No. 8						
			-				

#### BILL NO. 8 - STRUCTURES 8.5 - MISCELLANEOUS WORKS (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		EXPANSION JOINTS				
		Rate for joints shall be deemed to include formwork.				
		Rate for link slab shall be deemed to include plant and equipment, preparation of surface, blinding, aggregate, reinforcement, lapping reinforcement, polyethylene sheet, grouting, concrete and other related works.				
A	1713	Cast in-situ thin link slab connection (800mm x 11,500mm x 100mm thick) on bridge made from ultra high performance fiber reinforced concrete (UHPFRC) in accordance with the Drawing.	m	30		
В	1715.1	Joint filler or joint sealant, 50mm wide to parapets.	m	10		
С	I715.2	Joint filler or joint sealant, 25mm wide to approach slabs with joint filler or joint sealant.	m	30		
		BRASS PLAQUE Rate shall be deemed to include fixing cost.				
D	V320	Brass plaque 420mm x 297mm x 3.2mm thick as shown on the drawing.	nr	1		
		DRAINAGE TO STRUCTURES ABOVE GROUND				
		Water Down Pipe Rate for downpipes shall be deemed to include fixing and supply of fixing components.				
E	Q410	150mm diameter UPVC Class D rain water down pipes including G.I pipe hanger, metal strip, 'T' joint, bends, elbow, equal tee, end cap, etc. at 3000mm centres at deck slab with grating fitting.	m	75		
F	Q410.2	200mm diameter UPVC Class D for water collector pipes including G.I pipe bracket, 'T' joint, bends, elbow, equal tee, end cap, etc. at 1500mm centres at deck slab.	m	384		
		Scupper Drain				
G	Q340	150mm diameter scupper drains with grating on bridge.	m	385		
		Page Total Carried to Su		D::::N 0.7		

#### BILL NO. 8 - STRUCTURES 8.5 - MISCELLANEOUS WORKS (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		CONNECTION BETWEEN PARAPET AND CABLE PIT FOR STREET LIGHTING				
		Unplasticised Polyvinyl Chloride (uPVC) Pipes for Cabel at Parapet.				
Α	O434.1	2 nos 100 mm Unplasticised polyvinyl chloride (uPVC) pipes to MS 628, with bell mouth joints encase in concrete in between bridge parapet and cable pit in accordance with the Drawing.	m	385		
В	O438.1	GI Pipe 2 nos of 100mm GI pipe complete with duct seal, encase in concrete in between bridge parapet and cable pit in accordance with the Drawing.	m	25		
С	O438.2	150mm GI pipe with duct seal.	m	15		
D	U635	Cable Pit 400mm x 400mm x 500mm concrete cable pit to be fill with sand in accordance with the Drawing.	nr	4		
		Unplasticised Polyvinyl Chloride (uPVC) Pipes for Cabel at Parapet (Type 2)				
E	O434.2	1 nos 100 mm Unplasticised polyvinyl chloride (UPVC) pipes to MS 628, with bell mouth joints as per Drawing and Specification.	m	15		
		Opening Cable Access At Parapet Type 2				
F	O690	Provide 250mm x 250mm opening for cable access in accordance with the Drawing.	nr	8		
		Down Total Coming to St	mmen: -f	Dill No. 0.5		
		Page Total Carried to Su	mmary of	Bill No. 8.5		

#### BILL NO. 8 - STRUCTURES 8.5 - MISCELLANEOUS WORKS (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)		
		Summary of Bill No. 8.5 - Miscellaneous Works						
		Page BQ8.5 - 1/3						
		Page BQ8.5 - 2/3						
		Total of Bill No. 8.5 carried to	Summary o	T BIII NO. 8				

### BILL NO. 9 - TRAFFIC MANAGEMENT AND CONTROL (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
	C130	TRAFFIC MANAGEMENT PLAN Traffic Management Plan and the associated work shall be in accordance with the latest version of Specification for Road Works: Section 19.  TRAFFIC MANAGEMENT TEAM (TMT) / EMERGENCY RESPONSE TEAM (ERT) Traffic Management Team (TMT) / Emergency Response Team (ERT) shall be in accordance with the latest version Specification for Road Works: Section 19.  Appoinment of Qualified and Trained TMT				
А	C139	Flagman [1 person].	man-mth	24		
,,	C200	TEMPORARY ROAD FURNITURE	man man	2.		
	0200	Items for temporary road furniture shall be deemed to include the supply, installation, maintenance, and removal upon completion.				
		The supply of temporary road furniture shall be deemed to include base preparation, cost of materials, fabrication, and fixing including posts, struts, bolts and nuts, base, storage, and transportation. Installation of temporary road furniture shall be deemed to include cost for multiple shifting within the contractual boundaries and its vicinities that is affected by the traffic management plan.				
		Temporary road furniture shall be deemed to include cost for the inspection, immediate repair and replacement of any damaged, missing or stolen items throughout the duration of the construction, and removal upon completion.				
	C210	Temporary Traffic Signs				
		Temporary traffic signs shall be in accordance with Specification for Road Works : Section 19.				
		Non-illuminated retro-reflective sheeting.				
В	C211.1	Portable fluorescent orange prismatic not exceeding 1.0m <sup>2</sup>	nr	2		
С	C211.2	Portable fluoroscent orange prismatic exceeding 1.0m² but not exceeding 2.0m².	nr	2		
D	C212	Portable Changeable Message Signs (PCMS) of 1.8m x 1.2m.	nr	1		
		Page Total Carried to S	Summary o	f Bill No. 9		

### BILL NO. 9 - TRAFFIC MANAGEMENT AND CONTROL (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		TEMPORARY ROAD FURNITURE (CONT'D)				
	C220	Barriers and Barricades				
Α	C222	Portable Concrete Barrier 1000mm (L) x 800mm (H) x 500mm (W).	nr	50		
В	C229	Light Weight Movable Plastic Hoarding 1200mm (L) x 800mm(H) x 60mm (W).	nr	50		
	C230	<u>Delineators</u>				
С	C233	Battery operated flashing arrows on powder coated mild steel plate.	nr	2		
D	C234	Battery operated beacon lights.	nr	2		
E	C235	Polycarbonate lens battery operated blinkers.	nr	4		
F	C236	Delineator strip on barrier.	nr	2		
G	C239	Chevron Light.	nr	4		
	C240	Temporary Road Marking				
		All temporary road marking that more than one (1) month shall be of thermoplastic type.				
Н	C242.1	Continuous Line Type 1.	m	50		
1	C242.2	Edge Line Type 6.	m	50		
J	C290	Flood Lightings deem to include with electrical power supply.	nr	2		
	L	Page Total Carried to S	Summary o	of Bill No. 9		
			, -			

### BILL NO. 9 - TRAFFIC MANAGEMENT AND CONTROL (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)	
		Summary of Bill No. 9 : Traffic Management and Control					
		Page BQ9 - 1/3					
		Page BQ9 - 2/3					
	Total of Bill No. 9 carried to Summary of Tender						

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		PHYSICAL WORKS				
		DUST AND MUD CONTROL				
		Tyre Washing Facilities				
		Item for tyre washing facilities shall be deemed to include construction of tyre washing concrete platform, and provision and maintenance of water supply and portable water jets:				
А	B410	Provision, operation, maintenance and removal upon project completion of Tyre Washing Facilities including operators, water tank, water supply and other necessary equipments as specified and as per drawing to clean vehicle tyres at various exits of the worksites or as directed by the S.O.	set	1		
		Wash Trough				
В	B420	Provision, operation, maintenance and removal upon project completion of wash trough including operators, water tank, water supply and other necessary equipments as specified and as per drawing to clean vehicle tyres at various exits of the worksites or as directed by the S.O	nr	1		
		Water Bowser Truck				
		Item for water bowser truck shall be deemed to include provision and maintenance of vehicle, water supply and driver:				
С	B430	Water bowser truck for carrying out water spraying along haul/access roads, existing roads, near settlements and other required area, for a minimum of three times per day.	nr	1		
		SURFACE RUN-ON OR RUN-OFF CONTROL				
		Silt Fence				
D	B210	Construction of 1.0 m high silt fence including non-woven geotextile and wooden post with dimension as specified and as per drawing or as directed by the S.O	m	185		
		Turbidity Curtain/Silt Curtain				
E	B220	Installation of Turbidity curtain/Silt curtain including silt curtain screen made from high strength woven polyester geotextile, bottom weigth, achoring and and floatation system as specified and as per drawing or as directed by the S.O	m <sup>2</sup>	200		
	1	Page Total Carried to Su	ımmarv of	Bill No. 10		
		i ago rotai Garrieu to St	ui y 01	J 140. 10		

excavation, levelling, tr surface of excavation to dimensions and dispos reinstatement of site on or regular interval and after sediment laden and rer disposal site and reshapi  A B291 In earth, depth not excee  EROSION CONTROL  Proprietary Products  Supply, install and mair products available in the subjected to JKR's appround to JKR	Description	Unit	Qty.	Rate (RM)	Amount (RM)
Drain excavation shall be excavation, levelling, tr surface of excavation to dimensions and dispose reinstatement of site on cregular interval and after sediment laden and rer disposal site and reshapi  A B291 In earth, depth not excee EROSION CONTROL  Proprietary Products  Supply, install and main products available in the subjected to JKR's appround	IAGE WORKS				
excavation, levelling, tr surface of excavation to dimensions and dispos reinstatement of site on or regular interval and after sediment laden and rer disposal site and reshapi  A B291 In earth, depth not excee EROSION CONTROL  Proprietary Products  Supply, install and main products available in the subjected to JKR's approached by the subjec					
EROSION CONTROL  Proprietary Products  Supply, install and main products available in the subjected to JKR's approducts	I be deemed to include preparation site, trimming, shaping and compacting to the required lines, levels, grade and posal of surplus excavated material, on completion of the work, Inspection at after heavy rain to check for clogs and removal of accumulated sediment to laping of temporary drainage.				
B B292 Erosion control blanket (F  SEDIMENT CONTROL  Silt Trap  C B271 Excavation to form sil backfilling and disposal of backfilling and disposal of backfilling at inlet and of B272.1 Sand bedding for silt trap  E B272.2 Stone filling at inlet and of B272.3 25mm size aggregate filling Gabion cage with roexcavation, jointing, backfilling as specified and S.O.  G B275 1.0m x 1.0m x 1.0m gabion	ceeding 1.5 m.	m <sup>3</sup>	370		
Supply, install and mair products available in the subjected to JKR's appround to September 1. September 1. September 2. September 2. September 2. Sand bedding for silt trape 2. Stone filling at inlet and compared to JKR's appround to JKR's appro	<u>-</u>				
B B292 Erosion control blanket (F  SEDIMENT CONTROL  Silt Trap  C B271 Excavation to form sil backfilling and disposal of backfilling and disposal of backfilling at inlet and of the backfilling and bedding for silt trap  E B272.2 Stone filling at inlet and of the backfilling and bedding for silt trap  E B272.3 25mm size aggregate filling Gabion cage with rovexcavation, jointing, backfilling as specified and S.O.  G B275 1.0m x 1.0m x 1.0m gabion	<u> </u>				
SEDIMENT CONTROL  Silt Trap  C B271 Excavation to form sil backfilling and disposal of backfilling and backfilling at inlet and of backfilling and disposal of backfilling	naintain proprietary or any man-made the market to control erosion on slopes oproval.				
Silt Trap  C B271 Excavation to form sil backfilling and disposal of D B272.1 Sand bedding for silt trap  E B272.2 Stone filling at inlet and of D B272.3 Excavation to form silt backfilling and disposal of D B272.1 Sand bedding for silt trap  E B272.2 Stone filling at inlet and of D B272.3 Excavation at inlet and of D B272.3 Excavation, jointing, backgraying the properties of D B275 Excavation and D B275 Excavation to form silt backfilling and disposal of D B272.1 Excavation to form silt backfilling and disposal of D B272.1 Excavation to form silt backfilling and disposal of D B272.1 Excavation to form silt backfilling and disposal of D B272.1 Excavation to form silt backfilling and disposal of D B272.1 Excavation to form silt backfilling and disposal of D B272.1 Excavation to form silt trap  E B272.2 Excavation to form silt trap  Gabino cage with row excavation, jointing, backfilling at inlet and D B272.1 Excavation at a second silt of D B272.	et (Fibromat or equivalent).	m <sup>2</sup>	30		
C B271 Excavation to form sil backfilling and disposal of D B272.1 Sand bedding for silt trap E B272.2 Stone filling at inlet and of E B272.3 25mm size aggregate filling Gabion cage with roexcavation, jointing, bat material as specified and S.O.  G B275 1.0m x 1.0m x 1.0m gabion	<u>)L</u>				
backfilling and disposal of D B272.1 Sand bedding for silt trap  E B272.2 Stone filling at inlet and of D25					
E B272.2 Stone filling at inlet and compared to the B272.3 Stone filling at inlet and compared t	silt trap as per drawing including al of surplus material.	m <sup>3</sup>	50		
F B272.3 25mm size aggregate filli Gabion cage with ro excavation, jointing, ba material as specified and S.O.  G B275 1.0m x 1.0m x 1.0m gabin	raps.	m <sup>3</sup>	30		
Gabion cage with ro excavation, jointing, ba material as specified and S.O.  G B275 1.0m x 1.0m x 1.0m gabions	nd outlet.	m <sup>3</sup>	10		
excavation, jointing, ba material as specified and S.O.  G B275 1.0m x 1.0m x 1.0m gabin	filling including geotextile.	m <sup>3</sup>	10		
	rock fill and Geotextile including backfilling and disposal of surplus and shown in the drawing or directed by				
H B276 1.0m x 1.0m x 0.3m gabi	abion.	m <sup>3</sup>	30		
	abion mattress.	m <sup>3</sup>	30		
	Page Total Carried to S	ummary of	Bill No. 10		

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)	
		MAINTENANCE  Items for maintenance shall be deemed to include					
		disposal of accumulated debris, sediment and silt to an approved site, unless otherwise stated:					
Α	B281	Silt fence.	sum				
В	B282	Silt curtain.	sum				
С	B287	Silt trap.	sum				
		STOCKPILE PROTECTION					
D	B293	Provision and maintenance of canvas/tarpaulin sheeting to immediately cover topsoil stockpile for turfing and landscaping.	m <sup>2</sup>	30			
		FUEL SPILLAGE MANAGEMENT					
		Containment Bund for Bulk Fuel Tank Item for skid tank bund shall be deemed to include traps, oil and grease separators, and its maintenance and removal upon completion:					
E	B310	Construct impervious concrete base as per drawing to contain 110% volume of stored fuel including grease trap.	sum				
		WASTE MANAGEMENT					
		Item for scheduled waste shall be deemed to include storage, labelling and transportation from site by a licensed contractor for disposal as per Department of Environment (DOE) Regulation:					
F	B610	Scheduled wastes storage and disposal.	sum				
G	B630	Construction solid waste storage and disposal.	sum				
		Grease Trap					
Н	B690	Provision and maintenance of grease traps at kitchen and accommodation areas, site office, workshop and scheduled waste storage.	nr	1			
		MANAGEMENT OF DISPOSAL SITE FOR SURPLUS					
I	B930	Item coverage shall be deemed to include all necessary works as mentioned in the 'Instruction to contractors on disposal of surplus cut material' drawing and 'Surplus material disposal embankment' drawing.	sum				
Page Total Carried to Summary of Bill No. 10							

	Description		Qty.	Rate (RM)	Amount (RM)	
	Summary of Bill No. 10 : Environmental Protection And Enhancement Works					
	Page BQ10 - 1/4					
	Page BQ10 - 2/4					
	Page BQ10 - 3/4					
Page Total Carried to Summary of Bill No. 10						

ROUTINE MAINTENANCE WORKS DURING CONSTRUCTION PERIOD  A3511  MAINTAIN THE EXISTING ROAD  Provision of all labour, equipments, tools material, transport and whatever necessary to all the works stated below as per standard JNR road specification:  Maintenance of Favement Surface The works shall comprise of i a) Patching of potholes to be commenced immediately, b) Treatment/sealing of public of beack filled trenches. (d) Treatment to stripping of aggregapte. (e) Treatment for rutting. (f) Treatment to deterioration of concrete pavement surface. (g) Repair to concrete pavement plorits. (h) Repair to paving blocks and slabs. (h) Repair to paving blocks and slabs. (h) Repair to maintenance of grass cutting, disposal of cut grass and delvis. The trequency of grass cutting shall be carried out once a month. The limit and extent as described below: (a) Road shoulder. (b) Sispe area (c) Berm drain, interceptor drain and all other types of drain on slopes. (d) Median. (e) Clear vegetation on paved surface.  Drainage The works shall comprise of cleaning debris, dealting and repair works and shall be carried out 4 cycles/year: (a) Bodos in fined drains. (b) Debris in sump. (c) Debris in sump. (d) Debris in sump. (e) Debris in sump. (f) Debris in sump. (g) Debris in sump.	No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)	
Provision of all labour, equipments, tools material, transport and whatever necessary to all the works stated below as per standard JKR road specification:  A A351.1 Maintenance of Pavement Surface The works shall comprise of: a) Patching of potholes to be commenced immediately, b) Treatment for surfing, c) Rejarist concrete pavement of the stripping of aggresagate, e) Treatment for urting, f) Treatment to deterioration of back filled trenches, d) Repair to concrete pavement ploints, h) Repair to paving blocks and slabs.  B A351.2 Grass Cutting The works shall comprise grass cutting, disposal of cut grass and debris. The frequency of grass cutting shall be carried out once a month. The limit and extent as described below: a) Road shoulder, b) Slope area c) Berm drain, interceptor drain and all other types of drain on slopes, d) Median, c) Clear vegetation on paved surface.  Drainage  C A351.3 The works shall comprise of cleaning debris, desilting and repair works and shall be carried out 4 cycles/year: a) Debris in lumined drains. b) Debris in lumined drains. c) Debris in sump, d) Debris in culverts. e) Repair to diamaged drains and sumps. f) Repair to misaligned unlined drains.								
transport and whatever necessary to all the works stated below as per standard JKR road specification:  A A35.1.1 Maintenance of Pavement Surface The works shall comprise of: a) Patching of potrolies to be commenced immediately, b) Treatment/sealing of surface cracks, c) Reinstate adeg deterioration of back filled trenches, d) Treatment for ruting, f) Treatment for ruting, f) Treatment to deterioration of concrete pavement surface, g) Repair to concrete pavement joints, h) Repair to paving blocks and slabs,  B A351.2 Grass Cutting The works shall comprise grass cutting, disposal of cut grass and debris. The frequency of grass cutting shall be carried out once a month. The limit and extent as described below: a) Road shoulder, b) Slope area c) Berm drain, interceptor drain and all other types of drain on slopes, d) Median. c) Clear vegetation on paved surface.  Drainage  C A351.3 The works shall comprise of cleaning debris, desiliting and repair works and shall be carried out 4 cycles/year: a) Debris in lunified drains. b) Debris in lunified drains. c) Debris in culveffs. e) Repair to damaged drains and sumps. f) Repair to misaligned unlined drains.		A351	MAINTAIN THE EXISTING ROAD					
The works shall comprise of: a) Patching of potholes to be commenced immediately, b) Treatment/sealing of surface cracks. c) Reinstate edge deterioration of back filled trenches. d) Treatment to stripping of aggreagate. g) Treatment to deterioration of concrete pavement surface. g) Repair to concrete pavement joints. h) Repair to paving blocks and slabs.  B A351.2  Grass Cutting The works shall comprise grass cutting, disposal of cut grass and debhs. The frequency of grass cutting shall be carried out once a month. The limit and extent as described below: a) Road shoulder. b) Slope area c) Berm drain, interceptor drain and all other types of drain on slopes. d) Median. e) Clear vegetation on paved surface.  Drainage  C A351.3  The works shall comprise of cleaning debris, desilting and repair works and shall be carried out 4 cycles/year: a) Debris in lined drains. b) Debris in unlined drains. c) Debris in sump. d) Debris in sump. d) Debris in sump. d) Debris in culverts. e) Repair to damaged drains and sumps. f) Repair to misaligned unlined drains.			transport and whatever necessary to all the works stated					
The works shall comprise grass cutting, disposal of cut grass and debris. The frequency of grass cutting shall be carried out once a month. The limit and extent as described below:  a) Road shoulder. b) Slope area c) Berm drain, interceptor drain and all other types of drain on slopes. d) Median. e) Clear vegetation on paved surface.  Drainage  C A351.3 The works shall comprise of cleaning debris, desilting and repair works and shall be carried out 4 cycles/year: a) Debris in lined drains. b) Debris in unlined drains. c) Debris in sump. d) Debris in outliverts. e) Repair to damaged drains and sumps. f) Repair to misaligned unlined drains.	A	A351.1	The works shall comprise of : a) Patching of potholes to be commenced immediately. b) Treatment/sealing of surface cracks. c) Reinstate edge deterioration of back filled trenches. d) Treatment to stripping of aggreagate. e) Treatment for rutting. f) Treatment to deterioration of concrete pavement surface. g) Repair to concrete pavement joints.	km-mth	1.8			
C A351.3 The works shall comprise of cleaning debris, desilting and repair works and shall be carried out 4 cycles/year: a) Debris in lined drains. b) Debris in sump. d) Debris in culverts. e) Repair to damaged drains and sumps. f) Repair to misaligned unlined drains.	В	A351.2	The works shall comprise grass cutting, disposal of cut grass and debris. The frequency of grass cutting shall be carried out once a month. The limit and extent as described below:  a) Road shoulder. b) Slope area c) Berm drain, interceptor drain and all other types of drain on slopes. d) Median.	km-mth	1.8			
Page Total Carried to Summary of Bill No. 11	С	A351.3	The works shall comprise of cleaning debris, desilting and repair works and shall be carried out 4 cycles/year:  a) Debris in lined drains. b) Debris in unlined drains. c) Debris in sump. d) Debris in culverts. e) Repair to damaged drains and sumps.	cycle	8			
		Page Total Carried to Summary of Bill No. 11						

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)		
		ROUTINE MAINTENANCE WORKS DURING CONSTRUCTION PERIOD (cont'd)						
		MAINTAIN THE EXISTING ROAD (cont'd)						
		Provision of all labour, equipments, tools material, transport and whatever necessary to all the works stated below as per standard JKR road specification:						
Α	A351.4	Litter Collection and Disposal of Minor Obstruction/Debris Litter collection and disposal, removal and disposal of loose material and debris, carcass as and when required.	sum					
		RESURFACING WORKS						
		Resurfacing						
В	R530	Bituminous tack coat as per Specification.	m²	250				
С	R551	50mm thick Asphaltic Concrete Wearing Course AC14, as per Specification.	m²	250				
		Pavement Markings						
		Hot-applied reflectorised all weather thermoplastic road markings:						
D	R822	Type 6 - edge line: 150mm wide continous line.	m	50				
E	R823	Type 5 - centre/lane line: 100mm wide intermittent line with 2700mm line and 4500mm gap.	m	50				
F	A390	Maintain The Road Lighting						
		Maintenance Of Existing Road Lighting Within Project Site						
G	A391	The Contractor shall ensure the road within the project site to be lighted up sufficently according to the local authority requirement and maintained in good working conditon through out construction period including replacing all faulty and missing components, and removal from site upon completion of the road works / handovers to local authority as instructed by the S.O	sum					
	Page Total Carried to Summary of Bill No. 11							

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)		
	A359	ROUTINE MAINTENANCE WORKS DURING DEFECT LIABILITY PERIOD  MAINTAIN THE COMPLETED ROAD  Provision of all labour, equipments, tools material, transport and whatever necessary to all the works stated below as per standard JKR road specification:						
А	A359.1	Grass Cutting The works shall comprise grass cutting, disposal of cut grass and debris. The frequency of grass cutting shall be carried out once a month. The limit and extent as described below:  a) Road shoulder . b) Slope area. c) Berm drain, interceptor drain and all other types of drain on slopes. d) Median. e) Clear vegetation on paved surface.	km-mth	9.6				
В	A359.2	Road Furnitures The works shall comprise of cleaning works and shall be carried out 4 cycles/year of cleaning of: a) Guardrails and barriers. b) Signages and posts. c) Kilometer post and delineator post. d) Traffic signal aspects.	cycle	4				
С	A359.3	Bridges and Culverts The works shall comprise of cleaning works and shall be carried out 4 cycles/year of cleaning of: a) Expansion joints. b) Weep holes. c) Parapets. d) Bearing shelves. e) Grafiti and markings. f) Waterway or culvert opening and bridge carriageway. g) Removal of vegetation and lubricating and greasing operation for steel bearings. h) Water down pipe.	cycle	4				
	Page Total Carried to Summary of Bill No. 11							

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)	
	A359	ROUTINE MAINTENANCE WORKS DURING DEFECT LIABILITY PERIOD (cont'd)  MAINTAIN THE COMPLETED ROAD (cont'd)  Provision of all labour, equipments, tools material, transport and whatever necessary to all the works stated below as per standard JKR road specification:					
А	A359.4	Drainage The works shall comprise of cleaning debris and desilting works and shall be carried out 4 cycles/year: a) Debris in lined drains. b) Debris in unlined drains. c) Debris in sump. d) Debris in culverts. e) Blocked gratings.	cycle	4			
		Litter Collection and Disposal of Minor Obstruction/Debris  Provision of all labour, equipments, tools material, transport and whatever necessary to all the works stated below:					
В	A359.5	Litter collection and disposal, removal and disposal of loose material and debris, carcass as and when required.	sum				
С	A359.6	Landscaping Items for maintaining all landscaping shall be deemed to include digging, planting media, bedding, stalking, protection, watering, weeding, required fertilising, and replacement of dead item until the vegetation is established.  The works shall comprise of: a) Watering at every alternate day. b) Cutting and trimming and shall be carried out once a month.	km-mth	9.6			
		c) Weeding, fertilising, insect pest and disease control, pruning and mulching shall be carried out once a month.					
	Page Total Carried to Summary of Bill No. 11						

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)	
		Summary of Bill No. 11 : Routine Maintenance Works					
		Page BQ11 - 1/5					
		Page BQ11 - 2/5					
		Page BQ11 - 3/5					
		Page BQ11 - 4/5					
	Total of Bill No. 11 carried to Summary of Tender						
l							

### BILL NO. 12 - OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT (PROVISIONAL QUANTITY)

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)		
		PLANNING FOR SAFETY & HEALTH MANAGEMENT SYSTEM						
Α	A411	Prepare and submit safety and health plan (S-plan) as per Specifications For Occupational Safety And Health In Engineering Construction Works.	No	1				
В	A414	Prepare and submit monthly safety & health report as per Specifications For Occupational Safety And Health In Engineering Construction Works. (Five (5) copies per month).	No.	24				
		RESOURCES FOR SITE SAFETY						
С	A412	Employment of a Site Safety & Health Supervisor (SSS) and to the satisfaction of the S.O for the entire duration of the construction period to be stationed minimum 15 hours a week at the site.	man-mth	24				
		PROTECTIVE EQUIPMENT						
	A413	Provision and maintenance of Personal Protective Equipment to S.O staffs at Site of adequate quantity and of approved quality. The equipment shall include but not be limited to the following:						
D	A413.1	Safety boots.	No.	5				
Е	A413.2	Safety helmets.	No.	5				
F	A413.3	Protective Gloves.	No.	5				
G	A413.4	Safety jackets of reflective type.	No.	10				
Н	A413.5	Ear plugs and muffs.	No.	10				
J	A413.6	Dust masks.	No.	10				
		Provision and maintenance on the site during the duration of the works, of the adequate safety equipment to be approved by the S.O as follows:						
K	A413.7	Fire extinguishers.	No.	5				
L	A413.8	Hazard tape.	m	100				
М	A416	Safety signages as per Malaysian Standard Specification.	sum					
	Total of Bill No. 12 carried to Summary of Tender							

#### **BILL NO. 13 - PROVISIONAL SUM**

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)		
	W100 W110	PROVISIONAL SUM  PROVISIONAL SUM  Relocation and Protection of Utility Services  Allow a Provisional Sum of Ringgit Malaysia Eighty Eight Thousand Only (RM88,000.00) for the protection and/or relocation of the existing utilities services as listed below to be expended as directed by the Superintending Officer or						
A	W110.1	deducted in whole or in part if not expended.  Pengurusan Air Pahang Berhad (PAIP)	sum			88,000.00		
	Total of Bill No. 13 carried to Summary of Tender							

### BILL NO. 13A - PROVISIONAL SUM TO BE EXECUTED BY CLASS G1 & G2 BUMIPUTERA CONTRACTORS

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		PROVISIONAL SUM				
		PROVISIONAL SUM TO BE EXECUTED BY CLASS G1 BUMIPUTRA CONTRACTORS				
		Traffic Barrier				
A	W110	Allow a Provisional Sum of Ringgit Malaysia Sixty Thousand Only (RM60,000.00) for Traffic Barrier (Guardrails and Guardrails End-Treatment) to be executed by Class G1 "Bumiputera" Contractor and to be expended as directed by the Superintending Officer or deducted in whole or in part if not expended.	sum			60,000.00
В	W210.1	Allow for Attendance	sum			
С	W220.1	Allow for Profit (%)	%			
		Total of Bill No. 13A carried to Su	mmary of	Tender		

#### **BILL NO. 14 - PRIME COST SUM**

No.	Code No.	Description	Unit	Qty.	Rate (RM)	Amount (RM)
		PRIME COST SUM				
	W300	PRIME COST ITEMS				
		Road Lighting				
А	W310	Allow a Provisional Sum of Ringgit Malaysia Two Hundred Thousand Only (RM200,000.00) for Road Lighting to be expended as directed by the Superintending Officer or deducted in whole or in part if not expended.	sum			200,000.00
В	W320	Attendance.	sum			
С	W330	Profit%	%			
		Total of Bill No. 14 carried to	Summary	of Tender		