



PEJUTA

PERSATUAN JURUUKUR TANAH BERTAULIAH MALAYSIA
ASSOCIATION OF AUTHORISED LAND SURVEYORS MALAYSIA

SURVEY AND GEOMATICS SCHEDULE OF FEE 2023

Persatuan Juruukur Tanah Bertauliah Malaysia (PEJUTA)

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PROFESSIONAL CODE OF CONDUCT

This Code of Professional Conduct outlines the ethical obligations and standards that all members must adhere to. The purpose of this code is to maintain the integrity, reputation, and standing of the profession. Each member shall comply with the following provisions:

1. Upholding the Dignity of the Profession:
Members shall conduct themselves in a manner that upholds the dignity, standing, and reputation of the profession.
2. Solicitation and Professional Employment:
No member shall engage in canvassing or solicitation of professional employment, nor offer payment, whether through commission or any other means, for the introduction of such employment.
3. Advertising and Promotion:
Members are permitted to display plates and signs at their places of business that exhibit their name, title, and professional qualifications. Advertising is allowed for a reasonable period, provided it is appropriate and in line with the dignity, prestige, and standing of the profession.
4. Remuneration:
Members shall be remunerated solely by the fees payable by the client as per the rules established by the Lembaga Jurukur Tanah Malaysia (surveyor Board, Malaysia) or any fees approved by the Association.
5. Professional Courtesy:
Members shall not directly or indirectly attempt to supplant another member or interfere in any survey work, to their knowledge, which has already been entrusted to another member. Taking over the work of another member for the same client is not permitted until the member has obtained consent from the other member or has been formally notified by the client that the engagement has been properly terminated.
6. Avoiding Conflicts of Interest:
Members shall not knowingly assume or accept a position where their personal interests' conflict with their professional duties.
7. Avoiding Malicious Behaviour:
No member shall maliciously injure or attempt to injure, directly or indirectly, the professional reputation, prospects, or business of another member.
8. Professional Partnerships:
Members may enter professional partnerships with individuals permitted under the provisions of any other written law currently in force, if it does not contradict the provisions of the Licensed surveyor Act, 1958 (revised 1991) or its Regulations.

9. Fair Practices:
Members shall not:
- i. Offer any financial inducement to secure instructions, appointment, or employment.
 - ii. Undertake or offer work for charges that the Executive Council deems unfair to other members.
 - iii. Attempt to compete with another member based on fees with the objective of securing instructions, appointment, or employment.

By adhering to this Code of Professional Conduct, members of the profession will maintain the highest ethical standards, ensuring the trust and confidence of clients and the public to the profession. Any violations of this code will be subject to disciplinary action in accordance with the appropriate laws and regulations.

MODE OF PAYMENT

All fees for survey works will be remunerated in accordance with the subsequent schedule:

1. 30% of total survey fees to be paid upon mobilization.
2. 40% of total survey fees to be paid upon completion of field survey.
3. 30% of total balance survey fees to be paid upon submission of final survey plans and calculations

**SCHEDULE OF SCALE OF FEES
FOR ENGINEERING AND GEOMATICS SURVEYS**

The following is the schedule of Surveying and Geomatics charges applicable to services provided by Licensed surveyor who are registered under the Licensed surveyor Act 1958 (Act 458) (Amendment 1991).

This payment schedule is formulated based on the daily cost incurred by a survey team. For the purposes of this Schedule, "per party-day" means the work done in a day or part thereof by a survey team.

All fees chargeable under all Tables shall be the minimum fees.

Semenanjung Malaysia	:	RM 1,750.00
Sabah, Sarawak and Wilayah Persekutuan Labuan	:	RM 2,275.00

TABLE I

GENERAL ENGINEERING SURVEY

1. GENERAL ITEMS

this Table prescribe work items and rates applicable in all types of survey.

this Table provides for the fees of engineering survey including.

- (i) site survey
- (ii) road and railway survey, and
- (iii) cross-sectioning with sounding for bridge sites
- (iv) pipeline survey

2. SITE SURVEY

site survey may include building sites, dam sites, traffic interchanges and road junction, and any sites for development and construction The survey fees chargeable for Site Survey under this Table shall be as follows:

- (a) preparatory work
charge for preparatory work shall be 1 party-day.

- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.
- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.
- (d) missing boundary marks
charge for replacing of missing boundary marks with suitable marker is RM 400 per mark.
- (e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

- (f) monumenting
the rate for monumenting shall be as per TABLE X.
- (g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX - Item 2
- (h) topographical survey
the rate for topographical survey is applicable if work item topographical survey is done together with items 2(a) to 2(f).
- (i) contour and detail
charge for contour and detail in hectare per party-day are as follows:

Terrain and Ground Condition	Contour Intervals (ha per party-day)		
	1 metre	2 metres	3 metres
All area	1.00 (not applicable for hilly terrain)	1.00	1.50

- (ii) grid heighting
charge for grid heighting in party-day per kilometre are as follows:

Terrain and Ground Condition	Grid intervals (with detail)		Grid Intervals (without detail)	
	10m	20m	10m	20m
All area	5.50	2.75	2.75	1.40

- (i) minimum fee
the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.
- (j) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
- (k) data processing
- (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 2(c) to 2(e) and 2(g) to 2(h) where applicable.
- (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.
- (l) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 2(c) to 2(e) and 2(g) to 2(h) where applicable.
- (m) restricted or risk areas
- (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(h) where applicable,
- (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(h) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
- (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (n) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(h) where applicable.
- (o) land acquisition plans
charge for preparation of land acquisition plans shall be as TABLE XII.

- (p) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (q) reimbursable
charge for reimbursable shall be as per TABLE XI.

3. CROSS-SECTIONING WITH SOUNDING FOR BRIDGE SITES

charge for cross-sectioning with sounding for bridge sites survey are as follows:

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of additional motor vehicles and drivers, and air fares. The rate shall be 2 party-days.
- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.
- (d) missing boundary marks
charge for replacing of missing boundary marks with suitable marker is RM 400 per mark.
- (e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

- (f) monumenting
the rate for monumenting shall be as per TABLE X.
- (g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX - Item 2.
- (h) bridge site survey
charge for the survey of bridge site shall be 5.50 party-day/per hectare, excluding the

wetted area. These rates are applicable if work item survey of bridge site is done together with items 3(a) to 3(f).

- (i) cross-sectioning
these rates are applicable if works item cross-sectioning with sounding is done together with items 3(a) to 3(e).
 - (i) Where the depth of water is 1 metre or less the charge shall be 8 party-days per kilometre of cross-sectioning with spot level taken at 10 metres interval. If the interval is less than 10 metres the fees shall increase proportionally
 - (ii) Where the depth of water is of 1 metre or above, the charges shall be 12 party-days per kilometre of cross-sectioning with spot level taken at 10 metres interval. If the interval is less than 10 metres the fees shall increase proportionally. The charges for mobilization and demobilization of boat shall be 1.0 party-day per boat, and boat rental are reimbursable.
- (j) minimum fee
the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.
- (k) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
- (l) data processing
 - (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 3(c) to 3(e) and 3(g) to 3(i) where applicable.
 - (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.
- (m) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 3(c) to 3(e) and 3(g) to 3(i) where applicable.
- (n) restricted or risk areas
 - (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 3(b) to 3(e) and 3(g) to 3(i) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 3(b) to 3(e) and 3(g) to 3(i) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
 - (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.

- (o) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 3(b) to 3(e) and 3(g) to 3(i) where applicable.
- (p) land acquisition plans
charge for preparation of land acquisition plans shall be as TABLE XII.
- (q) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV respectively
- (r) reimbursable
charge for reimbursable shall be as per TABLE XI.

4. ROAD AND RAILWAY SURVEY.

This table provides for the fees for Road and Railway Survey are as follows:

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.
- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection, connection to Reference Markers is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.
- (d) missing boundary marks
charge for replacing of missing boundary marks with suitable marker is RM 400 per mark.
- (e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

- (f) monumenting
the rate for monumenting shall be as per TABLE X.
- (g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX - Item 2
- (h) survey of strip with spot level and detail
these rates are applicable if work item survey of strip with spot level at 20 metres interval. The rate shall be 1 hectare per party-day.
- Conditions: Items 4(h) shall be conducted with cross-sectioning and the rate for cross sectioning as per items 4(k) below.
- (i) setting out centre line
these rates are applicable if work item setting out of centre line of road and railway is done together with items 4(a) to 4(c).
- (i) charge for Setting out of centre line of road and railway from IP to IP with chainage pegs at 20 metres intervals shall be 4.25 party-days per kilometre.
- (ii) the rate for Setting out of centre line of road and railway from IP to IP with 20 metres intervals chainage pegs and curve setting. The rate shall be 5.50 party-days per kilometre. Where the chainage interval is less than 20 metres, then the fees shall be increased proportionally.
- (j) longitudinal profiling along established chainage pegs
longitudinal profiling is the determination of levels at the pegs established and is done together with item 4(i). Levels to be taken at every 20 metres and at any points to indicate significant change in slope. Where the chainage interval is less than 20 metres then the fees shall be increased proportionally. The rate shall be 3 party-days per kilometre.
- (k) cross-sectioning
cross-sectioning shall be conducted at the chainage pegs established and is done together with items 4(i) and 4(j). Where the total width is more than 70 metres then the fees shall be increased proportionally. The rate shall be 5 sections per party-day.
- (l) setting of reserve boundaries
these rates are applicable if work item setting out of reserve boundaries is done together with items 4(i). The rate shall be 3 party-days per kilometre. are as follows:

Conditions:

- (i) the above rates are only applicable when the setting out of the reserve boundary is conducted together with the setting out of the centre line. Otherwise, the normal rates for planimetric control and connection shall be apply.
 - (ii) hard wood pegs to be planted at turning points and jungle roller pegs at intermediate points on the reserve at about 100 metres intervals. and where the intervals are less than 100 metres the fees shall be increased proportionally
 - (iii) for reserve width of 60 metres or less, fees shall be charged according to the distance measured along the centre-line of the reserve.
 - (iv) for reserve width of more than 60 metres, or where the setting out must be carried out along both sides of the reserve, fees shall be charged according to planimetric control and connection rates measured along both sides of the reserve. Rates for planimetric control and connection is RM 7.00 per metre.
- (m) minimum fee
the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.
- (n) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
- (o) data processing
- (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 4(c) to 4(e) and 4(g) to 4(l) where applicable.
 - (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.
- (p) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 4(c) to 4(e) and 4(g) to 4(l) where applicable.
- (q) restricted or risk areas
- (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 4(b) to 4(e) and 4(g) to 4(l) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 4(b) to 4(e) and 4(g) to 4(l) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
 - (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (r) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an

additional fee of 20% of the charges under subparagraphs 4(b) to 4(e) and 4(g) to 4(l) where applicable.

- (s) land acquisition plans
charge for preparation of land acquisition plans shall be as TABLE XII.
- (t) charge for supply of plan and documents shall be as per TABLE XIII.
the types of plans to be supplied to the client's department are as follows:
 - (i) location plan of the survey area at a suitable scale such that the area under study can be shown in a single standard size sheet. The chainages of the alignment shall be indicated for ease of cross referencing with the detail plans.
 - (ii) longitudinal profile and plan shall show details of ground levels, chainages and all features as required, the survey stations along the centre line of the road, IPs, locations of the cross-sections taken, reference points and benchmarks. All items shall be clearly indicated and referenced. The longitudinal profile shall be at a scale of 1:1000 (horizontal), 1:100 (vertical), The drawing on plan view shall be at a scale of 1:1000.
 - (iii) drawing of all the cross-sections taken along the centre line of the proposed road, plotted in consecutive order, to a scale of 1: 100 both horizontal and vertical. The drawings shall show details of ground levels and distances from the centre line of pavement, shoulders, etc.
 - (ii) all formats of plans submitted shall conform to accepted practice. All drawings shall be on A1 size unless otherwise agreed.
- (u) additional prints
charge for supply of additional prints shall be as per TABLE XIV.
- (v) reimbursable
charge for reimbursable shall be as per TABLE XI.

5. PIPELINE SURVEY.

this Table provides for the fees for Pipeline Survey are as follows:

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.
- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection, connection to Reference Markers is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.

(d) missing boundary marks
charge for replacing of missing boundary marks with suitable marker is RM 400 per mark.

(e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

(f) monumenting
the rate for monumenting shall be as per TABLE X.

(g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX - Item 2

(h) setting out of pipeline
setting out of pipeline from IP to IP with chainage pegs at 20 metres interval. The rate in party-days per kilometre are as follows:

Terrain and Ground Condition	Along Existing Road	Other areas
All area	3.75 party-days/km	5.00 party-days/km

(i) longitudinal profiling
longitudinal profiling is the determination of levels at the pegs established and is done together with item 5(h). The rate in party-days per kilometre are as follows:

Terrain and Ground Condition	Along Existing Road	Other areas
All area	2.00 party-days/km	2.5 party-days/km

Conditions:

- (i) levels along centre-line of the pipeline route to be taken at 20 metres interval and at points necessary to show any significant changes in slope.
- (ii) longitudinal sections along the pipeline route shall be drawn to a scale of 1:1000 (horizontal), 1:100 (vertical)
- (iii) at all streams, bridge and culvert crossings, the following information shall be obtained, Section of streams along the pipeline centre-line giving levels at intervals sufficiently close to show the bed levels, The soffit level of the longitudinal beam of the bridges, together with their spans and the locations of the columns, and the invert levels and the crown levels of all culverts.

- (j) survey of site with 0.5-metre contour and detail
these rates are applicable if work item survey of site with spot level at 20m interval and detail shall be 0.75 hectares per party-day.
- (k) cross-sectioning
cross-sectioning shall be conducted at the chainage pegs. Where the total width is more than 70 metres then the fees shall be increased proportionally. The rate shall be 5 sections per party-day.
- (l) survey of strip with spot level and detail
these rates are applicable if work item survey of strip with spot level at 20 metres interval. The rate shall be 0.75 hectares per party-day.
- (m) setting of reserve boundaries
the rate shall be 3 party-days per kilometre.

Conditions:

- (i) the above rates are only applicable when the setting out of the reserve boundary is conducted together with the setting out of the centre line. Otherwise, the normal rates for planimetric control and connection shall be apply.
 - (ii) hard wood pegs to be planted at turning points and jungle roller pegs at intermediate points on the reserve at about 100 metres intervals and where the intervals are less than 100 metres the fees shall be increased proportionally.
 - (iii) for reserve width of 60 metres or less, fees shall be charged according to the distance measured along the centre-line of the reserve.
 - (iv) for reserve width of more than 60 metres, or where the setting out must be carried out along both sides of the reserve, fees shall be charged according to planimetric control and connection rates measured along both sides of the reserve. Rates for planimetric control and connection is RM 7.00 per metre.
- (n) minimum fee
the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.
 - (o) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
 - (p) data processing
 - (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 5(c) to 5(e) and 5(g) to 5(m) where applicable.
 - (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.
 - (q) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 5(c) to 5(e) and 5(g) to 5(m) where applicable.

- (r) restricted or risk areas
 - (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 5(b) to 5(e) and 5(g) to 5(m) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 5(b) to 5(e) and 5(g) to 5(m) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
 - (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (s) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 5(b) to 5(e) and 5(g) to 5(m) where applicable.
- (t) land acquisition plans
charge for preparation of land acquisition plans shall be as TABLE XII.
- (u) plan, conversion documents and additional prints
charge for supply of plan and conversion documents and additional prints shall be as per TABLE XIII and TABLE XIV respectively
- (v) reimbursable
charge for reimbursable shall be as per TABLE XI.

TABLE II

ENGINEERING SURVEY FOR DRAINAGE AND IRRIGATION

1. DRAINAGE AND IRRIGATION

this Table provides for the fees of engineering survey including

- (i) site survey and
- (ii) waterway survey

2. SITE SURVEY

This Table provides for the fees for Site Survey are as follows:

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.
- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection, connection to Reference Markers is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.
- (d) missing boundary marks
charge for replacing of missing boundary marks with suitable marker is RM 400 per mark.
- (e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

- (f) monumenting
the rate for monumenting shall be as per TABLE X.
- (g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX - Item 2
- (h) topographical survey
these rates are applicable if work item topographical survey is done together with items 2(b) to 2(c) and 2(e).
- (i) Contour and Detail
the rate in hectares per party-day are applicable

Terrain and Ground Condition	Contour Intervals		
	1 metre	2 metres	3 metres
All area	1.00	1.25	1.50

- (ii) Grid Survey
the rate in party-days per kilometre shall be as follows

Terrain and Ground Condition	Base Line and Height Control	Grid Line with Spot Levels at intervals of		
		25 metres	50 metres	100 metres and above
All area	4.00	3.50	3.25	3.00

- (i) minimum fee
the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.
- (j) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
- (k) data processing
 - (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 2(c) to 2(e),2(g) and 2(h) where applicable.
 - (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.
- (l) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 2(c) to 2(e),2(g) and 2(h) where applicable.
- (m) restricted or risk areas
 - (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional

charge of 25% of the charges under subparagraphs 2(b) to 2(e),2(g) and 2(h) where applicable,

- (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 2(b) to 2(e),2(g) and 2(h) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
- (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (n) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 2(b) to 2(e),2(g) and 2(h) where applicable.
- (o) land acquisition plans
charge for preparation of land acquisition plans shall be as TABLE XII.
- (p) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (q) reimbursable
charge for reimbursable shall be as per TABLE XI.

3. WATERWAYS SURVEY

This Table provides fees for Survey Waterways (inclusive of Lakes, Ponds, and Reservoir) and as follows:

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.
- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection, connection to Reference Markers is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.

(d) missing boundary marks
charge for replacing of missing boundary marks with suitable marker is RM 400 per mark.

(e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	+ 0.012 \sqrt{k}	1.3 km/party-day
(ii). Precise	+ 0.003 \sqrt{k}	0.4 km/party-day

(f) monumenting
the rate for monumenting shall be as per TABLE X.

(g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX – Item 2

(h) survey of strip with detail
these rates are applicable if work item survey of strip with detail is done together with items 3(a) to 3(c), 3(e) and 3(f). The charges in hectares per party-day are as follows:

Terrain and Ground Condition	Rate
All area	1.00 ha/party-day

(i) setting out of centre line of proposed route, waterways, canals and drains
these rates are applicable if work item setting out of centre line, longitudinal sectioning and cross-sectioning for the proposed route, waterways, canals, and drains is done together with items 3(a) to 3(c), 3(e), 3(f) and 3(h). The rate in party-day per kilometre shall be as follow:

Terrain and Ground Condition	Setting Out	Longitudinal Section with Spot Levels at Intervals of		Cross Section at 50m Intervals for Surveyed Width of		
		50m	100m	50m	75m	100m
All area	4.25	2.25	2.00	2.75	3.00	3.50

(j) survey of existing route, waterways, canals and drains
these rates are applicable if work item setting out of centre line, longitudinal sectioning and cross-sectioning of the existing route, waterways, canals, and drains is done together with items 3(a) to 3(c), 3(e), 3(f), 3(h) and 3(i). The rate in party-days per kilometre.

Terrain and Ground Condition	Alignment Survey	Longitudinal Section with Spot Levels at intervals of		Cross Section at 50m Intervals for Surveyed Width of		
		50m	100m	50m	75m	100m
All area	3.50	2.75	2.50	3.00	3.75	4.00

Specifications:

- (i) setting out of centre line from IP to IP of proposed or existing where applicable of route, waterways, canals, and drains shall be conducted at 50 metres interval. Where the intervals of setting out is less or more than 50 metres then fees shall be increased or decreased proportionally.
- (ii) only x and y coordinates of the setting out markers are to be supplied.
- (iii) longitudinal section survey of existing route, waterways, canals, and drains include taking of levels of the right and left banks. Levels shall be taken along alignment at every 50 metres interval and at points necessary to show significant change in slope.
- (iv) cross section survey shall be conducted at intervals of 50 metres and across corridor width of 50 metres. Where the width of corridor and intervals is more or less than 50 metres then fees shall be increased or decreased proportionally.
- (v) depth of water
 - (i) where the depth of water at the time of survey is 1 metre or less the charge shall be 8 party-days per kilometre of cross-sectioning with spot level taken at 10 metres interval. If the interval is less than 10 metres the fees shall increase proportionally
 - (ii) where the depth of water is of 1 metre or above, the charges shall be 12 party-days per kilometre of cross-sectioning with spot level taken at 10 metres interval. If the interval is less than 10 metres the fees shall increase proportionally. The charges for mobilization and demobilization of boat shall be 1.0 party-day per boat, and boat rental are reimbursable.
- (k) site survey
the rate shall be 3.5 party-day per site of 150 metre X 150 metre

Conditions:

- (i) cross-section survey shall be conducted at intervals of 50 metres and across corridor width of 50 metres. Where the width of corridor and intervals is more than 50 metres then the fees shall be increased proportionally
- (ii) depth of water
 - (i) where the depth of water at the time of survey is 1 metre or less the charge shall be 8 party-days per kilometre of cross-sectioning with spot level taken at 10 metres interval. If the interval is less than 10 metres the fees shall increase proportionally
 - (ii) where the depth of water is of 1 metre or above, the charges shall be 12 party-days per kilometre of cross-sectioning with spot level taken at 10 metres interval. If the interval is less than 10 metres the fees shall increase proportionally. The charges for mobilization and

demobilization of boat shall be 1.0 party-day per boat, and boat rental are reimbursable.

- (l) setting out of waterways reserve
these rates are applicable if work item setting out of waterways reserve is done together with items 3(a) to 3(c) and 3(i). The rate shall be 3.0 party-days per kilometre.
Conditions:
- (i) the above rates are only applicable when the setting out of the reserve boundary is conducted together with the setting out of the centre line. Otherwise, the normal rates for planimetric control and connection shall be apply.
 - (ii) hard wood pegs to be planted at turning points and jungle roller pegs at intermediate points on the reserve at about 100 metres intervals and where the intervals are less than 100 metres the fees shall be increased proportionally
 - (iii) for reserve width of 60 metres or less, fees shall be charged according to the distance measured along the centre-line of the reserve.
 - (iv) for reserve width of more than 60 metres, or where the setting out must be carried out along both sides of the reserve, fees shall be charged according to planimetric control and connection rates measured along both sides of the reserve. Rates for planimetric control and connection is RM 7.00 per metre.
- (m) minimum fee
the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.
- (n) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
- (o) data processing
- (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 3(c) to 3(e) and 3(g) to 3(l) where applicable.
 - (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.
- (p) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 3(c) to 3(e) and 3(g) to 3(l) where applicable.
- (q) restricted or risk areas
- (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 3(b) to 3(e) and 3(g) to 3(l) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 3(b) to

3(e) and 3(g) to 3(l) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and

- (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.

- (r) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 3(b) to 3(e) and 3(g) to 3(l) where applicable.

- (s) land acquisition plans
charge for preparation of land acquisition plans shall be as TABLE XII.

- (t) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.

- (u) reimbursable
charge for reimbursable shall be as per TABLE XI.

TABLE III

ENGINEERING SURVEY FOR TRANSMISSION LINE

1. TRANSMISSION LINE

For survey of Transmission Line, the following rates and scope of work shall be applied.

2. TRANSMISSION LINE SURVEY

this Table provides the fees for Transmission Line Survey shall be as follows:

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.
- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection, connection to Reference Markers is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.
- (d) missing boundary marks
charge for replacing of missing boundary marks with suitable marker is RM 400 per mark.
- (e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

- (f) monumenting
the rate for monumenting shall be as per TABLE X.

(g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX - Item 2(b) to 2(e).

(h) survey of strip with spot level and detail
these rates are applicable if work item survey of strip with spot level at 20m interval is done together with items 2(a) to 2(c), 2(e) and 2(f). The rate shall be 1.5 hectares per party-day.

(i) setting out of centre line of transmission line
these rates are applicable if work item setting-out of centre line of transmission line is done together with items 2(h). The rate shall be 4.25 party-days per kilometre.

Conditions:

- (i) the setting-out of centre line of transmission line shall be conducted at 200 metres intervals. Where the intervals are less than 200 metres then fees shall be increased proportionally
- (ii) angle positions shall be indicated by emplacement of galvanized iron pipes 1 metre in length and 40mm in diameter. The pipe shall be buried in the ground to a depth of 0.75 metre and the remaining exposed portion to be painted red.

(j) longitudinal profiling
these rates are applicable if work item longitudinal profiling is done together with item 2(i). Levels shall be taken at every 50 metres intervals and at points necessary to indicate significant changes in slope. Where the interval is less than 50 metres then the fees shall be increased proportionally. The charge is 2.75 party-days per kilometre.

(k) cross-sectioning
these rates are applicable if work item cross sectioning is done together with items 2(h) and 2(j). The total width of each section shall be 10 metres. Where the width is more than 10 metres then fees shall be increased proportionally. The charge shall be 10 sections per party-day.

(l) setting out of tower or pylon positions
these rates are applicable if work item setting out of tower or pylon positions is done together with items 2(a) to 2(c). The charge shall be 1 tower or pylon per party-day.

(m) site survey for tower or pylon positions
these rates are applicable if work item site survey for tower/pylon positions is done together with items 2(a) to 2(c), 2(e) and 2(f). The rate is 1 site per party-day.

Conditions:

- (i) the maximum area per site shall be 100 square metres. Where the area is more than 100 square metres the fees shall be increased proportionally
- (ii) spot levels shall be taken at 2 metres intervals. Where the interval is less than 2 metres then the fees shall be increased proportionally

(n) setting out reserve boundaries
these rates are applicable if work item setting out reserve boundaries is done together with items 2(i). Setting out shall be conducted by off-setting from the centre line 200 metres markers. The rate in party-day per kilometre are as follows:

Terrain and Ground Condition	Reserve Width		
	60m	40m	20m
All area	3.0	2.75	2.5

- (o) marking of trees within the reserve boundaries
 these rates are applicable if work item marking of trees within the reserve boundaries is done together with items 2(n). The trees to be marked shall be 30 centimetres or more in diameter measured at approximately 1 metre above ground level. The rate in party-day per kilometre are as follows:

Terrain and Ground Condition	Reserve Width		
	20 m	40 m	60 m
Swampy area	0.75	1.00	1.25

- (p) minimum fee
 the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.
- (q) transformation of coordinates
 if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
- (r) data processing
- (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 2(c) to 2(e) and 2(g) to 2(o) where applicable.
 - (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.
- (s) professional consultation
 charge for professional consultation is 10% of the charges under subparagraphs 2(c) to 2(e) and 2(g) to 2(o) where applicable.
- (t) restricted or risk areas
- (i) security pass or permit
 where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(o) where applicable,
 - (ii) armed escort
 where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(o) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
 - (iii) waiting time
 when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.

- (u) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(o) where applicable.
- (v) land acquisition plans
charge for preparation of land acquisition plans shall be as TABLE XII
- (w) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (x) reimbursable
charge for reimbursable shall be as per TABLE XI

TABLE IV
MAPPING

1. AERIAL MAPPING

involves the use of aircraft or drones equipped with various sensors and cameras to capture high-resolution images, LiDAR (Light Detection and Ranging) data, or other remote sensing data from the air. There are two primary categories of operating systems utilized to capture these data from the air:

- (a) Drone or Unmanned Aircraft System (UAS) and LiDAR
- (b) Manned aircraft

2. DRONE OR UNMANNED AIRCRAFT SYSTEM

this table provides the fees for the drone or unmanned aircraft system method shall be as follows:

- (a) preparatory work
charge for preparatory work shall be 2 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.
- (c) ground control points (GCPs) establishment
GCPs are specific points marked on the ground for accurate georeferencing of the aerial imagery. Surveyors use GNSS receivers and surveying equipment to measure and record the coordinates of these GCPs. A minimum of 5 GCP is required for each job. The charges are provided under TABLE IX -Item (2).
- (d) data acquisition
 - (i) a drone or Unmanned Aircraft System (UAS) is used to capture high-resolution images of the survey area under suitable weather conditions. Typically, there is a 70% overlap for the front and a 60 % overlap for the sides for each image. The charge for data acquisition is:

Category Ground Sample Distance (GSD)	Rate
Less than 5cm / pixel	RM 200 per hectare
More than 5cm / pixel and less 10cm / pixel	RM 175 per hectare
More than 10cm / pixel	RM 100 per hectare
LiDAR	RM 400 per hectare

(ii) the minimum fee shall be 8 party-days per job.

(e) data processing, and report generation

(i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 2(d). Surveyors prepare a comprehensive report summarizing the survey findings, including accurate measurements, area calculations, and relevant observations. The final deliverables include orthophoto, image products and report.

(ii) if other products are required, the charges are shown in the table below

Product	Developed area	Undeveloped area
Digital Surface Model (DSM)	15% of the charges under subparagraphs 2(d)	
Digital Terrain Model (DTM)	15% of the charges under subparagraphs 2(d)	
Contour – generate from DTM	5% of the charges under subparagraphs 2(d)	
Feature Extractions	25% of the charges under subparagraphs 2(d)	10% of the charges under subparagraphs 2(d)

(iii) if other modelling formats such as GIS or BIM are required, an additional 10% of the charges under subparagraphs 2(e)(ii) will be added.

(f) professional consultation

charge for professional consultation is 10% of the charges under subparagraphs 2(d) and 2(e) where applicable.

(g) restricted or risk areas

(i) security pass or permit

where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 2(d) where applicable,

(ii) armed escort

where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 2(d)

where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and

- (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (h) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 2(d) where applicable.
- (i) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (j) reimbursable
charge for reimbursable shall be as per TABLE XI

3. MANNED AIRCRAFT

this table provides the fees for the manned aircraft method shall be as follows:

- (a) preparatory work
charge for preparatory work shall be 5 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.
- (c) ground control points (GCPs) establishment
GCPs are specific points marked on the ground for accurate georeferencing of the aerial imagery. Surveyors use GNSS receivers and surveying equipment to measure and record the coordinates of these GCPs. The charges are as provided under TABLE IX -Item (2).
- (d) data acquisition
 - (i) Image capture-airborne
surveyors coordinate with aerial photographers to capture high-resolution images of the survey area, ensuring suitable weather conditions. The minimum charge for data acquisition is 10 party-days per kilometer square (km²).
 - (ii) LiDAR (Light Detection and Ranging)
The minimum charge for data acquisition by LiDAR is RM 400.00 per hectare.
- (e) data processing and reporting
 - (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under

subparagraphs 3(d). Surveyors prepare a comprehensive report summarizing the survey findings, including accurate measurements, area calculations, and relevant observations. The final deliverables include orthophoto, image products and reports.

- (ii) if other products are required, the charges are as shown in the table below.

Product	Developed area	Undeveloped area
Digital Surface Model (DSM)	15% of the charges under subparagraphs 3(d)	
Digital Terrain Model (DTM)	15% of the charges under subparagraphs 3(d)	
Contour – generate from DTM	5% of the charges under subparagraphs 3(d)	
Feature Extractions	25% of the charges under subparagraphs 3(d)	10% of the charges under subparagraphs 3(d)

- (iii) If other modelling formats such as GIS or BIM are required, an additional 10% of the charges under subparagraphs 2(e)(ii) will be added.

- (f) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 3(d) and 3(e) where applicable.
- (g) restricted or risk areas
- (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 3(d) where applicable,
- (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 3(d) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
- (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (h) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 3(d) where applicable.
- (i) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (j) reimbursable
charge for reimbursable shall be as per TABLE XI

TABLE V

HYDROGRAPHICAL SURVEY

1. DESCRIPTION OF HYDROGRAPHICAL SURVEY

Hydrographical surveying deals with the configuration of the bottom and adjacent land areas of oceans, lakes, rivers, harbours, and other water forms on Earth. The schedule of rates for Coastal Hydrographic Survey in support of:

- (i) The management of coastal zones
- (ii) The hydrographical survey of deltaic regions and river mouths up to two kilometres upstream of the river mouth
- (iii) The development of coastal engineering, property, infrastructure projects and activities
- (iv) The management and development of jetties, ports, harbours and associated maritime facilities
- (v) The management and development along inland waterways and inland water body
- (vi) The management of maritime navigation and traffic
- (vii) Naval operations
- (viii) The preservation of marine environment
- (ix) The management of marine resources
- (x) The activities of laying submarine cables/pipelines.
- (xi) Scientific studies

2. HYDROGRAPHICAL SURVEY

the scope of work and fees for Coastal Hydrographical Survey are as follow:

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.
- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection, connection to Reference Markers is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.

(d) missing boundary marks
charge for replacing of missing boundary marks with suitable marker is RM 400 per mark.

(e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

(f) monumenting
the rate for monumenting shall be as per TABLE X. The rate is applicable if mounting is done together with items 2(b), 2(c) & 2(e)

(g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX - Item 2

(h) survey of strip with detail
these rates are applicable if work item survey of strip with spot level at 20 metres interval is done together with items 2(b),2(c), 2(e) & 2(f). The rate shall be 1.25 hectares per party-day.

(i) shoreline profiling

(i) Topographical Onshore Profiling
these rates are applicable if work item of topographical (Onshore) profiling is done together with items 2(b), 2(c), 2(e), 2(f) and 2(h). Spot levels shall not be more than 10 metres apart along the profiling line and shall extend as far into the sea or water bodies as possible. The rate in party-day per kilometre.

Specifications	Base Line and Height Control	Profiles at Interval of		
		25m	50m	100m and above
All area	4.50	4.00	3.75	3.50

(ii) Bathymetric (Offshore) Profiling
these rates are applicable if work item of bathymetric profiling is done together with items 2(b), 2(c), 2(e), 2(f), 2(h) and 2(i)(i). Echo Sounder are classified as below:

SBES	Single Beam Echo Sounder
Dual Frequency	refers to measurement using two different frequencies simultaneously
MBES	Multibeam Echo Sounder
Dual Head Multibeam	refers to wider swapping angle and higher density

Rate in kilometre per party-day

Profiles at interval of (m)	Rate			
	SBES	DUAL FREQ SBES	MBES	DUAL HEAD MBES
25	0.30	0.25	0.15	0.10
50	0.35	0.30	0.20	0.15
75	0.40	0.35	0.25	0.20
100 or more	0.45	0.40	0.30	0.25
minimum party-days per job	4	5	8	10

Usage of dual frequency echo sounder, multibeam, side scan sonar, sub bottom profiler and software packages shall be reimbursable as per TABLE XI

Specifications:

- (i) The echo sounder shall be calibrated at the start and at the end of each day's sounding using the bar check method.
 - (ii) Continuous echo sounding shall be conducted with the sounding recorded at not more than 10 metres interval along the profiling line.
 - (iii) Sounding is to be extended as close as possible to the shoreline.
 - (iv) Sounding must be reduced to the adopted height datum from observed tides.
- (j) tidal observation
these rates are applicable if work item of tidal observation is done together with items 2(b), 2(c), 2(e), 2(f).
- (i) Automatic Water Level Recording
The cost in party-days per location

Period	Installation	Measurement and Data Processing
14 days or less	5 party-days	8 party-days
15 to 30 days	5 party-days	18 party-days

Where the duration is more than 30 days, then the fees shall be increased proportionally.

- (i) Water level measurement with self-recording water level recorder with the measurement recorded at no more than 15 minutes interval continuously for measurement period.
- (ii) The recorded data shall be downloaded at the end of the measurement period and process to produced tabulation of recorded water level in ASCII or MS EXCEL format.
- (iii) For the purpose of harmonic analysis of tidal data, a minimum of 30 days recorded data is recommended.

(ii) Tidal Observation - Direct Reading

Instrument	Installation	Tidal Observation
Tide Pole	3 party-days	RM 525.00 per hour subject to a minimum of 1 party-day per job
15 to 30 days	5 party-days	18 party-days

Specifications:

- (i) Water level measurement by method of direct observation of a tide pole establish in the vicinity of the survey area with the tidal observations conducted at no more than 15 minutes interval.
- (ii) The observed data should be processed to produced tabulation of observed tidal levels in ASCII or MS EXCEL format.

(k) self-recording current measurement

these rates are applicable if work item current measurement is done together with items 2(b), 2(c), 2(e), & 2(f).

- (i) Self-Recording Current Measurement
The Cost in party-days per location per instrument.

Period	Installation	Measurement and Data Processing
14 days or less	10 party-days	27 party-days
30 days	10 party-days	54 party-days

Where the duration is more than 14 days but less than 30 days, then the fees shall be computed proportionally. Where the duration is more than 30 days, then the fees shall be increased proportionally.

Specifications:

- (i) A self-recording current meter shall be deployed at a designated location with a suitable mooring and recovery system (e.g., U-shape mooring).
- (ii) Measurement of current speed and direction using the self-recording current meter deployed at designated depth within the water column at the designated location, with the measurement of current speed and direction at not more than 30 minutes interval continuously for the measurement period.
- (iii) The self-recording current meter must not be subject to befouling during the measurement period.

- (iv) The recorded data shall be downloaded at the end of the measurement period and process to produce tabulation of recorded current speed and direction in ASCII or MS EXCEL format.

- (ii) Direct Reading Current Measurement
Preparation and Set Up. The charge shall be as below

Preparation and Set Up	Direct Observation of Current Speed and Direction
2.5 party-days	The rate of observation is RM 875 per hour subject to a minimum of 5.25 party-days per job

Specifications:

- (i) in-situ observation of the current speed and direction using a direct reading current meter at three depths within the water column (one metre below surface, mid depth, and one metre above the bed of water body) at the designated location. The current speed and direction will be observed at no more than 30 minutes interval.
- (ii) the measurement is normally conducted during spring and neap tidal condition and the measurement period shall not be less than 13 hours to sufficiently cover the basic tidal cycle.
- (iii) the observed data should be processed to produce tabulation of observed current speed and direction in ASCII or MSEXCEL format.

- (l) seawater temperature and salinity measurement
these rates are applicable if work item Seawater Temperature and Salinity Measurement is done together with items 2(b), 2(c), 2(e) and 2(f).

- (i) installation of tide poles
the rate for installation is 2.5 party-days
- (ii) tidal observation
the rate for in-situ direct observation RM 700.00 per hour subject to a minimum of 5.3 party-days per job

Specifications:

- (i) in-situ observation of seawater temperature and salinity using direct reading temperature and salinity bridge at three depths within the water column (one metre below surface, mid depth, and one metre above the bed of water body) at one designated location. The temperature and salinity will be observed at no more than 30 minutes interval.
- (ii) the measurement is normally conducted during spring and neap tidal condition and the measurement period shall not be less than 13 hours to sufficiently cover the basic tidal cycle.
- (iii) the observed data shall be processed to produce tabulation in ascii or MS Excel format.

- (m) seabed (grab) soil sampling
these rates are applicable if work item grab sampling is done together with item 2(b),

2(c), 2(e) and 2(f). The charge per sample is RM 700.00 per hour subject to a minimum of 2.0 party-days per job.

Specifications:

- (i) seabed (grab) soil sampling shall be conducted at designated location and using appropriate grab sampler e.g., van der veen type
- (ii) the seabed soil samples shall be sent to approved laboratory for particle size distribution (sieve analysis)

(n) seawater sampling

these rates are applicable if work item seawater sampling is done together with item 2(b), 2(c), 2(e), & 2(f).

The charge per sample is RM 700.00 per hour subject to a minimum of 2.0 party-days per job

Specifications:

- (i) seawater sample shall be collected using an appropriate water sampler at different depths within the water location at each designated location.
- (ii) water sample shall be sent to an approval laboratory for total suspended solids analysis.

(o) preparation of report and submission

charge of 5% of the total survey fees is applicable subject to a minimum fee of 3.5 party-days per job.

Survey Report should include, as least the following:

- (i) scope of work
- (ii) personal and equipment
- (iii) methodology
- (iv) significant events
- (v) data collected
- (vi) results of laboratory analysis (if applicable)

(p) minimum fee

the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.

(q) transformation of coordinates

if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.

(r) data processing

- (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 2(c) to 2(e) and 2(g) to 2(n) where applicable.
- (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.

- (s) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 2(c) to 2(e) and 2(g) to 2(n) where applicable.
- (t) restricted or risk areas
 - (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(n) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(n) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
 - (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (u) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(n) where applicable.
- (v) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (w) reimbursable
charge for reimbursable shall be as per TABLE XI

TABLE VI

UNDERGROUND UTILITY DETECTION SURVEY

1. DESCRIPTION

an underground utility survey is a comprehensive process aimed at identifying and mapping the various subsurface utility lines and infrastructure that are essential for providing services such as water, sewage, electricity, and telecommunications.

2. UNDERGROUND UTILITY SURVEYS

this Table provides the fees for Underground Utility Surveys shall be as follows:

- (a) preparatory work
charge for preparatory work shall be of minimum fee of 6 party-days per job.
 - (i) gathering of existing information from utility provider
 - (ii) preliminary discussion with utility provider for permission and access.
 - (iii) gathering of information on soil and geological information
 - (iv) gathering latest available information utility from *Pangkalan Data Ukur Utiliti* (PADU)
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 3 party-days per job.
- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection, connection to Reference Markers is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.
- (d) missing boundary marks
charge for replacing of missing boundary marks with suitable marker is RM 400 per mark.
- (e) height control
the height control and connection include connection to JUPEM Benchmarks/Datum, either along proposed or existing routes or alignments. The datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

- (f) monumenting
the rate for monumenting shall be as per TABLE X.
- (g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX - Item 2
- (h) underground utility detection
the rate per metre square are as follow:

Depth of Utility	per m ²
Up to 3 metre depth	RM 9.70
From 3 metre to 5 metre depth	RM 12.15
More than 5 metre depth	subject to special equipment used with actual cost and charges for Feasibility Study Report [item 2(i)]

Specifications:

- (i) detail survey of underground utility survey area to include topographical survey as per item 2(h) of TABLE I
- (ii) rate for as-built survey of exposed utility that requires standby shall be charged 1.3 party-day per party per kilometre per day.
- (iii) preparation of survey report and plans is compulsory and content as per 2(p).
- (i) the Feasibility Study Report
the charge shall be 21 party-days per kilometre, subject to a minimum fee of 10 party-days for each job and shall include the following .
- (i) Proposed methodology
 - (ii) Equipment calibration
 - (iii) Soil testing and geological information
 - (iv) Traffic management
 - (v) Insurance and safety aspects
 - (vi) Approvals and utility provider access
 - (vii) Utility operations management
 - (viii) Acceptable technology tests
 - (ix) Preliminary report
 - (x) Analysis report

- (xi) Field measurement and interpretation strategy
 - (xii) Safety insurance coverage
 - (xiii) Safety requirements
 - (xiv) Scheduled reports
 - (xv) Financial proposal
 - (xvi) Report presentation
 - (xvii) Consultation
 - (xviii) Final Report
- (j) preparation of survey report and submission
charge of preparation of survey report subject to 5% of the total survey fees chargeable, subject to a minimum fee of 1.5 party-days per job (site). The survey report shall encompass, at least the following item:
- (i) scope of work
 - (ii) personnel and equipment
 - (iii) methodology
 - (iv) significant events
 - (v) data collection
 - (vi) result of survey
 - (vii) recommendation and conclusion
- (k) minimum fee
the minimum fee shall be 1.5 party-days per site which is not inclusive of preparatory works.
- (l) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
- (m) data processing
charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 2(c) to 2(e) and 2(g) to 2(j) where applicable.
- (n) restricted or risk areas
- (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(j) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(j) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and

- (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 0.5 party-day per survey party shall be applicable.
- (o) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(j) where applicable.
- (p) land acquisition plans
charge for preparation of land acquisition plans shall be as TABLE XII
- (q) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (r) reimbursable
charge for reimbursable shall be as per TABLE XI

TABLE VII

SURVEY FOR BUILDING INFORMATION MODELLING (BIM)

1. SURVEY FOR BUILDING INFORMATION MODELLING (BIM)

building information modelling (BIM) is a collaborative and digital approach to designing, constructing, and managing buildings and infrastructure. It revolves around creating and using intelligent 3D models that contain a wealth of information beyond just visual representation. building information modelling (BIM) is a collaborative and digital approach to designing, constructing, and managing buildings and infrastructure. It revolves around creating and using intelligent 3D models that contain a wealth of information beyond just visual representation.

2. BUILDING INFORMATION MODELLING SURVEY

this Table provides the fees for Building Information Modelling Survey

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.
- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection, connection to Reference Markers is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.
- (d) missing boundary marks
charge for replacing of missing boundary marks with suitable marker is RM 400 per mark.
- (e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

- (f) monumenting
the rate for monumenting shall be as per TABLE X.
- (g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE XI - Item 2
- (h) site survey
the scope of works and rates are as listed in Item 2 of Table II – Site Survey
- (i) building information modelling spatial survey and data processing
volume quantity shall be measured and calculated from three-dimensional space enclosed by a closed surface, and Linear quantity shall be measured and calculated from two-dimension. The rate shall be RM 20.00 per metre³ (cubic metre) in building or metre² (metre square) for linear features or structure, and subject to a minimum charge of 10 party-days per job.
- (j) semantic modelling
- (i) charge shall be RM 20.00 per metre³ (cubic metre) in building
 - (ii) charge shall be RM 3.50 per metre² (metre square) for linear features or structure
 - (iii) and subject to a minimum charge of 3 party-days per job.
- (k) preparation of report and submission
the survey report is required to be submitted in a designated format, and the charge shall be 3 party-days per report.
- (l) minimum fee
the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.
- (m) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
- (n) data processing
charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 2(c) to 2(e) and 2(g) to 2(j) where applicable.
- (o) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 2(c) to 2(e) and 2(g) to 2(j) where applicable.

- (p) restricted or risk areas
 - (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(j) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(j) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
 - (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (q) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(j) where applicable.
- (r) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (s) reimbursable
charge for reimbursable shall be as per TABLE XI

TABLE VIII

MISCELLANEOUS SURVEY

1. GENERAL ITEM

this Table provides for the fees of Engineering Survey including

- (i) Earthwork Survey
- (ii) Verticality Survey
- (iii) Piling Point Survey
- (iv) Monitoring Survey
- (v) Joint Verification Surveys (as a verifier)

2. EARTHWORK SURVEY

scope of work and rates for earthwork survey are as follow:

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.
- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection, connection to Reference Markers is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.
- (d) missing boundary marks
charge for replacing of missing boundary marks with suitable marker is RM 400 per mark.
- (e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

- (f) monumenting
the rate for monumenting shall be as per TABLE X.
- (g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX - Item 2
- (h) site survey
the scope of works and rates are as listed in Item 2 of Table II – Site Survey
- (i) volume calculation
the rate in party-day per day are as follows:

Area (Ha)	Rate
Less than 10	3 party-day
10-50	4 party-day
Above 50	Proportionally as above

- (j) preparation of report and submission
charge of 5% of the total survey fees is applicable subject to a minimum fee of 3.5 party-days per job.
Survey Report should include, as least the following:
 - (i) scope of work
 - (ii) personal and equipment
 - (iii) methodology
 - (iv) significant events
 - (v) data collected
 - (vi) results of laboratory analysis (if applicable)
- (k) minimum fee
the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.
- (o) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
- (l) data processing
 - (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 2(c) to 2(e) and 2(g) to 2(i) where applicable.
 - (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.

- (m) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 2(c) to 2(e) and 2(g) to 2(i) where applicable.
- (n) restricted or risk areas
 - (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(i) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(i) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
 - (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (o) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 2(b) to 2(e) and 2(g) to 2(i) where applicable.
- (p) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (q) reimbursable
charge for reimbursable shall be as per TABLE XI

3. VERTICALITY SURVEY

this Table provides the scope of work and fees for verticality survey. Connection to control points shall be conducted for every 5th floor or less. The schedule of rate for verticality surveys are as follows:

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.
- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection, connection to Reference Markers is RM 7.00 per metre. The accuracy for planimetric control and

connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.

- (d) charge for replacing of missing marks with suitable marker is RM 400 per mark.
- (e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

- (f) monumenting
the rate for monumenting shall be as per TABLE X.
- (g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX - Item 2
- (h) verticality survey points
charge for survey shall be RM 175.00 per point subject to a minimum charge of 1 party-day.
- (i) preparation of report and submission
charge of 5% of the total survey fees is applicable subject to a minimum fee of 3.5 party-days per report and the report shall be submitted for maximum of 5 floor or less.
Survey Report should include, as least the following:
 - (i) scope of work
 - (ii) personal and equipment
 - (iii) methodology
 - (iv) significant events
 - (v) data collected
 - (vi) results of laboratory analysis (if applicable)
- (j) minimum fee
the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.
- (k) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.

- (l) data processing
charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 3(c) to 3(e) and 3(g) to 3(h) where applicable.
- (m) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 3(c) to 3(e) and 3(g) to 3(h) where applicable.
- (n) restricted or risk areas
 - (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 3(b) to 3(e) and 3(g) to 3(h) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 3(b) to 3(e) and 3(g) to 3(h) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
 - (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (o) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 3(b) to 3(e) and 3(g) to 3(h) where applicable.
- (p) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (q) reimbursable
charge for reimbursable shall be as per TABLE XI

4. PILING POINT SURVEY

This Table provides the fees for Piling Point Survey

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.

- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection, connection to Reference Markers is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.
- (d) charge for replacing of missing marks with suitable marker is RM 400 per mark.
- (e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

- (f) monumenting
the rate for monumenting shall be as per TABLE X.
- (g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX - Item 2
- (h) preparation of setting-out plan
charge for preparing setting-out plans and Pre-Comp plan is 2 party-days
- (i) setting out and as-built piling points
the rate for setting-out of Piling Points shall be as follows:

Scope	Rate
Setting out points	RM 50.00 per point
As-built points	RM 35.00 per point
Setting-out rate for Block pegging for piling	1 party-day per block
Setting-out of grid line	Planimetric control at RM 7.00 per metre subjected to a minimum charge of 1.5 party-days/job.

- (j) minimum fee
the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.
- (k) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.

- (l) data processing
 - (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 4(c) to 4(e) and 4(g) to 4(i) where applicable.
 - (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.
- (m) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 4(c) to 4(e) and 4(g) to 4(i) where applicable.
- (n) restricted or risk areas
 - (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 4(b) to 4(e) and 4(g) to 4(i) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 4(b) to 4(e) and 4(g) to 4(i) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
 - (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (o) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 4(b) to 4(e) and 4(g) to 4(i) where applicable.
- (p) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (q) reimbursable
charge for reimbursable shall be as per TABLE XI

5. MONITORING SURVEY

the scope covered for monitoring survey are vast, but not limited to dams, roads, tunnels, bridges, and viaducts; high rise and historical buildings; foundations and construction sites; mining, landslide and settlement areas, and earthquakes

Monitoring survey shall include all related surveying activities such as Structural Monitoring Survey, Deformation Survey, Dilapidation Survey, Settlement Survey and Forensic Survey

The rate for the survey shall follow as per the rate depending on the method used either conventional, geodetic, or photogrammetric.

This Table provides the fees for Monitoring Survey

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) mobilization and demobilization
charge for mobilization and demobilization. Mobilization of the survey party by different modes of transportation where necessary shall be reimbursable at cost. This includes but not limited to hire of helicopter or aircraft and crew, hire of boat and crew, hire of 1 additional motor vehicles and drivers under exceptional circumstances, and air fares. The rate shall be 2 party days.

Mobilization of the survey party by the following modes of transportation where necessary shall be reimbursable at cost such as hire of helicopter or aircraft and crew, hire of boat and crew, hire of additional motor vehicles and drivers under exceptional circumstances, and air fares.

- (c) planimetric control
charge for demarcation of boundaries, planimetric control and connection, connection to Reference Markers is RM 7.00 per metre. The accuracy for planimetric control and connection shall not be less than 1 in 8,000 unless the situation warrants, and includes connection JUPEM datum, and along the proposed or existing routes or alignment.
- (d) missing boundary marks
charge for replacing of missing boundary marks with suitable marker is RM 400 per mark.
- (e) height control
the datum for height control shall be established by at least two existing Benchmarks. The surveyor shall take the shortest practical route and may use any methods that he considers most suitable for the job to meet the accuracy required. The rate in kilometre per party-day shall be as follows:

Class for Heighting	Accuracy (in metres) Where k is the distance in kilometre	All area
(i). Ordinary	$+ 0.012 \sqrt{k}$	1.3 km/party-day
(ii). Precise	$+ 0.003 \sqrt{k}$	0.4 km/party-day

- (f) monumenting
the rate for monumenting shall be as per TABLE X.
- (g) GNSS point positioning
if point positioning by satellite is required, the charges are as provided under TABLE IX - Item 2
- (h) structural monitoring survey

- (i) establishment of monitoring station and structure monitoring point
the rate shall be 0.6 party-day per point, subject to a minimum charge of 1.5 party-days
- (ii) observation of structure monitoring points
the rate shall be RM 1000.00 per point per observation, subject to a minimum charge of 1.5 party-days
- (iii) settlement survey
the rate shall be RM 1000.00 per point per observation, subject to a minimum charge of 1.5 party-days
- (iv) deformation survey
the rate shall be RM 1000.00 per point per observation, subject to a minimum charge of 1.5 party-days
- (v) dilapidation survey
the scope of a dilapidation survey typically involves assessing the condition of a property before and after construction or renovation works. The purpose is to document physical condition in the property. The survey may include spatial investigation by using surveying techniques and technologies for accurate assessment and reporting.

The minimum charge shall be 2 party-days per building, or it can be determined with reference to the scope of work in TABLE VI, VII, VIII, and XI.

- (vi) forensic survey
the survey may include spatial investigation by using surveying techniques and technologies for accurate assessment of position for, but not limited to crime scene, traffic accidents, storm damage and environmental threats.

The minimum charge shall be 8 party-days per job, or it can be determined with reference to the scope of work in TABLE VI, VII, VIII, and XI.

- (i) preparation of report and submission
charge of 5% of the total survey fees is applicable subject to a minimum fee of 3.5 party-days per job.

Survey Report should include, as least the following:

- (i) scope of work
- (ii) personal and equipment
- (iii) methodology
- (iv) significant events
- (v) data collected
- (vi) findings (if applicable)
- (vii) certifications (if applicable)
- (viii) results of laboratory analysis (if applicable)
- (ix) equipment calibration certificate if applicable)

- (j) minimum fee
the minimum fee shall be 3 party-days per site which is inclusive of preparatory works.

- (k) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
- (l) data processing
 - (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 5(c) to 5(e) and 5(g) to 5(h) where applicable.
 - (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.
- (m) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 5(c) to 5(e) and 5(g) to 5(h) where applicable.
- (n) restricted or risk areas
 - (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 5(b) to 5(e) and 5(g) to 5(h) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 5(b) to 5(e) and 5(g) to 5(h) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
 - (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (o) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 5(b) to 5(e) and 5(g) to 5(h) where applicable.
- (p) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (q) reimbursable
charge for reimbursable shall be as per TABLE XI

6. VERIFICATION SURVEYS (as a verifier or arbitrator)

This Table provides the fees for verification surveys

- (a) preparatory work
charge for preparatory work shall be 1 party-day.
- (b) joint verification survey
charge for joint verification shall be 1.5 party-day per day
- (c) survey report
the verification survey report shall be submitted in a designated formats and the charge shall be 5 party-days per report.
- (d) reimbursable
charge for reimbursable shall be as per TABLE XI
- (e) professional consultation
charge for professional consultation is 10% of the charges under subparagraphs 6(b) and 6(c) where applicable.

TABLE IX

SATELLITE, SOLAR AND STAR OBSERVATION

1. GENERAL ITEM

This Table provides for the fees for Satellite, Solar, and Star Observation.

- (i) Point Positioning by Satellite
- (ii) Geodetic Survey First Order
- (iii) Geodetic Survey Second Order
- (iv) Global Navigation Satellite System (GNSS) Levelling
- (v) Field Astronomy

2. POINT POSITIONING BY SATELLITE

the survey fees chargeable for Point Positioning with the use of satellite under this Table for each job shall be as follows:

- (a) basic charge
basic charge shall be 1.5 party-days
- (b) mobilization and demobilization
charge for mobilization and demobilization of 3 Field parties shall be as follows:

Distance to Worksite from Headquarters	Charge for 3 Field Parties
Up to 150 kilometres	3 party-days
More than 150 kilometres but not exceeding 300 kilometres	7 party-days
Exceeding 300 kilometres	10 party-days

- (c) point positioning
charge for positioning of each point is 2 party-days
- (d) GNSS monument
charge for the construction of a Global Navigation Satellite System (GNSS) monument is RM800.00 per monument.
- (e) site clearance
charge for site clearance for observation shall be RM 1,200.00 per point. Charges exceeding this amount shall be based on actual cost.
- (f) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.

- (g) data processing
 - (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 2(c) to 2(e) where applicable.
 - (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.
- (h) professional consultation
charge for the professional consultation is 10% of the charges under subparagraph 2(c) to 2(e) where applicable.
- (i) restricted or risk areas
 - (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 2(b) to 2(e) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 2(b) to 2(e) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
 - (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (j) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 2(b) to 2(e) where applicable.
- (k) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (l) reimbursable
charge for reimbursable shall be as per TABLE XI.

3. **FIRST ORDER GEODETIC SURVEY**

the survey fees chargeable for First Order Geodetic Survey under this Table for each job shall be as follows:

- (a) basic charge
basic charge shall be 1.5 party-days

- (b) mobilization and demobilization
charge for mobilization and demobilization of 3 Field parties shall be as follows:

Distance to Worksite from Headquarters	Charge for 3 Field Parties
Up to 150 kilometres	3 party-days
More than 150 kilometres but not exceeding 300 kilometres	7 party-days
Exceeding 300 kilometres	10 party-days

- (c) site assessment
charge for Site assessment shall be 3 party- days
- (d) point positioning
charge for positioning of each point is subject to observation hours specified by the client with a minimum of 12 hours observation per session.

Item	Observation Hours	Party Days
1	1	1.5

- (e) GNSS monument
charge for the construction of a Global Navigation Satellite System (GNSS) monument similar to JUPEM type 'A' Mark is 2.5 party-day per monument.
- (f) site clearance
charge for site clearance for observation shall be RM 1,200.00 per point. Charges exceeding this amount shall be based on actual cost.
- (g) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
- (h) data processing
- (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 3(c) to 3(f) where applicable.
 - (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.
- (i) professional consultation
charge for the professional consultation is 10% of the charges under subparagraph 3(c) to 3(f) where applicable.
- (j) restricted or risk areas
- (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 3(b) to 3(f) where applicable,

- (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 3(b) to 3(f) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
- (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (k) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 3(b) to 3(f) where applicable.
- (l) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (m) reimbursable
charge for reimbursable shall be as per TABLE XI.

4. SECOND ORDER GEODETIC SURVEY

the survey fees chargeable for Second Order Geodetic Survey under this Table for each job shall be as follows:

- (a) basic charge
basic charge shall be 1.5 party-days
- (b) mobilization and demobilization
charge for mobilization and demobilization of 3 Field parties shall be as follows:

Distance to Worksite from Headquarters	Charge for 3 Field Parties
Up to 150 kilometres	3 party-days
More than 150 kilometres but not exceeding 300 kilometres	7 party-days
Exceeding 300 kilometres	10 party-days

- (c) site assessment
charge for Site assessment shall be 3 party- days
- (d) point positioning
charge for positioning of each point is subject to observation hours specified by the client with a minimum of 4 hours observation per session.

Item	Observation Hours	Party Days
1	1	1.5

- (e) GNSS monument
charge for the construction of a Global Navigation Satellite System (GNSS) monument similar to JUPEM type 'B' Mark is 1.5 party-day per monument.
- (f) site clearance
charge for site clearance for observation shall be RM 1,200.00 per point. Charges exceeding this amount shall be based on actual cost.
- (g) transformation of coordinates
if the transformation of coordinates or datum required for specific reference, the charges shall be RM 50.00 per point, subject to a minimum charge of RM 1,000.00 per job.
- (h) data processing
- (i) charge for processing, conversion, translation, and transformation of data together with quality assurance, compliance with regulatory requirements and prevailing government electronic environment shall be 20% of the charges under subparagraphs 4(c) to 4(f) where applicable.
 - (ii) If other modelling formats such as GIS or BIM are required, an additional 10% will be added.
- (i) professional consultation
charge for the professional consultation is 10% of the charges under subparagraph 4(c) to 4(f) where applicable.
- (j) restricted or risk areas
- (i) security pass or permit
where security pass or permit must be obtained from the authority, an additional charge of 25% of the charges under subparagraphs 4(b) to 4(f) where applicable,
 - (ii) armed escort
where armed escort is required and working hours are dictated by relevant authority, and additional fee of 50% of the charges under subparagraphs 4(b) to 4(f) where applicable. Where required, the provision of armed escort shall be at no cost to the surveyor; and
 - (iii) waiting time
when there is a waiting time after mobilization, an additional charge of 1.5 party-day per survey party shall be applicable.
- (k) motorable road
where the survey worksite is more than 2 kilometres away from motorable road, an additional fee of 20% of the charges under subparagraphs 4(b) to 4(f) where applicable.

- (l) plan, documents, and additional prints
charge for supply of plan and documents, and additional prints shall be as per TABLE XIII and TABLE XIV, respectively.
- (m) reimbursable
charge for reimbursable shall be as per TABLE XI.

5. GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) LEVELLING

the survey fees chargeable for GNSS Levelling under this Table for each job shall be as follows:

- (a) basic charge
basic charge shall be 1.5 party-days
- (b) point positioning and levelling
charge for positioning of each point is subject to observation hours specified by the client.

6. FIELD ASTRONOMY

this Table provides the fees and Scope of Works for Qibla Determination.
The rate shall be as below:

Item	Preparatory Work	Other Charges
Qibla Direction	2 party-days	RM 175.00 per point
Star Observation	2 party-days	Reimbursable as per TABLE XI

- (i) Azimuth determination by Solar Observation
 - (a) establish coordinate of point of observation
 - (b) azimuth observation by solar
 - (c) calculation of azimuth for reference line
- (ii) Qibla direction observation
 - (a) establish coordinate of point of observation
 - (b) azimuth observation by solar
 - (c) calculation of azimuth and qibla direction
 - (d) establish reference mark for qibla direction
 - (e) report of survey
- (iii) Star Observation and Others Related field astronomy activities shall be in accordance and adherence to Circular issued by JUPEM

TABLE X
MONUMENTING

1. Monumenting involves construction of Intersection Points (IP), Temporary Benchmarks (TBM) and Reference Marks (RM). These rates are applicable if monumenting is done together with Planimetric Control and Height control. The rate for monumenting are as follows:

Monument Type	Accessible	Inaccessible
a. With concreting	4 marks per party-day	2 marks per party-day
b. Without concreting	5 marks per party-day	3 marks per party-day

Specification:

- (i) Standard Monument with concreting
the standard monument shall be constructed out of a 1 metre length of 40 mm diameter galvanized iron pipe set in concrete of dimension 30cm x 30cm x 30cm. The TBM standard monument number and the value of the TBM must be written on the concrete.
- (ii) Standard Monument without concreting
the standard monument shall be constructed out of a 1 metre length of 40 mm diameter galvanized iron pipe to be firmly embedded.
- (iii) Non-Standard Monument
in the event where the surveyor is required to construct monuments according to non-standard specifications, the charge shall be at actual cost.

TABLE XI
REIMBURSEMENT

1. This Table provides the fees for Reimbursement.
- (a) actual expenses incurred in purchase of relevant documents, plan, maps, record etc.
 - (b). actual expenses incurred for courier, postage, telephone calls etc.
 - (c). hiring charge of feasibility study, special equipment and software packages as agreed and approved by the client.

- (d). actual expenses for medical treatment
- (e) expenses incurred in traveling, accommodation and subsistence allowance shall be as follows:

Travelling	Air Fare	Business Class
Road	Mileage	RM 1.00 per km
Hotel / Lodging		Actual cost
Subsistence Allowances		RM 200.00 per day

- (f). expenses incurred in the use of special transportation; helicopter, boat etc. as agreed and approved by the client.
- (g). expenses incurred in obtaining the followings:
 - (i) application of permit.
 - (ii) bank guaranteed imposed by appropriate authorities.
 - (iii) attendance of all safety courses.
 - (iv) trenching occupation.

TABLE XII

PREPARATION OF LAND ACQUISITION PLANS

- 1, Preparation of Land Acquisition Plans
land acquisition plans shall be compiled from the JUPEM cadastral sheet. This drawing shall show but not limit to the following information:
 - (i) lot boundaries with bearings and distances within the survey corridor
 - (ii) lot numbers
 - (iii) lot areas
 - (iv) any other information shown on JUPEM cadastral survey sheets
2. This Table provides the fees for Preparation of Land Acquisition Plans
 - (a) preparatory work
charge for preparatory work shall be 1 party-day.
 - (b) all certified plans and cadastral sheets purchased for the compilation / preparation of the land acquisition plans shall be charged as per TABLE XI – Reimbursement.

- (c) the time involved for search at the land office and other government department will be charged at RM 25.00 per hour plus traveling expenses chargeable as TABLE XI – Reimbursement.
- (d) charges for computation and plan drawing shall be subject to a minimum charge of RM 3,000.00 per job. Any additional lot above 30 is charged RM 100.00 per lot.

TABLE XIII

SUPPLY OF PLANS AND DOCUMENTS

1. Plans and documents to be supplied to the client without charge shall be as follows. Except for (ii), all other documents shall bear the signature of the Licensed Land Surveyor.:
 - (i) three (3) sets of paper prints
 - (ii) digital data in “DWG” or “DXF” format
 - (iii) all relevant data, field book, drawing, calculation sheet, etc prepared in the execution of the contract.

TABLE XIV

ADDITIONAL PLANS AND PRINTS

1. This Table provides for the charges to provide plans with linen backing or replotting on different scale or format. The charges are as follows:

Type of Size of Plan	Charge per Copy
(a) replotting drawing on different scale, format, and paper size	RM 280.00
(b) transparent film of A1 size	RM 50.00
(c) transparent tracing paper of A1 size	RM 30.00
(d) transparent tracing paper of A2 size or smaller	RM 25.00
(e) paper of A1 size with linen backing	RM 100.00
(f) paper of A2 size with linen backing	RM 50.00
(g) paper print of A1 size or smaller	RM 30.00