

Your Contractual Questions Answered

What Constitute Variations And How To Evaluate Them?

By The Entrusty Group

Entrusty Group, a multi-disciplinary group of companies, of which, one of their specialisation is in project, commercial and contractual management, has been running a regular contractual questions and answers section for Master Builders members in the Master Builders Journal.

In this instalment of this series, Entrusty Group will provide the answer to another frequently asked question above.

In almost all construction projects, changes or variations are common occurrences during the design and construction phases. It is therefore not surprising that in most construction contracts, standard forms or bespoke, the provision for a variation clause in the contract has become a standard, if not compulsory feature.

In this instalment article, Entrusty will describe and explain the variation provisions found in the common standard forms of building or construction contracts in Malaysia, namely the PAM (1998 & 2006), IEM (1989), JKR/PWD (203A- rev.10/83 & rev. 2007) and CIDB (2000) Forms. The aim of this article is to provide readers with a better appreciation and understanding of the variation provisions and how variations are evaluated or valued under the respective contracts.

This article answers the question of *What Constitute Variations And How To Evaluate Them?*, in the following separate sections ;

- Definition or Meaning of Variation
- Evaluation or Valuation of Variations
- Rules for Valuation of Variations

- Recent Case Law on Variations
- Summary/Conclusion

■ Variation – Definition/ Meaning

The term 'Variation' as described and/or defined by various standard forms of contract differs from one to another but in principle the definition and/or meaning is more or less similar. In general, the term 'Variation' usually means a change, modification, alteration, revision or amendment to the original intent of the contract and/or its works.

By and large most variations occur due to changes in the client's requirements, revisions or modifications in the original design by the designer (Architect/Engineer/ Superintending Officer (SO)/Project Director(PD) and/or amendments or changes in the statutory provision or requirement.

If there is no variation provision in the contract, then any change would require the agreement of the contracting parties, be it between the Employer and Contractor or Contractor and Sub-contractor. The contracting parties would need to renegotiate the contract price and/ or rates (and possibly even time,

as the case may be), each time a change occurs.

PAM Forms (1998 & 2006)

Both PAM Forms, 1998 and 2006 defined 'Variation' under Clause 11.1 as the alteration or modification of design, quality or quantity works. The latter version includes:

- (a) Addition, omission or substitution of any work;
- (b) Alteration of the kind or standard of any materials and goods to be used in the works;
- (c) Removal from the site of any work executed or materials and goods brought thereon by the Contractor for the purposes of the works other than work, materials and goods which are not in accordance with the Contract; and
- (d) Any changes to the provisions in the Contract with regards to:
 - (i) any limitation of working hours;
 - (ii) working space;
 - (iii) access to or utilisation of any specific part of the Site; and
 - (iv) the execution and completion of the work in any specific order,

But such variations exclude any changes intended to rectify any

negligence, omission, default and/or breach of contract by the Contractor, who shall execute such changes, if any, entirely at his own cost.

It is noted that the terms described in the PAM 06 are similar to PAM 98 save for the cost to be borne by the Contractor for his own breach of contract. Other provisions which allow for variations include Clause 4 – to comply with any change in the statutory requirements and Clause 32 – war damages.

JKR/PWD Form 203A (Rev. 10/83 & Rev. 2007)

Under the JKR/PWD Forms, the term 'Variation' is defined in one paragraph under Clause 24 (b) or 24.2 respectively, which are similar to PAM 98 and 06 Forms, except for the provision under PAM Form 06 Clauses 11.1(d) as described above. Similarly, the said Forms also have other provisions that allow for variations such as Clauses 11(d) and 21.2, to comply with any change in the statutory requirements.

IEM Form (1989)

Under IEM Form, the term 'Variation' is defined under Clause 23 (a) bears some similarity in format to PAM 98 and 06 Forms. The said Clause empowers the Engineer to make any necessary or desirable variation of the form quality or quantity of the Works or any part thereof and to order the Contractor to do any of the following:

- (i) Increase or decrease the quantity of any work included in the Contract;
- (ii) Omit any such work;
- (iii) Change the character or quality or kind of any such work;
- (iv) Change the levels lines position and dimensions of any part of the works; and
- (v) Execute additional work of any kind necessary for the completion of the works

Similar to the JKR Form, there are also other provisions that allow for variations such as Clause 11, to comply with any change in the statutory requirements.

CIDB Form (2000)

As for the CIDB Form, the term 'Variation' is defined under Clause 1.1, as any change in the original contract works, including but not restricted to:

- (i) Quantity increase and/or decrease;
- (ii) Addition or omission;
- (iii) Change in character, quality and/or nature;
- (iv) Change in levels, elevations, layout and dimensions;
- (v) Demolition or removal of any part of the works, equipment, materials/goods not desired by the employer/so;
- (vi) Change in contractor's temporary work, working method and/or construction plant by employer/so;
- (vii) Postponement of any part of the works by employer; and/or
- (viii) Employer's requirement to complete the works or any part/section earlier than its completion time.

Variations also include changes to alter the use to which the Works will be put, but exclude any instruction to cure any Contractor's default or breach of contract. Similar to the other Forms, provisions that allow for variations include Clause 10 - to comply with any change in the statutory requirements, Clause 25 - expediting progress of Works, Clause 35 - indemnity provisions - contractor to rectify damage, Clause 38B - insurance of the Works - by the Employer, 38C - insurance of existing building or structure - by the Employer and Clause 39 - Antiquities and Fossil.

JKR PWD Form DB/T (2002)

Under the JKR PWD Form DB/T, the term 'Variation' as defined under Clause 27.1 (a) to (b) bears some similarity in format to PAM 06 in that under Clause 11.1 (a) to (d), Part (a) relates to changes to the contract documents which make it necessary to alter or modify the design, quality or quantity of the works or removal from site of any executed works or materials/goods brought to the site. Whereas part (b) relates to additional, alteration or omission of obligations or restrictions in regards to:

- (i) Access to site;
- (ii) Use of any specific part(s) of the site;
- (iii) Limit working space;
- (iv) Limit working hours;
- (v) Execution or completion of the work in any specific order.

Again similar to the aforesaid Forms, there are other provisions that allow for variations such as Clause 12 – to comply with any change in the statutory requirements.

The following tabulation provides a summary of the scope of variations under the aforesaid common standard forms of building/construction contract in Malaysia.

■ Valuation of Variations

Most of the standard forms of building/construction contract provide some basis or rules for evaluation or valuation of variation works. These rules are often similar, in principle.

PAM Forms (1998 & 2006)

The PAM 98 Form has its rules for valuation of variations under Clause 11.5 (i) to (iv), whilst for PAM 06 Form, its rules are stipulated under Clause 11.6 (a) to (f). The following tabulation provides the comparison and differences in the provisions for

Table 1 - Scope of Variations Under The Common Standard Forms of Building/Construction Contract In Malaysia

Scope of Variation Item / Clause Ref.	PAM 06	PAM 98	CIDB	IEM	JKR PWD 203A(83/07)	JKR PWD DB/T
Alteration and modification of quantity (addition or omission of - CIDB)	11.1	11.1(i)	1.1(a)	23(a)(i)	24(b) / 24.2	27.1(a)
Change in quality (incl alteration and modification - Both PAM forms)	11.1	11.1(i)	1.1(c)	23(a)(iii)	24(b) / 24.2	27.1(a)
Alteration or modification of design	11.1	11.1(i)			24(b) / 24.2	27.1(a)
Exclude any changes for the Contractor's default or breach of contract.	11.1	11.1(vi)	1.1			27.2
Addition or omission	11.1 (a)	11.1(ii)	1.1(b)	23(a)(ii) & (v)	24(b) / 24.2(a)	27.1(a)(i)
Substitution	11.1 (a)	11.1(ii)			24(b) / 24.2(a)	27.1(a)(i)
Alteration of the kind or standard of any materials or goods	11.1 (b)	11.1(iii)			24(b) / 24.2(b)	27.1(a)(ii)
Removal of any part of the works, Equipment, materials/goods from site (include demolition - CIDB)	11.1 (c)	11.1(iv)	1.1(e)		24(b) / 24.2(c)	27.1(a)(iii)
Addition, alteration or omission of any expressed obligations or restrictions imposed by the Employer on any limitation of working hours, working space, or access to or utilisation of any specific part of the site or the execution and completion of the work in any specific order. (exclude obligations or restrictions - PAM06)	11.1 (d)	11.1(v)				27.1(b)
Any change in the original contract intention, which shall include but not restricted to:			1.1			
Change in character and/or nature			1.1(c)			
Change in levels, elevations, layout and dimensions			1.1(d)	23(a)(iv)		
Change in Contractor's Temporary Works, working method and/or construction Plant (working method only - PAM98)		11.1(vi)	1.1(f)			
Postponement of any part of the works by Employer			1.1(g)			
Employer's requirement to complete the works or any part/section earlier than its completion time			1.1(h)			
Include changes to alter the use of the works.		11.1(vi)	1.1			

valuation of variations between the PAM 06 and PAM 98:

JKR/PWD Form 203A (Rev. 10/83 & Rev. 2007)

The JKR/PWD Forms are basically similar to PAM 98 provisions, except in relation to the character and condition of the variation work, where they differ. The valuation of variations in the JKR

Forms is provided under Clause 25 (b) (i) to (iii) and (d) for 203A(Rev 10/83) and Clause 25.1 and 25.2 under 203A(Rev.2007), using almost similar wordings, but reference is made to the SO instead of Architect.

In the JKR Form 203A (Rev. 10/83), it is expressly stated that quantities in the Bills of Quantities (BoQ) are conclusive and not

subject to re-measurement, unless it is stated as *provisional*. Its Clause 25 (c) further provides for the valuation of re-measurement works to be in accordance with its rules (i) and (ii) and Clause 26 (d)(i) provides for the prices and rates in the BoQ to be subjected to SO's agreement as to their reasonableness and be adjusted if required before signing of the contract.

Table 2 - Comparison Between PAM 2006 and PAM 1998 Rules for Valuation of Variations

PAM 2006		PAM 1998	
Clause		Clause	
11.6 (a)	where work is of <i>similar character to, is executed under similar conditions</i> as, and <i>does not significantly change the quantity of work</i> as set out in the Contract Documents, the rates and prices in the Contract Documents shall determine the valuation.	11.5 (i)	the prices in the Contract bills shall determine the valuation of work of <i>similar character executed under similar conditions</i> as work priced therein.
11.6 (b)	where work is of <i>similar character to work</i> as set out in the Contract Documents but is <i>not executed under similar conditions</i> or <i>is executed under similar conditions but there is a significant change in the quantity of work carried out</i> , the rates and prices in the Contract Documents shall be the basis for determining the valuation which shall include a <i>fair adjustment</i> in the rates to take into account such difference.	11.5 (ii)	where work is of <i>similar character to work</i> included in the Contract Bills but <i>may not be executed under similar conditions</i> the rates in the Contract Bills shall, <i>as far as may be reasonable</i> , be the basis of valuation, with inclusion of a <i>fair allowance</i> for the difference in conditions.
11.6 (c)	where work is <i>not of a similar character to work</i> as set out in the Contract Documents, the valuation shall be at <i>fair market rates and prices determined by the Quantity Surveyor</i> .		
11.6 (d)	<p>where <i>work cannot be properly measured and valued in accordance with Clause 11.6(a), (b) or (c)</i>, the Contractor shall be allowed:</p> <p>11.6(d)(i) <i>the daywork rates in the Contract Documents;</i> or</p> <p>11.6(d)(ii) where there are <i>no such daywork rates</i> in the Contract Documents, at the <i>actual cost</i> to the Contractor of his materials, additional construction plant and scaffolding, transport and labour for the work concerned, <i>plus fifteen (15) percent</i>, which percentage shall include for the use of all tools, standing plant, standing scaffolding, supervision, overheads and profit.</p> <p>In either case, vouchers specifying the time spent daily upon the work, the workers' names, materials, additional construction plant, scaffolding and transport used shall be <i>signed by the Site Agent and verified by the Site Staff and shall be delivered to the Architect or Quantity Surveyor at weekly intervals with the final records delivered not later than fourteen (14) Days after the work has been completed.</i></p>	11.5 (iii)	<p>where <i>work cannot be properly measured and valued</i> the Contractor shall be allowed <i>daywork rates at the prices prevailing as far as may be reasonably ascertained at the time that such work is carried out or at the day work rates stated in the Contract Bills or if no such rates are included at the actual prime cost</i> to the Contractor of his materials, transport and labour for the work concerned <i>plus fifteen percent (15%)</i>, which percentage shall include for the use of all ordinary plant, tools and scaffolding, supervision, overheads and profit.</p> <p>Provided that in any case vouchers specifying the time spent daily upon the work, the worker's names, the plant and the materials employed shall be <i>delivered for verification to the Architect or to the Quantity Surveyor as instructed by the Architect not later than seven (7) days after the work had been completed.</i></p>
11.6 (e)	the <i>rates and prices in the Contract Documents shall determine the valuation of items omitted. If omissions substantially vary the conditions</i> under which any remaining items of work are carried out, the <i>prices of such remaining items shall be valued under Clause 11.6(a), (b) or (c).</i>	11.5 (iv)	The <i>prices in the Contract Bills shall determine the valuation of items omitted. If omissions substantially vary the conditions</i> under which any remaining items of work are carried out, the <i>prices of such remaining items shall be valued under Clause 11.5 (ii).</i>
11.6 (f)	in respect of <i>Provisional Quantity</i> , the quantities stated in the Contract Documents shall be <i>re-measured by the Quantity Surveyor</i> based on the actual quantities executed. <i>The rates and prices in the Contract Documents shall determine their valuations.</i>		

However, in the new JKR Form 203A (Rev.2007), the conclusiveness is taken out and substituted with firm quantities and the Works are not subjected to re-measurement unless the said Bills are erroneous, as stipulated under Clause 26.5. Further, unlike the aforesaid provision of Clause 26(d)(i) above, the right to determine the reasonableness and to adjust the prices and rates is not the SO, but the Government, whose decision shall be final.

IEM Form (1989)

Similar to the aforesaid JKR Form 203A – Rev. 10/83, the valuation of variations under IEM Form (1989) is provided under Clause 24 (a) to (d), with some differences and reference is made to the Engineer instead of SO. For example, Clause 24 (a) allows the Engineer to order all extra or additional work or work to be omitted and to value them at the rates and prices set out in the Contract, if they are applicable. If the Contract does not contain any rate or price applicable, then suitable rates or prices shall be agreed upon between the Engineer and the Contractor. It also allows the Engineer to fix the rates or prices, which in his opinion, is reasonable and proper in the event of disagreement.

Clause 24 (b) further allows the Engineer to apply a suitable rate or price to be agreed by him and the Contractor, if the nature or amount of any omission or addition renders the rate or price contained in the Contract unreasonable or inapplicable. In the event of disagreement, the Engineer is also allowed to fix such other rate or price, which in his opinion, is reasonable and proper under the circumstances.

The above Clauses (a) and (b) are subjected to the proviso that the increase or decrease is made soon after the order/instruction date or before the commencement of the additional work, as is practicable by a written notice, either by the Contractor to the Engineer of his intention to claim extra payment or a varied rate or price, or by the Engineer to the Contractor of his intention to vary a rate or price as the case may be.

Clause 24(c) then states that if the net effect of all variations (other than those relating to variations in price of materials and/or labour) is found to result in a reduction greater than 20% of the Contract Sum on completion of the whole of the Works, the Contract Sum amount (less all Provisional Sums and Prime

Cost items) shall be adjusted by adding 5% of the difference beyond the margin of 20%.

Subsequent provision, Clause 24(d) allows the Engineer to order any additional or substituted work be executed on a daywork basis and to pay by using the rates and prices affixed in Daywork Schedule of the Bill of Quantities. It also requires the Contractor to furnish the Engineer with receipts or other vouchers to prove the amounts paid and submit to the Engineer quotations for his approval before ordering materials in the manner prescribed in this Clause. The Engineer is also entitled to authorise payment for variation work either as daywork or at such value he considers fair and reasonable if the manner prescribed was impracticable.

CIDB Form (2000)

Similar to PAM 06 Form Clause 11.6 (a) to (e), the valuation of variations under CIDB Form is provided under Clause 29.1 (a) to (e), with some differences and additional provisions, and reference is made to the SO instead of Architect.

Clause 29.1 states that all variations shall be valued under the following valuation methods. Where the varied work is of;

- (a) Similar character to, is executed under similar conditions as, and does not significantly change the quantity of the work described in the Contract Documents, using the Contract Rates; or
- (b) A similar character to the work described in the Contract Documents (which can include Drawings, Specification, BoQ, etc) and/or is not executed under similar conditions and/or involves significant changes in the quantity of such work described in the Contract Documents, using the Contract Rates as valuation basis but with a fair allowance for any



Construction workers

differences in conditions and/or quantity changes; or

(c) Where (a) and (b) above do not apply, by valuation at fair market rates and prices; or

(d) Where (a), (b) & (c) are inapplicable or inappropriate under its circumstances, valuation be based on Daywork rates and prices of necessary Plant, materials or goods, labour and any additional Construction Plant necessary for its execution subject to:

(i) Condition precedent to any payment - Contractor have received SO's instruction authorising the varied work on Daywork basis.

(ii) Unless otherwise specified, Contractor entitled to additional 15% on the Daywork rates - percentage deemed adequate to compensate for all supervision, the use of Construction Plant (except for necessary additional Construction Plant), overheads, profit and all other loss, expense, costs or damages incurred in or connected with its execution.

(iii) Contractor to maintain proper daily records in its execution of the varied work specifying;

- time spent by each relevant trade workman (incl. their names, if required by SO),
- any Construction Plant employed and
- Equipment, materials or goods used.

(iv) Such records with the relevant vouchers, DOs or receipts be delivered to SO for verification within seven days of its execution. If varied work continues, such records be delivered weekly to SO for verification and final records delivered within seven days of its completion.

(e) Contract Rates shall be used for valuation of work omitted;

If the omission varies the conditions for execution of the remaining work, the remaining work shall be valued in accordance with sub-clauses



Construction machinery

29.1(b) or (c) or (d). The Contractor is not entitled to Loss and Expense for omission work unless it is carried out by Employer or another contractor.

JKR PWD Form DB/T (2002)

The provision for the valuation of variations under JKR PWD Form DB/T can be found in Clauses 28.1 to 28.5, whereby Clause 28.1 states that the valuation of additional or substituted work shall be consistent with the values of work of similar character set out in the Contract Sum Analysis or Contract Schedule of Rates making due allowance for any change in the conditions under which the work is carried out and/or any significant change in the quantity of the work so set out. Where it is not work of a similar character set out in the Contract Sum Analysis or Contract Schedule of Rates, a fair valuation shall be made.

The subsequent Clause 28.2 states that the valuation of omission of works shall be in accordance with the values in the Contract Sum Analysis or Contract Schedule of Rates. Clause 28.3 provides that an allowance be made for any necessary addition to or reduction of the site administration, site facilities and temporary works.

As for work on Daywork basis, Clause 28.4 states that the valuation shall comprise the prime cost of such work plus 15%, which includes for the provision of site administration, site facilities and temporary works and for profit. The said Clause makes it a condition precedent for the Contractor to produce vouchers specifying the time daily spent upon the work, the workmen's names, the plant and the materials employed to the PD for verification not exceeding seven days after the work has been executed, prior to his right to any payment.

Interestingly, Clause 28.5 allows that if a variation changes the conditions under which any other work is executed and the Contractor can satisfy the PD that such variation was in consequence of any physical condition (other than weather conditions or conditions due to weather, the nature, character and extent of local conditions, accessibility of the Site, the supply of electricity and water, the nature and geology of the ground, subsoil and sub-marine, the hydrological and climatic conditions, the form, nature and suitability of the Site, the supply of and conditions affecting labour and materials) or artificial obstruction which could not reasonably have been foreseen by an experienced Contractor,

then such work shall be value in accordance with the provisions of this Clause.

However, if valuation of variations under Clauses 28.1 to 28.5 cannot reasonably be applied, then Clause 28.6 allows for a fair valuation to be made but Clause 28.7 states that no allowance shall be made for direct loss and/or expense under these variation provisions.

■ Rules for Valuation of Variations

Generally, in principle, there are five common rules to the valuation of variations found in most standard forms of building/construction contract. Though the wordings and details may differ from one form to another, the contents and intent are the same, in principle.

Where the quantities of the works in the contract is stated as 'provisional', it is normal for the actual works executed to be re-measured and valued under such rules accordingly, as well.

Rule 1

Where the varied work is of *similar character* executed under *similar condition*, the work price or rate in the contract shall be used for the valuation. (N.B. – PAM 06 & CIDB includes '*does not significantly change the quantity of the work*').

So, what is the difference between the term 'similar character' and 'similar conditions' for variation work? The word 'similar' means 'of a like nature' and does not mean have to be 'identical'.

Similar character of variation work usually refers to the similar item of work already described and has a rate/price in the contract BoQ e.g. concrete columns/beams, brick walls, etc. Whereas, in the case of variation works not of similar

character e.g. installation of floor tiles vs ceiling tiles.

Similar condition of variation work usually refers to the physical condition, timing and extent of the variation work which are similar to that described and allowed in the contract BoQ. An example of variation works not of similar condition which may be affected by the said three factors is an addition of a concrete beam after completion of all concrete works, in which the character may be the similar but the condition has changed.

Rule 2

Where the varied work is of similar character to work included in the contract but *not* executed under similar condition, the work price or rate in the contract (as far as may be reasonable – PAM 98/IEM) shall be the basis of valuation, (with a *fair adjustment/allowance* for the difference in conditions – PAM 06 & 98/CIDB).

In PAM 06 and CIDB 2000, the said Forms include work executed under similar conditions but there is a significant change the quantity of the work carried out). (JKR DB/T states *making due allowance for any change in the condition..... and/or any significant change in the quantity.....*). Under JKR 203A (rev. 2007), the varied work not executed under similar condition can be considered under this Rule, as the said Form provides for varied work *not of similar character* or *not executed under similar condition*.

Rule 3

As for variation works where the rules 1 & 2 do not apply or where work is not of similar character, (or not executed under similar condition – JKR 203A (rev. 2007) as above described), the valuation shall be at (a fair market rates and prices – PAM 06/CIDB). The BoQ rates shall

be the basis of rates for the same, so far as may be reasonable, in failing which a *fair valuation* shall be made (JKR 203A (rev.2007) and DB/T). PAM 98/IEM has no such provision.

Rule 4

Where the varied work cannot be properly measured and valued (or when the above rules are inapplicable or inappropriate in the circumstances - CIDB), the valuation shall be based upon Daywork rates or prices. Where no such rates or prices, (at actual prime costs of materials, transport and labour – PAM 98), (at actual cost of materials, transport, labour, additional construction plant and scaffolding – PAM 06), plus 15%, which the percentage shall include for the use of all ordinary plant, tools and scaffolding, supervision, overheads and profit (standing plant and standing scaffolding – PAM 06).

The CIDB Form includes for all other loss, expense, costs and damages incurred or in-connection with the varied works. Valuation under this Daywork Rule is also provided under Clause 25.2 of JKR203A (rev. 2007), which is similar in many respect.

Under JKR PWD DB/T, Clause 28.4 states that if a fair valuation is *Dayworks, the valuation shall comprise the prime cost.....plus 15%....* and Clause 28.6 is a 'catch all' provision for any other circumstances where it is stated that if any of the preceding rules cannot be applied then *a fair valuation shall be made*.

Rule 5

Where the varied work involves items to be omitted, the rates or prices in the contract shall determine the valuation of items omitted. If omissions substantially vary the conditions under which any remaining items of work are carried out, the rates or prices of such

remaining items shall be valued under Rule 2 (and Rules 1 or 3 – PAM 06), (and Rules 3 or 4 - CIDB), Rule 3 (JKR203A(rev. 2007)).

Provisional Quantity

Under PAM 06 Clause 11.6(f), the said form provides that in respect of Provisional Quantity, the quantities stated in the Contract Documents shall be re-measured by the Quantity Surveyor based on actual quantities executed. The rates and prices in the Contract Documents shall determine their valuations.

However, under JKR 203A(rev. 10/83), Clause 25(c) provides for the valuation of re-measured works shall be in accordance with Rules 1, 2 and 3 above. Under JKR 203A(rev. 2007), the actual re-measurement of the work shall be ascertained in accordance with Clause 25.1, which is basically Rules 1, 2, 3, 4 & 5 above.

Recent Case Law on Variations

So, what constitute fair valuation and/or fair allowance/adjustment as stated in the Rules 2 and 3 above? Fair valuation and/or fair allowance/adjustment are usually employed for valuing variation work not of similar character and/or not executed under similar condition.

Essentially, what is fair may not be reasonable nor what is reasonable is fair. A fair valuation or fair allowance/adjustment on the contract rate/price must be construed and considered together with the circumstances of the variation work. For example,

A market rate for a variation work may be reasonable to the Client, but under the circumstances of the variation work (e.g. under dissimilar condition), it may not be fair to the Contractor.



Building materials

The Architect/Engineer/SO/PD (or QS if applicable) may value a fair rate or include a fair allowance/adjustment on the contract rate/price to take into consideration the circumstances prevailing at the time of execution of the variation work. This fair rate may be far higher than the market rate or contract rate/price, which to the Employer or others not knowing, may seem most unreasonable or unrealistic. Therefore, the Architect/Engineer/SO/PD (or QS if applicable) will need to decide on the rate or allowance/adjustment in coming to what is fair and reasonable.

According to *Building Contract Dictionary - Vincent Powell Smith & David Chappel*, what is fair will depend on the whole of the contractor's pricing.

A fair valuation or fair allowance/adjustment on contract rate/price, usually encompasses consideration based on cost plus or market rate basis together with the circumstances the variation work was subjected to.

In *Weldon v The Commission for New Towns [2000] BLR 496 Technology & Construction Court*, Judge Humprey Lloyd QC, upheld the Contractor's appeal on an Arbitrator's Award which excluded overheads and profit on costs of a variation order by

deciding that a fair valuation has to include each elements usually found in contract rates or prices : costs of labour, plant, material, overheads and profit in the variation rate or price. He also said that it would not be a fair valuation if it did not include something on account for each of these items. The contract was under ICE Form.

In *Henry Boot Construction v Alstom Combined Cycles Ltd [2000] BLR 247*, the Court of Appeal, by majority, found that the relevant variations had to be priced using contract bill rate, notwithstanding the apparent mistake which meant the Contractor was likely to receive a windfall profit. *The sole function of the words "so far as may be reasonable" in Clause 52(1) (b) was to call for comparison between the work covered by variation order and the work priced in the Bills of Quantities. If the difference was very great, the Engineer might take the view that it was not reasonable to apply the bill rates. Otherwise, the Engineer should start his calculations from the bill rates.... (The clause does) not enable the Engineer to open up or disregard the rates on the ground that they were inserted by mistake..."it is the use of the rates in the change to circumstances brought about the variation order that must be reasonable not the rates themselves".*

With the aforesaid case law decisions, it is relatively clear that a fair valuation should include the costs of labour, plant, material, overheads and profit in the variation rate or price.

Summary/Conclusion

All the standard forms of construction/building contract provide for variation or change and its meaning/definition, as well as the rules for the valuation of variations, which are similar in many respects. In general, the term 'Variation' usually means a change,

modification, alteration, revision or amendment to the original intent of the contract and/or its works.

If there is no variation provision in the contract, then any changes would require agreement of the contracting parties, be it between the Employer and Contractor or Contractor and Sub-contractor. The contracting parties would need to renegotiate the contract price and/or rates (and possibly even time, as the case may be), each time a change occurs.

In carrying out the task of valuing variation works, it is pertinent to appreciate and have an in-depth understanding of the valuation rules so that the variation works can be valued properly and accordingly under the contract.

In principle, there are broadly five common rules for valuation of variations that are used in most standard forms of building/construction contract, each providing its criteria and requirement for valuation, accordingly. In the case where the variation work is not of similar character and/or not executed under similar conditions, the Architect/Engineer/SO/PD (or QS, if applicable) in coming to a fair valuation or allowance/adjustment on the price or rate will need to consider and decide based on what is fair and reasonable under the circumstances.

Depending on the form used, the Architect's/Engineer's/SO's/PD's written instructions are usually required for ordering and carrying out variation works. They (or the QS, if instructed or provided for in the form) are responsible for the valuation of variation works in accordance with the rules provided under the applicable contract. As such, they are bound to discharge their knowledge and skills in undertaking the valuation task, professionally and accordingly. 

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References are also made to several Malaysian standard forms of contract, namely;

- i. PAM Forms of Building Contract (1998 & 2006)
- ii. JKR/PWD Forms of Contract (203A – Rev 10/83 & Rev. 2007)
- iii. IEM Conditions of Contract for Works Mainly of Civil Engineering Construction (1st Edition – 1989)
- iv. CIDB Form of Contract for Building Works (2000 Edition)
- v. JKR PWD/ Standard Form of Design & Build/Turnkey Contract (PWD Form DB/T) (2002 Edition).

In the next issue of the MBAM journal the article will answer the question on **“What Are Preliminaries And How To Evaluate Them?”**



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