



**Civil Engineering and Development Department
Technical Circular No. 07/2019**

**Ordering of Variations, Increase in Contract Sum and
Related Authorities in Works Contracts**

Introduction

This technical circular (TC) sets out guidelines, delegated authorities and procedure for approving variations and increase in contract sum in works contracts.

Effective Date

2. This TC takes immediate effect.

Effect on Existing Circulars

3. This TC supersedes Civil Engineering and Development Department TC No. 08/2010 which is hereby cancelled. The revisions are mainly to update the content arising from the updating of the Stores and Procurement Regulations (SPR) and Financial Circular (FC) No. 7/2017.

Background

4. SPR 520 specifies the conditions under which bureaux and departments can authorise variations to a works contract. The Schedule of Authorities for Variation of Contracts is set out in Appendix V(B) of SPR.

Measures for Avoiding Variation

5. During the design stage, the project officers and consultants must ensure that up-to-date design standards and maintenance requirements are followed. Relevant drawings and data must be forwarded to the concerned maintenance authorities for their comments. The maintenance authorities must also be asked to confirm their acceptance of the design (after incorporating any necessary changes) and that the works, if carried out to the agreed design and specifications, will be accepted for maintenance. This can avoid the ordering of variations

at the construction stage for the purpose of satisfying maintenance requirements.

6. Where variations are caused by new requirements from the maintenance authorities, their overall financial implications must also be assessed and made known to the maintenance authorities. The maintenance authorities must be asked to consider whether or not the new requirements can be waived or, if they cannot be waived, whether they can be implemented by the maintenance authorities after completion of the works contract.

Considerations Before Ordering Variation

7. Under no circumstances shall additional works outside the approved scope of the project be ordered. The contract sum, the administrative cap on project expenditure¹ and the Approved Project Estimate (APE) should be checked before ordering any variation. If the proposed variation would result in the contract sum being exceeded, requirements set out in paragraphs 24 to 27 shall be complied with. In accordance with FC No. 7/2017, if the proposed variation would result in the administrative cap being exceeded, prior approval for an additional allocation of funds within the APE shall be obtained. If the proposed variation would result in APE being exceeded, prior approval for an increase in APE shall be obtained.

8. Should variations be found necessary, the possibility of other more economical or efficient options for procuring the works must be considered. These include using an existing term contract or effecting a supplemental agreement with the contractor or requesting other parties to carry out the works.

9. Notwithstanding the above, the overall financial implications of ordering a variation must be ascertained before a decision to order the variation is made. The overall financial implications shall include but are not limited to the amount of possible extensions of time, the amount of potential entitlement to disruption or prolongation costs, the amount of liquidated damages that may be foregone, the effect on the contract sum and whether the administrative cap or the APE will be exceeded. This requirement shall apply to all variations irrespective of their direct costs.

Authorities for Approving Variations and Increase in Contract Sum

10. The delegated authorities for approving variations and increase in contract sum are applicable to works contracts for which funds are provided from the following sources:-

- (a) under heads of expenditure for which the Director is the Controlling Officer as designated in the printed Estimates, or
- (b) by means of an allocation warrant issued to the Director and for which he becomes accountable by virtue of Section 14(5) of the Public Finance Ordinance, Cap. 2.

¹ According to paragraph 36 of FC No. 7/2017, in order to avoid locking up resources unnecessarily, the Treasury Branch (TsyB) will “freeze” the savings arising from contracts awarded at prices substantially lower than the provision earmarked for these contracts in the APE. Bureaux or works departments should not spend against such savings. For Resource Allocation Exercise (RAE) purpose and monitoring of project spending, the reduced project estimate will be the administrative cap on the project expenditure.

11. SPR 520(b) provides that the Director, or a designated officer of appropriate rank, may approve any number of variations to a works contract which are inevitable and which do not increase the “Original Contract Value”, provided that all relevant factors, including rates, are no less favourable. This generally refers to variation that results in saving or has no cost implication. Authority is delegated to the following officers up to the limits stated below:-

Approval of variations (i.e. Item A.I.(a) in Appendix V(B) to SPR) which do not increase the Original Contract Value	
Rank of Officer	Authority Limit for each variation that results in saving
Public officers at Engineer level or equivalent	Up to a limit of –\$350,000 for each variation
Public officers at Senior Engineer level or equivalent	Up to a limit of –\$1.4 million for each variation
Public officers at D1 rank	Up to a limit of –\$4.0 million for each variation
Public officers at D2 rank or above	Up to a limit of –\$7.0 million for each variation

For capital works contracts adopting General Conditions of Contract (GCC) form, the term “Original Contract Value” means the value of the Contract Sum as defined in the General Conditions of Contract less the contingencies allowed for in accordance with the contract terms². For term contracts adopting GCC form, the term “Original Contract Value” means the estimated value of each Works Order less the contingencies specified in that Works Order³. “Contingencies” covers any Provisional Sums, Contingency Sums and daywork. Notwithstanding the authorities delegated in this paragraph, the officer responsible should seek the prior agreement of an officer at D2 rank or above before ordering any variation if such variation will incur significant contractual and financial implications.

² For capital works contracts adopting NEC form, the term “Original Contract Value” means the Forecast Total of the Prices in the Grand Summary of the Activity Schedule or Bill of Quantities, less the contingencies allowed for in accordance with the contract terms.

³ For term contracts adopting NEC form, the term “Original Contract Value” means the calculated total of the Prices of each Task Order less the contingencies specified in that Task Order.

12. Pursuant to SPR 520(c), provided that funds are available (i.e. APE or approved commitment not exceeded), any variation to a works contract which will increase the Original Contract Value, or any increase in contract sum or any extension of contract period for term maintenance contracts (see Secretary for Environment, Transport and Works' memo at reference (d)) must be approved by the appropriate authorities specified in Appendix V(B) of SPR. In addition to the above authorities set out in the SPR, this TC specifies that the authority limit for a public officer at D1 rank to approve each variation which increases the Original Contract Value is up to \$4 million. For the avoidance of doubt, the authority limits are stated below:-

Approval of variations (i.e. Item A.I.(a) in Appendix V(B) to SPR) which increase the Original Contract Value	
Rank of Officer	Authority Limit for each variation
Public officers at Engineer level or equivalent	Up to a limit of +\$350,000 for each variation
Public officers at Senior Engineer level or equivalent	Up to a limit of +\$1.4 million for each variation
Public officers at D1 rank	Up to a limit of +\$4.0 million for each variation
Public officers at D2 rank or above	Up to a limit of +\$7.0 million for each variation

13. Pursuant to SPR 520(d), public officers in exercising their delegated authorities shall interpret the limits specified in Appendix V(B) of SPR strictly and shall not evade the limits by including items which have the effect of bringing down the original increase in contract value had those items not been included. Public officers shall also guard against evasive acts of deliberately omitting unrelated works to bring the net value of a variation to within the authorized limits. Further, savings arising from variations for reduction in contract requirements under SPR 520(b) should not be mixed up with or used to offset the value of variations procured under Items A.III, A.IV, A.V, and E.I of Appendix V(B) of SPR.

14. In respect of contracts for which funds are provided as in paragraph 10(a) above but are managed by other agencies under the authority of allocation warrants issued to them, the authorities to approve variations shall be exercised by the Controlling Officers to whom the allocation warrants were issued and/or relevant officers in his/her department.

Procedure for Ordering Variations in Works Contracts Administered by Consultants

15. When the need to order a variation arises, the Engineer⁴ must assess its value in

⁴ In NEC contracts, the corresponding terminology is *Project Manager, Supervisor, Service Manager* or their representatives as appropriate.

order to determine whether or not prior approval from the Employer is required. For the purpose of this TC, the value of the variation shall include the estimated cost of the varied work and any likely prolongation/disruption costs. The Engineer⁴ shall also assess the effect of the variation on the approved contract sum, liquidated damages foregone, resident site staff costs and other commitments to expenditure. Such assessments must be recorded in writing and filed properly.

16. When prior approval from the Employer is not necessary, the Engineer⁴ shall copy the variation order to the Employer with a full account of why the variation is needed including its estimated value and breakdown. The Engineer⁴ shall provide further information if requested by the Employer.

17. When approval from the Employer is necessary, the Engineer⁴ shall seek the prior approval in writing by submitting to the Employer at least the following information:-

- (a) details of the variation including a draft variation order⁵;
- (b) reasons for the variation;
- (c) confirmation that all relevant matters including the alternatives, options and measures for avoiding the variation have been considered;
- (d) confirmation that the variation is necessary for completion of the Works or desirable for achieving satisfactory completion and functioning of the Works;
- (e) value of the variation with breakdown, including the estimated cost of the varied works and any likely prolongation/disruption costs;
- (f) time implication of the variation;
- (g) liquidated damages⁶ foregone, additional resident site staff costs and other commitments to expenditure;
- (h) whether increase in contract sum is required; and
- (i) a current financial statement and confirmation of funding availability.

18. On receiving the application, the officer responsible shall assess the application and respond within the time specified in the consultancy agreement.

19. If approval from the Director is required, the officer responsible shall submit his recommendation via his Office Head with full supporting details for the Director's consideration. The project office shall ensure that all items given in the Checklist at **Appendix A** to this TC are included in its recommendation to the Director and enclose the completed Checklist with its recommendation.

⁵ In NEC Engineering and Construction Contracts, the corresponding terminology is *Project Manager's* instruction. In NEC Term Service Contracts, the corresponding terminology is *Service Manager's* instruction.

⁶ In NEC contracts, the corresponding terminology is delay damages.

20. Approval for increase in contract sum, if required, should be sought at the same time. Variations, which will increase the contract sum, must not be ordered before the increase in contract sum is approved.

Procedure for Ordering Variations in In-house Works Contracts

21. When the need to order a variation arises, the Engineer⁴ or the officer responsible, as the case may be, shall assess its value in accordance with paragraph 15 above in order to determine whether or not prior approval from public officers at higher rank stipulated in Appendix V(B) of SPR is required and seek such approval as appropriate. The Engineer⁴ or the officer responsible should also assess the effect of the variation on the approved contract sum, administrative cap and APE. Such assessments must be recorded in writing and filed properly.

22. If approval from the Director is required, the Engineer⁴ or the officer responsible shall submit his recommendation via his Office Head with full supporting details and the completed Checklist as stated in paragraph 19 above.

Procedure for Notification of Increase in Value of Variations Ordered

23. If due to any reason other than contract price fluctuation the value of a variation exceeds its estimate made at the time approval was given, the following actions are required:

- (a) If the increase is due to a change in scope or a change in the nature of the original variation, the whole variation as changed shall be treated as a new variation and all necessary approvals as required in this TC shall be obtained;
- (b) If the increase is due to any reasons other than sub-paragraph (a) above, the public officer of appropriate rank by referring to paragraph 12 above shall be notified (via the original approving officer) with explanations of such increase. Reasons for an increase in value, which requires notification, may include under-estimation, remeasurement and change in rates etc. For the avoidance of doubt, if the increased value of the variation in the aforesaid case is still within the approval limit of the original approving officer, only notification to the original approving officer is required.

Procedure for Increase in Contract Sum

24. Examples of additional payment in accordance with the terms of the contract which will give rise to increase in the contract sum are variations, price fluctuations, certified claims, remeasurement and arbitration awards. For the purpose of this TC, the value of certified claims may be taken as the Engineer's⁴ estimate for the claims.

25. The increase in contract sum must not result in:-
- (a) the administrative cap or APE being exceeded; or
 - (b) the funds allocated to CEDD under an allocation warrant being exceeded.

In addition, approval of the relevant Policy Secretary must be sought if funds allocated to the project in the Resource Allocation Exercise, current at the time, are to be exceeded.

26. Any request for increase in contract sum shall be addressed to the appropriate approving officers in accordance with Item A.I of Appendix V(B) of SPR with the following information:-

- (a) original contract sum;
- (b) brief history of previous approval of increase in contract sum, if any;
- (c) proposed increase in contract sum;
- (d) reasons for the proposed increase;
- (e) confirmation that the additional payment is in accordance with the terms of the contract; and
- (f) other relevant remarks.

27. When approval from the Director is required, a brief description of the contract shall also be given in addition to information listed in paragraph 26 above.

Approval of Alternative Design and Additional Works Outside the Terms of the Original Contract

28. Pursuant to Item A.II of Appendix V(B) of SPR, public officers at D1 rank or above can approve the acceptance of an alternative design, method, etc, proposed by a contractor during the course of the Works, subject to there being no additional cost implications or no additional works outside the terms of the original contract.

29. In accordance with SPR 520(e), contract variations, especially those which are not provided for in the original contract, may amount to new procurements. For contract variations amounting to new procurements covered by the Agreement on Government Procurement of the World Trade Organisation (WTO GPA), the responsible officer shall ensure that all relevant requirements of WTO GPA are complied with. In case of doubt as to whether contract variations amount to new procurements in the context of WTO GPA, the responsible officer should seek legal advice from Legal Advisory Division (Works) of the Development Bureau (LAD(W)/DEVB).

30. Any submission to the Permanent Secretary for Financial Services and the Treasury (Treasury) (PSTsy) under Items A.III and A.IV of Appendix V(B) of SPR shall be made by the relevant Office Head. This submission shall be copied to the Director.

Extra-contractual Settlement of Claims

31. In accordance with Item E.I of Appendix V(B) of SPR, the Director can approve, on the advice of LAD(W)/DEVB, payment of a claim which is not certified and is not the subject of an arbitration award or an award of the court, subject to funds being available and provided that the accumulated value of such payments does not exceed the amount specified under Sub-item E.I(a)(i).

32. For any proposed extra-contractual settlement, either involving payment by the Government at a value beyond the delegated authority of the Director as given in SPR or involving acceptance of payment from the contractor, the submissions to PSTsy seeking approval for settlement should be cleared by the Director, before being dispatched by the department.

Timing in Seeking Approval

33. It is the responsibility of officers administering contracts to ensure that early action is taken to obtain all necessary approvals required under this TC.

Enquiries

34. Enquiries on this TC should be addressed to the relevant contract advisers.

References

- (a) The Stores and Procurement Regulations (SPR)
- (b) Project Administration Handbook, Chapter 7
- (c) FC No. 7/2017 - Capital Works Programme
(http://ref.ccgo.hksarg/fbfc/en/FC07_2017.pdf)
- (d) SETW's memo ref. (01AGR-01-4) in ETWB(W) 510/30/01 dated 27.11.2006 on the subject "FSTB Circular Memorandum 16/2006 - SPR"

(Signed)

(Ricky C K LAU)
Director of Civil Engineering and Development

**CHECKLIST FOR APPLICATION FOR ORDERING VARIATION
FOR DCED'S APPROVAL**

The following information/ supporting documents should be provided in an application for ordering variation for DCED's approval in accordance with CEDD TC No. 07/2019. Project Offices should also read CAU's bulletin board entitled "Other special circumstances/ common mistakes in VO application" to include necessary details/ avoid common mistakes in their application for ordering variation.

[Please enclose this checklist with your application]

[Please put a tick to those items checked]

The checklist is applicable to both conventional GCC contracts and NEC contracts. For NEC contracts, Project Office should pay attention to the footnotes which describe the alternative terminology and requirements for NEC contracts.

- Brief summary of the **purpose** of the proposed variation order (VO)¹
- Detailed description of the **existing situation** of the Works related to the VO¹
- Detailed description of the **matter/ events** arisen leading to the need for a VO¹
 - Supporting documentation showing the matter arisen, e.g. letter from maintenance authority imposing new requirements on the design should be enclosed.
- Detailed description of the proposed **revision** to the design/ methodology in carrying out the Works in response to the matter arisen under the existing situation as mentioned above -
 - Drawings should be enclosed to show the proposed revision.
 - Supporting documentation showing the feasibility of the proposed VO¹, e.g. acceptance of the proposed revision by the maintenance authorities or the design review authorities concerned.
- Reason/ justification for the VO¹ being **necessary for the completion** of the Works or **desirable for achieving satisfactory completion and functioning** of the Works² –
 - Along with the reason, the Project Office should explicitly confirm in the memo that they consider the VO¹ being necessary for the completion of the Works or desirable for achieving satisfactory completion and functioning of the Works.
- Reason/ justification for **not being possible to avoid** the proposed VO¹, having

¹ In NEC Engineering and Construction Contracts, *Project Manager's* instruction shall be applicable. In NEC Term Service Contracts, *Service Manager's* instruction shall be applicable.

² Although no explicit clause in NEC Contracts stipulates similar requirement as GCC 60(1) for giving instructions changing the Works Information / the Service Information / Task Order, this requirement should be applicable to NEC Contracts for the sake of effective administrative control.

considered all available alternatives, options and measures –

- Please describe any alternatives, options and measures considered (e.g. utilising term contractors, effecting supplementary agreement, liaising for others to take up the additional works etc.) and why they are rejected.
- Confirmation (with justification) that the works under the VO¹ are within the terms of the contract (if additional works are being involved) –
- Estimated **value**³ of the proposed VO¹ –
 - Value included provision for Contract Price Fluctuation
 - Value excluded provision for Contract Price Fluctuation

***The Project Office shall confirm in the memo that the estimate value³ of the VO¹ is in order.*

*** The estimated value³ of the proposed VO¹ should also include the cost of any other cost implication/ commitment (e.g. prolongation/ disruption costs, other commitments to expenditures under the Contract etc.) which would affect the Contract Sum.*

*** Contingency should NOT normally be included.*
- Supporting documentation for the estimated value³ of the VO¹ –
 - Breakdown of the estimated value³
 - Build-up details of any new rate in the Breakdown
 - Calculation details of the estimate of provision for Contract Price Fluctuation
- Assessment on **time and any other cost implication/ commitment** –
 - Any potential EoT⁴?
 - EoT⁴ for the related Section?
 - EoT⁴ for all Sections under the Contract?
 - Any Liquidated Damages⁵ foregone?
 - Any prolongation/ disruption costs?
 - Any additional resident site staff costs?
 - Any other commitments to expenditures?
 - Any increase in Approved Contract Sum?

***Supporting documentation / breakdown for the above should be provided as appropriate, e.g. the current and the forecast revised master programme taking into account the issuance of the VO¹.*

***If the related works are entrusted to CEDD, the Project Office should provide documentation showing the client department's acceptance of the revised design*

³ For NEC Contracts, estimated changes to the Prices shall be applicable.

⁴ For NEC Contracts, delay to the Completion Date, Key Date or Task Completion Date shall be applicable.

⁵ For NEC Contracts, delay damages shall be applicable.

and the estimated value³ of the VO¹.

- Funding** availability –
 - Confirmation of availability of funding and the funding source of the VO¹
 - Contingency available under the funding source prior to ordering of the VO¹
 - Contingency available under the funding source after ordering of the VO¹
- **The Project Office should enclose the current financial statement of the Contract and the funding source with incorporation of the proposed VO¹*
- Other related issue –
 - Any abortive works carried out on site as a result of the proposed VO¹?
- The draft VO¹