**Section VII *Contractor*’s design**

**VII:1 Definitions relating to *Contractor*’s design**

| **VII:1** | **Definitions relating to *Contractor*’s design** | **Guidelines** |
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| (1) | “**Certified Working Drawing**” means a drawing prepared by the Designer and endorsed as being checked and approved by the Independent Checking Engineer.  “**Check Certificate**” means a certificate, in the form specified in **Appendix** [*insert reference*] to the *additional conditions of contract*, issued by the Independent Checking Engineer certifying that the *Contractor*’s Design or Cost Savings Design has been independently checked and complies in all respects with the terms and conditions of the contract.  “***Contractor*’s Design**” means that part or those parts of the design of the permanent works for which the *Contractor* has elected or is required in accordance with the Scope to prepare design calculations and drawings and which has been accepted by the *Client*, including, where appropriate, any further design which the *Contractor* has to carry out as a result of any amendment to the design required under sub-clause (7) or (8) of ACC Clause VII:3 and / or any change to the works for the *Contractor*’s Design instructed by the *Project Manager*.  “**Cost Savings Design**” means the cost savings design proposal for any part of the *works* submitted by the *Contractor* under ACC Clause VII:2 and any amplification or amendment thereto and accepted by the *Client* with or without amendments, including, where applicable, any further design which the *Contractor* has to carry out as a result of any amendment to the design required under sub-clause (7) or (8) of ACC Clause VII:3 and / or any change to the works for the Cost Savings Design instructed by the *Project Manager*.  “**Designer**” means the person, firm or company responsible for the design of the *Contractor*’s Design or Cost Savings Design whose qualifications, skill and experience are deemed satisfactory by the *Client*.  “**Independent Checking Engineer**” means the person, firm or company employed by the *Contractor* and responsible for the independent checking of the *Contractor*’s Design or Cost Savings Design whose qualifications, skill and experience are deemed satisfactory by the *Client* and who is independent of the Designer and the *Contractor*.  “**Temporary Works**” means all temporary work of every kind required for the construction, Completion and maintenance of the *works.* |  |

**VII:2 Cost Savings Design**

| **VII:2** | **Cost Savings Design** | **Guidelines** |
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| (1) | The *Contractor* may at any time during the continuance of the *works* propose to the *Project Manager* a cost savings design proposal in respect of a part of the *works* with sufficient details and justifications to show   1. the Prices can be reduced by an amount of a lump sum, and/or 2. the time for Completion of the whole of the *works* or any *section* thereof can be reduced, and/or 3. the future operation and maintenance cost of the works can be reduced, and/or 4. the efficiency or value to the *Client* of the *works* can be improved, and/or 5. the construction productivity can be enhanced and/or the requirement for manpower resources can be reduced, and/or 6. any other social benefits. | DEVB TC(W) No. 3/2014 |
| (2) | Any cost savings design proposal clearly states that it is submitted for consideration by the *Client* under this clause and includes   1. an estimate of the amount of the cost of Providing the Works that may be saved, 2. a fully priced and detailed Schedule of Rates as referred to in sub-clause (9) of ACC Clause VII:3, 3. deletion(s) required for the original pricing document, and 4. an estimate of any addition in future operation and maintenance cost.   In assessing the overall cost savings, the *Client* takes into account the additional cost incurred for considering the *Contractor*’s proposal including the *Project Manager*’s cost and addition in future operation and maintenance cost. |  |
| (3) | Before acceptance of the cost savings design proposal, both the *Client* and the *Contractor* agree on   1. the overall cost savings as assessed by the *Client*, and 2. any revision (on the basis of the change in value as assessed by the *Client* and change in the Completion Date) to the rate of delay damages and/or minimum rate of delay damages for the *works* or, as the case may be, the relevant *section* to which the cost savings design proposal belongs. |  |
| (4) | Before acceptance of the cost savings design proposal, the *Project Manager*   1. confirms that it is compatible with the provisions of the Scope, subject to any modifications to the Scope in respect of particular methods of construction or materials not included in the Scope proposed by the *Contractor* and accepted by the *Client*, 2. obtains confirmation from the *Client* that the proposal is acceptable to the *Client*, and 3. obtains confirmation from both the *Contractor* and the *Client* that they agree on the matters mentioned in sub-clauses (3)(a) and (b) of this clause. |  |
| (5) | The *Project Manager* conveys the *Client*’s decision to accept or reject the cost savings design proposal to the *Contractor* within six weeks from receipt of the proposal or a longer period to which the *Contractor* has agreed, and neither the acceptance nor rejection of such proposal by the *Client* vitiates the contract. For the avoidance of doubt, the acceptance of the cost savings design proposal is not a compensation event. If the proposal is rejected, the *Contractor* is not entitled to any compensation event arising from its submission to the *Project Manager* of the proposal and the *Client* bears its own cost for considering the proposal submitted by the *Contractor* under this clause except that the *Contractor* reimburses the *Client* for the *Project Manager*’s cost in doing the same. The *Client* is entitled to deduct such cost from any sums due to the *Contractor* under the contract and/or to recover such cost as a debt from the *Contractor*. |  |
| (6) | If the cost savings design proposal is accepted, the Completion Date is adjusted as agreed between the *Client* and the *Contractor* and the Accepted Programme is deemed adjusted accordingly. |  |
| (7A) | If the cost savings design proposal is accepted, the Prices is reduced by the total amount of the agreed construction cost savings in lump sum for the part of the *works* immediately. The agreed construction cost savings are equally shared between the *Client* and the *Contractor*, the *Project Manager*’s cost and addition in future operation and maintenance cost for a design life in net present value resulted from the Cost Savings Design is borne by the *Contractor*. Upon Completion of the whole of the *works*, the *Contractor*’s share in the agreed construction cost savings due to the Cost Savings Design, after the deduction of the total of the *Project Manager*’s cost and any addition in future operation and maintenance cost for a design life in net present value resulted from the Cost Savings Design, is paid to the *Contractor*. | Sub-clause (7A) is for **Options A and B**, not for Options C and D. |
| (7B) | If the cost savings design proposal is accepted, the Prices remain unchanged. The *Contractor* reimburses the *Client* for the total of the *Project Manager*’s cost and any addition in future operation and maintenance cost for a design life in net present value resulted from the Cost Savings Design. The *Client* is entitled to deduct such cost from any sums due to the *Contractor* under the contract and/or to recover such cost as a debt from the *Contractor* upon completion of the part of the *works* related to Cost Savings Design. Upon Completion of the whole of the *works*, the *Contractor*’s share due to the Cost Savings Design, after the deduction of the total of the *Project Manager*’s cost and any addition in future operation and maintenance cost for a design life in net present value resulted from the Cost Savings Design, is included in the *Project Manager*’s assessment under NEC Clause 54. | Sub-clause (7B) is for **Options C and D**, not for Options A and B. |

**VII:3 *Contractor*’s design (including *Contractor*’sDesign and Cost Saving Design)**

| **VII:3** | ***Contractor*’s design (including *Contractor*’sDesign and Cost Saving Design)** | **Guidelines** |
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| (1) | For the purposes of this clause, *Contractor*’s design includes *Contractor*’s Design and Cost Savings Design. |  |
| (2) | (a) The *Contractor* has in respect of any defect or insufficiency in the *Contractor*’s design the like liability to the *Client*, whether under statue or otherwise, as would an appropriate professional designer holding itself out as competent to take on the *Contractor*’s design, provided always that:  (i) where the *Client* has relied upon the *Contractor* to select equipment, plant, materials and goods required by the *Contractor*’s design to be incorporated into the *works* the *Contractor* ensures that all such equipment, plant, materials and goods are reasonably fit for the purpose for which they are intended and of good quality, and  (ii) subject to sub-clause (2)(a)(i) above, in no circumstance the *Contractor* is obliged to ensure that the *Contractor*’s design is fit for the purpose for which it is intended. |  |
|  | (b) The liability of the *Contractor* referred to in sub-clause 2(a) above applies independent of any question of fault on the part of the *Contractor* or any Tier Subcontractor and are not invalidated in any respect by any error made by the *Contractor* or any Tier Subcontractor in the *Contractor*’s design or any submission to the *Project Manager* for checking or acceptance. |  |
|  | (c) The Designer prepares all calculations and drawings relating to the *Contractor*’s design which are subject to a Check Certificate. |  |
|  | (d) If at any time the *Project Manager* has substantial cause for dissatisfaction with the conduct or performance of the Independent Checking Engineer, it notifies the *Client* accordingly. The *Contractor*, upon receiving written notice from the *Client*, ceases to employ such person, firm or company and immediately replaces it by another whose qualifications, skill and experience are satisfactory to the *Client*. |  |
| (3) | The *Contractor*’s design is to be compatible with the provision of the Scope. Notwithstanding the aforesaid, the *Contractor* may propose modifications to the Scope in respect of particular methods of construction or materials not included in the Scope. In such cases, the *Contractor* immediately advises the *Client* of such proposals through the *Project Manager.* The *Project Manager* conveys the *Client*’s decision to the *Contractor* within a reasonable period, and neither the acceptance nor rejection of such proposals by the *Client* vitiates the contract. Acceptance or rejection of such proposals by the *Client*, or any change to the Scope resulting from the *Client*’s acceptance of such proposals, is not a compensation event. The *Contractor*’s design accepted by the *Client* is deemed part of the Scope provided by the *Contractor*. |  |
| (4) | Within a reasonable period prior to the commencement of that part of the *works* to be constructed in accordance with the *Contractor*’s design, and from time to time as the *Project Manager* requires, the *Contractor* submits to the *Project Manager*:  (a) two certified copies of the *Contractor*’s design,  (b) Check Certificates,  (c) Certified Working Drawings, and  (d) satisfactory evidence of professional indemnity insurance as referred to in ACC Clause VII:5. |  |
| (5) | The *Project Manager* notifies the *Contractor* within a reasonable period whether or not the documents submitted meet the requirements of the contract. The *Contractor* does not commence the construction of such part of the *works* until receipt of confirmative notification from the *Project Manager*. |  |
| (6) | Prior to the commencement of the part of the *works* of the *Contractor*’s design, the *Contractor* supplies to the *Project Manager* [*insert number of copies required*] copies of the Certified Working Drawings of the *Contractor*’s design together with the soft copy in accordance with the contract. |  |
| (7) | If at any time it becomes apparent to the *Project Manager* that any drawing and/or document submitted by the *Contractor* does not comply with the contract in any respect whatsoever, then the *Contractor* makes all amendments to such drawing and/or document the *Project Manager* deems necessary, and such amended drawing and/or document are reviewed by the Designer and are subject to a further Check Certificate. The *Contractor* bears the full cost of complying with this sub-clause, and reimburses the *Client* the cost of any work or design done by the *Client* which has been rendered abortive by any such amendments. The *Contractor* is not entitled to compensation event nor an adjustment of the Prices in respect of the cost of complying with this sub-clause. |  |
| (8) | If at any time it becomes apparent to the *Contractor* that an amendment to the *Contractor*’s design is required for the proper completion of that part of the *works* involved in such design, then it  (a) immediately advises the *Project Manager* of the proposed amendment, and  (b) resubmits documents to the *Project Manager* in accordance with sub-clause (4) of this clause, provided that  (i) the finished appearance of the *works* remains substantially unaltered,  (ii) there is no increase in the Prices nor any compensation event granted to the *Contractor*, and  (iii) the *Contractor* reimburses the *Client* the cost of any work or design done by the *Client* which has been rendered abortive by any such amendments. |  |
| (9) | The work to be constructed in accordance with the *Contractor*’s design is priced as a lump sum for [\*related activities in the Activity Schedule *(for Option A/C)* or \*for related items in the Bill of Quantities *(for Option B/D)*] accompanied by a fully priced and detailed Schedule of Rates. The lump sum price for such [\*activities/\*items] includes:  (a) the cost of producing the *Contractor*’s design,  (b) the cost and fees for obtaining the Check Certificates,  (c) the cost of providing the *Project Manager* with all calculations, documents (including maintenance manuals), and drawings for the *Contractor*’s design,  (d) the full value of the work (including without limitation, spare parts) constructed in accordance with the *Contractor*’s design and all the risks, liabilities and obligations of the *Contractor* under the contract, and  (e) the cost of all samples and testing thereof and testing of the work constructed in accordance with the *Contractor*’s design. | *Project office to amend to suit the appropriate Option.* |

**VII:4 Independent Checking in respect of Temporary Works**

| **VII:4** | **Independent Checking in respect of Temporary Works** | **Guidelines** |
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| (1) | When considered necessary by the *Contractor*, specified in the contract or subsequently instructed by the *Project Manager* or the *Supervisor*, the design of any Temporary Works is to be checked and certified by an engineer independent of the *Contractor* and not associated with the design of the Temporary Works (“**independent checking engineer**”). The design so checked and certified is hereinafter referred to as the “**certified design**”. | WBTC No. 3/97  Modified fromSCC26 |
| (2) | The independent checking engineer is to be a professionally qualified engineer and a member of the Hong Kong Institution of Engineers or equivalent, whom the *Contractor* considers has suitable experience and is acceptable to the *Project Manager*. |  |
| (3) | The independent checking engineer before certifying the design of any Temporary Works in the checking certificate   * 1. examines the *Contractor*’s detailed design and method statements concerning the design, erection, use and removal of the Temporary Works, and   2. considers the ground conditions, the adequacy of foundations and support of the Temporary Works and any other factors which may affect the stability and safety of such Temporary Works during their erection, use and removal so that it is able to certify that the Temporary Works are properly and safely designed using all reasonable skill and care. |  |
| (4) | Before commencing construction of any such Temporary Works identified as requiring certification by independent checking engineer, the *Contractor* submits the following documentation to the *Project Manager* in sufficient time for the *Project Manager* to examine and satisfy itself that the documentation contains no obvious deficiency and that the independent checking engineer has carried out its duties set out in sub-clause (3):   1. detailed design and method statements concerning the design, erection, use and removal of the Temporary Works, and 2. the original checking certificate signed by both the independent checking engineer and by or on behalf of the *Contractor*.   Upon being so satisfied the *Project Manager* issues its consent in writing for such Temporary Works to commence, with due regard to the *Contractor*’s programme. |  |
| (5) | The *Contractor* ensures that any Temporary Works are erected, used and removed in accordance with the certified design and method statements. If the *Contractor* wishes to deviate from the certified design, the *Contractor* submits to the *Project Manager* further certification that any change has been properly and safely designed and has been checked and found satisfactory by the independent checking engineer, in accordance with its duties set out in sub-clause (3), and the documentation referred to in sub-clause (4) prior to the commencement of construction of such Temporary Works. |  |
| (6) | In all cases where the loading of any Temporary Works is applied as a separate operation after completion of their construction, before such loading is applied, the *Contractor* submits to the *Project Manager* a further certificate signed by or on behalf of the *Contractor* and by the independent checking engineer confirming that the Temporary Works have been constructed in accordance with the certified design. In all cases where the loading is an integral part of the construction of any Temporary Works, the *Contractor* submits to the *Project Manager* such a further certificate as soon as is reasonably possible after the construction of the same. |  |
| (7) | No checking certificate certified by the independent checking engineer, with or without amendment, absolves the *Contractor* from its liability under the contract for the design, erection, use or removal of the Temporary Works. |  |
| (8) | If instructed by the *Project Manager*, the *Contractor* provides a method statement for any Temporary Works not subject to checking by independent checking engineer, which include but are not limited to excavation and temporary access structures. |  |
| (9) | If at any time and for any reason related to the work of the independent checking engineer, the *Project Manager* is dissatisfied with the performance of the independent checking engineer, the *Project Manager* notifies the *Contractor* giving reasons for such dissatisfaction. If the independent checking engineer does not remedy the situation within a reasonable time, the *Project Manager* may, by a further notice, require the *Contractor* to dismiss the independent checking engineer, and the *Contractor* does so with immediate effect, does not re-employ it again in connection with the *works* and replaces the independent checking engineer with a replacement which complies with sub-clauses (1) and (2). |  |

**VII:5 Professional Indemnity Insurance in respect of *Contractor*’s Design, Cost Savings Design and Temporary Works**

| **VII:5** | **Professional Indemnity Insurance in respect of Contractor’s Design, Cost Savings Design and Temporary Works** | **Guidelines** |
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| (1) | The *Contractor*   1. effects and maintains, and 2. procures that each of the Designer, the Independent Checking Engineer and the designer and independent checking engineer of the Temporary Works appointed or engaged by the *Contractor* effects and maintains   with well established insurers of repute which are acceptable to the *Project Manager*, professional indemnity insurance (“**PII**”) for its obligations in relation to the design of any part or all of the *Contractor*’s Design, Cost Savings Design and Temporary Works to be carried out by or on behalf of the *Contractor* pursuant to the contract.  The minimum amount of the PII for any one occurrence or series of occurrences arising out of any one event, or each and every claim is as stated in the following table. The PII provides cover from the Contract Date until the end of the period as stated in the following table.   |  |  |  |  | | --- | --- | --- | --- | |  | *Contractor*’s Design | Cost Savings Design | Temporary Works | | minimum amount | [*insert the amount*]\* | As notified by the *Project Manager* to the *Contractor* | [*insert the amount*]\* | | period of insurance | [*insert the time*]\* years after the date of Completion of the whole of the *works* | [*insert the time*]\* years after the date of Completion of the whole of the *works* | 6 years after the date of Completion of the whole of the *works* | | \* Project office to insert the figures |
| (2) | The *Contractor* immediately notifies the *Project Manager* if such PII ceases to be available or otherwise is not maintained in accordance with this clause or for any reason becomes void or unenforceable. |  |
| (3) | If the PII policy is project specific, the maximum deductible/excess allowed under the PII policy is limited to a maximum of 20% of the minimum amount required in sub-clause (1). |  |
| (4) | If the PII policy contains a limit of indemnity for the period of insurance, then either:   1. the limit of indemnity in the aggregate for all claims for the period of insurance is reinstated in full upon exhaustion of the limit of indemnity by reason of indemnity payments made on account of any claim, loss, damage, liability, cost or expense paid or payable under the PII policy until the total amount of indemnity payable by the insurer under the PII policy reaches X times the minimum amount required in sub-clause (1), or 2. the limit of indemnity in the aggregate for all claims for the period of insurance is not less than X times the minimum amount required in sub-clause (1), or 3. the limit of indemnity for any one occurrence or series of occurrences arising out of any one event, or each and every claim under the PII policy is not less than X times the minimum amount required in sub-clause (1).   If the period of insurance under the PII policy is twelve months or less, **X is 2**.  If the period of insurance under the PII policy exceeds twelve months, **X is 3**. |  |
| (5) | The *Contractor* submits the following documents to the *Project Manager* for acceptance   1. within 60 days from the Contract Date or the respective dates of appointment or engagement of the Designer, the Independent Checking Engineer and the designer and independent checking engineer of the Temporary Works, and 2. thereafter, if the PII policy does not cover the entire period of insurance required in sub-clause (1), within 7 days upon the expiry of the earlier PII policy |  |
|  | 1. an undertaking that the current PII policy complies with the terms in this clause in Form [*insert reference*] in **Appendix** [*insert reference*] to the *additional conditions of contract*, and |  |
|  | 1. a certified copy of the full PII policy unless the *Contractor* can demonstrate to the satisfaction of the *Project Manager* that it is not reasonably practicable to provide a certified copy of the full PII policy, in such case the *Contractor* provides a certificate in Form [*insert reference*] in **Appendix** [*insert reference*] to the *additional conditions of contract* issued by the insurer or insurance broker of the PII policy and any information relating to the PII policy that the *Project Manager* may reasonably require. |  |
| (6) | If upon the *Project Manager*’s instruction, the *Contractor* fails to submit evidence that there is in force PII required, the *Client* may effect and keep in force any such PII and pay such premium as may be necessary for that purpose. The *Client* is entitled to deduct such premium, together with expenses incurred, from any sums due to the *Contractor* under the contract and/or to recover such premium and expenses as a debt from the *Contractor*. |  |
| (7) | In determining the period of insurance under a PII policy for the purpose of this clause, any extension or renewal of the PII policy is treated as a separate PII policy and does not have the effect of extending the period of insurance. |  |