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26 May 2021

Legislative Council
Legislative Council Complex
1 Legislative Council Road
Central, Hong Kong

(Attn: Ms. Wendy JAN)

Dear Sirs,

Public Accounts Committee

Consideration of Chapter 6 of the Director of Audit's Report No. 76

**Site formation and associated infrastructure works for development
near Choi Wan Road and Jordan Valley**

With reference to your letter dated 18 May 2021 attaching the enquiries of the Public Accounts Committee on Chapter 6 of the subject Audit Report, we provide our written responses to and/or information on the issues set out in the **Appendix**. The soft copy (in Microsoft Word format) of the responses will be emailed to you separately.

Yours faithfully,

(Victor CHAN)

for Director of Civil Engineering and Development

Encl.

c.c.
STH
SFST
D of Audit


Internal
DCED, DDCED, AD/A, CE/HQ, H(GEO)

PAC's Enquiries	CEDD's Responses
<p>Part I: Introduction</p> <p>1) According to paragraph 1.3 and Note 4 of the Director of Audit's Report No. 76 ("Audit Report"), 5 footbridges had initially been planned to be constructed under the Project. Further to review of the anticipated pedestrian flow conducted by the Civil Engineering and Development Department ("CEDD"), the number of footbridges to be constructed was ultimately reduced by 2 to 3. What were the unforeseeable factors causing a decrease in forecast pedestrian flow resulting in not requiring to construct two footbridges, and was there any decrease in the construction cost?</p>	<p>The implementation of a large scale infrastructural project (from initial planning, feasibility study, investigation, statutory procedures, detailed design, construction to operation) will normally last for several years to more than a decade. During the implementation process, the planning and design of the project may require adjustment or update to cope with the prevailing development need of the district. Accordingly, during different stages of the project, there will be review on original planning and design carried out as necessary in light of the latest development need of the district and the updated information so as to ensure the latest situation in the district has been duly considered in the infrastructure project.</p> <p>CEDD completed 'Planning and Engineering Feasibility Study for Development near Choi Wan Road and Jordan Valley' in 1998, in which five footbridges were proposed to cater for the proposed housing and school developments. Along with the implementation of the project, new housing and school developments in the district were completed progressively. CEDD conducted review on planning and design of the project in a timely manner, and reviewed the pedestrian flow of the district in the years of 2005, 2011 and 2018. It was revealed that the latest forecast pedestrian flows for two proposed footbridges would be less than the forecast prepared in the original planning and could be replaced by improving the at-grade pedestrian crossing in the vicinity. Hence, CEDD recommended omitting the two originally proposed footbridges.</p>

PAC's Enquiries	CEDD's Responses
<p>2) According to Table 3 of paragraph 1.6 of the Audit Report, all Contracts A, B and C were not completed within the original time frame, the actual completion dates were 8.8 months to 13.9 months (i.e. 267 days to 422 days) later than the original contract completion dates. The Audit Report mentioned that the extension of time was granted for the three Contracts, partly due to inclement weather: 211 days for Contract A (Note 8 in paragraph 2.3), 96 days for Contract B (Note 34 in paragraph 4.3) and 99 days for Contract C (Note 38 in paragraph 4.13). What is the definition of "inclement weather" in relation to these contracts / works? Did the Government include any allowance of extension of time due to inclement weather in determining the original contract completion dates? If yes,</p>	<p>The recommendation obtained the consent of relevant bureau/department and was supported by the relevant District Council. Subsequently, the Government gazetted the changes and saved about HK\$27M construction cost for the project.</p> <p>As far as civil engineering construction contract is concerned, inclement weather means "any weather condition which is detrimental to the progress of the Works". The impacts of inclement weather may vary greatly with different types of work. For example, the impact of inclement weather is comparatively little on indoor building works, but significant on outdoor construction. Due to the inherent uncertainty of inclement weather, it is difficult to predict its actual impacts in the preparation of a contract. In order to handle the risk of inclement weather effectively, civil engineering construction contract generally includes provisions for inclement weather allowing contractor to seek and justify extension of time due to inclement weather for the completion of the Works. The Engineer shall assess the actual impacts to the progress of works in accordance with the contract provisions. If it is confirmed that the critical activities are affected by inclement weather, extension of time would be granted accordingly for completion of the Works, but the contractor will not be entitled to extra sum of money. The merit of this mechanism is that it lets the contracting parties to share the unpredictable inclement weather risk based on contract provisions, and is a common, fair and effective risk allocation arrangement between the government and the contractor.</p>

<p>PAC's Enquiries</p>	<p>CEDD's Responses</p>
<p>how many days of allowance were included? If not, will the contractors always be entitled to claim for extension of time due to inclement weather in the future contracts? What measures will you be implemented to avoid the above situation?</p>	<p>In the absence of related inclement weather contract provisions, the contractor is required to bear all unforeseeable inclement weather, who may then reflect the risks in the tender price leading to higher contract price.</p> <p>As to whether there would be any preset allowance of extension of time for inclement weather in determining the original contract completion dates, since inclement weather is unpredictable and its impacts on different type of works is uncertain, we do not provide a preset allowance on the extension of time for inclement weather. Rather, with the adoption of the mechanism mentioned in paragraph 1 above, we can deal with the contractor's claim for extension of time due to inclement weather in a fair way according to contract provisions.</p> <p>As inclement weather would have greater impact on contracts like Contracts A, B and C which involved lots of outdoor construction activities, contractual provisions in relation to inclement weather were provided in these three contracts. The Engineer had to assess the actual impacts of the inclement weather to the progress of works and grant extension of time to the completion of Works, but without extra sum of money.</p> <p>Works department will continue to consider the nature of works and the merits of individual works contract in deciding the risk allocation arrangement for inclement weather. To minimise the impact of inclement weather, the project team, consultant, contractor, etc. would, taking into account actual circumstances, make concerted efforts to develop appropriate mitigation</p>

PAC's Enquiries	CEDD's Responses
	measures with a view to minimizing the impact of inclement weather on the duration of works.
<p>Part 2: Contractual Disputes under Contract A</p> <p>3) Paragraph 2.3 of the Audit Report mentioned that Contractor A was granted extension of time of 422 days. Other than 211 days of extension due to inclement weather, what were the causes of extension of time for the remaining days? Regarding the 422 days, what was the additional cost to be borne by the government?</p> <p>Paragraph 3.7 of the Audit Report mentioned that two flyrock incidents happened during the construction period of Contract A, was there any suspension of works ordered? If yes, how many days of works involved? Was the period of suspension counted in the delayed completion of works?</p>	<p>Contractor A was granted 422 days of extension of time, in which 211 days were due to inclement weather. The remaining 211 days of extension of time was due to encountering unforeseeable and complex ground conditions, including adversely-oriented rock joint and unexpectedly hard rock, which required longer time to handle. Regarding the 422 days of extension of time, Contractor A had not claimed for additional costs compensation and the Government had not incurred extra cost either.</p> <p>In light of the blasting and flyrock incidents, all blasting activities under Contract A stopped immediately pending investigation of the causes of incidents and completion of improvement measures. The two incidents led to suspension of the blasting activities for a total of 101 days. According to results of the subsequent expert review, the major causes of the two incidents were due to unforeseeable and complex rock conditions, and the period of suspension was counted in the delayed completion of works.</p>

PAC's Enquiries	CEDD's Responses
<p>4) Please provide the "Project Administration Handbook for Civil Engineering Works" as mentioned in paragraph 2.18 of the Audit Report.</p>	<p>The relevant excerpts of the "Project Administration Handbook for Civil Engineering Works" is attached (see attached Annex 1)(English version only). The "Project Administration Handbook for Civil Engineering Works" is</p> <div style="text-align: center;">  <p>Annex 1.pdf</p> </div> <p>available from the following website:</p> <p>https://www.cedd.gov.hk/eng/publications/standards-spec-handbooks-cost/stan-pah/index.html</p>
<p>5) Please provide the "Geoguide 2: Guide to Site Investigation" and "Development Bureau Technical Circular (Works) No. 3/2018" as mentioned in paragraph 2.26(b) of the Audit Report.</p>	<p>The "Geoguide 2: Guide to Site Investigation" and "Development Bureau Technical Circular (Works) No. 3/2018" (English version only) are available from the following websites:</p> <p>https://www.cedd.gov.hk/filemanager/eng/content_108/eg2_20171218.pdf</p> <p>https://www.devb.gov.hk/filemanager/technicalcirculares/en/upload/357/1/C-2018-03-01.pdf</p>

PAC's Enquiries	CEDD's Responses
<p>Part 3: Other Issues under Contract A</p> <p>6) Regarding the two flyrock incidents mentioned in paragraph 3.7 of the Audit Report, the one happened in February 2003 caused damages to 5 flats and 8 windows of an estate, which was not reported by the media immediately; and the other happened during blasting on 6 June 2003 where aggregates were scattering onto the Clear Water Bay Road was a serious incident which caused 9 persons injured and 4 vehicles damaged.</p> <p>Regarding the two abovementioned incidents, did the Contractor notify the government immediately after the incidents, and what was the notification mechanism? Should there be any delay in reporting or underreporting, what would be the penalty? Besides, who were responsible for compensation.</p>	<p>After the two flyrock incidents, Contractor A had immediately notified the consultant, project team and the Mines Division of Geotechnical Engineering Office of CEDD according to the reporting mechanism stipulated in the Contract. There was no delay in reporting or underreporting.</p> <p>Should there be any delay in reporting or underreporting, the consultants would warn the contractor, follow up with the contractor on their unsatisfactory performance, and reflect the case in the contractor's quarterly performance report.</p> <p>As for the two flyrock incidents mentioned above, pursuant to the contract requirements, the contractor was responsible for bearing the compensation for those affected individuals and flat owners.</p>

SYNOPSIS

This Chapter provides a handy reference to the various standard documents, forms and information that are regularly used in the preparation of contract documents for civil engineering works using the General Conditions of Contract (GCC) for Civil Engineering Works (1999 Edition). In some cases, standard forms and exact wording to be included in contract documents are reproduced in the Chapter. However, where a printed version of a standard document is available or where the information is contained in a well-known document, the Chapter makes reference to such documents or source rather than reproducing them. Standard documents referred to in this Chapter should be of the latest editions of the General Conditions of Contract for Civil Engineering Works, Standard Method of Measurement for Civil Engineering Works, General Specification for Civil Engineering Works, Sub-contract Articles of Agreement and Conditions for Civil Engineering Works, Contractor Management Handbook and Construction Site Safety Manual. The information in this Chapter would also be useful in the preparation of documents for term contracts using the General Conditions of Contract for Term Contracts for Civil Engineering Works (2002 Edition).

To cater for the wider adoption of New Engineering Contract (NEC) form in public works projects, DEVB has promulgated the “Practice Notes for New Engineering Contract – Engineering and Construction Contract (NEC – ECC) for Public Works Projects in Hong Kong” (referred to as “the Practice Notes”) aiming to provide guidance, performance benchmarking and alignment of practices in the preparation and administration of public works projects using NEC form. The most updated version of the Practice Notes is available at DEVB’s website:

https://www.devb.gov.hk/en/publications_and_press_releases/publications/standard_contract_documents/practice_notes_nec_engineering_construction_contract/index.html

The guidelines provided in this Chapter were originally written for preparation of contract documents under GCC contracts. As the types of contract involved and the composition of contract documents in GCC contracts and NEC contracts are different, project officers are advised to refer to Sections A4.1 and A4.2 of the Practices Notes when they prepare the tender and contract documents for NEC contracts.

Notwithstanding the above, many of the guidelines in this Chapter can still be applied to the preparation of contract documents for NEC contracts.

A contract for civil engineering construction is a very complex legal document containing several inter-related documents each of which plays an important role in defining the obligations and responsibilities of the parties concerned or in providing information on the works to be constructed. It is therefore essential that the contract documents for each contract are prepared with great care and by an experienced professional who has thorough knowledge of the works to be constructed. The documents forming a contract must be scrutinized for comprehensive coverage, accuracy and consistency with one another before tenders are invited.

which are covered by the provisions of the WTO GPA. For contracts not covered by the WTO GPA, departments may decide whether or not to allow joint ventures to tender.

3.8 LANGUAGES TO BE USED FOR TENDER SUBMISSIONS

Article 9 of the Basic Law stipulates that “in addition to the Chinese language, English may also be used as an official language by the executive authorities, legislature, and judiciary of the Hong Kong Special Administrative Region”. It is therefore inappropriate to state in the tender notices and tender documents that tenders should be submitted in English.

3.9 MINIMUM WAGE REQUIREMENTS

The former S for Tsy in his memo ref. (6) in FT 53/88/2 dated 28.2.2000 announces that departments should not stipulate minimum wage requirements in their tender exercises. If departments would like to secure quality services, more effective means should be used, e.g. by specifying in detail the qualifications, experience, training and skills required of the personnel concerned; requesting tenderers to provide references from their previous clients; or using a marking scheme for tender evaluation. Nevertheless, if a department really considers it essential to stipulate minimum wage requirements in a particular tender exercise, it should make a submission with full justifications to the Central Tender Board for prior approval (i.e. before tendering). This will prevent the need to cancel the tender exercise if the Board is not satisfied with the justifications provided.

3.10 NOT USED

3.11 MAXIMUM NUMBER OF CONTRACTS TO BE UNDERTAKEN BY THE SAME CONTRACTOR

There are occasions when procuring bureaux/departments invite tenders for more than one contract in a tender exercise and impose a restriction on the maximum number of contracts each tenderer may secure. Some procuring bureaux/departments have also imposed a restriction on the maximum number of a particular type of contracts (which may be tendered out at one go in the same tender exercise or separately in different tender exercises) that a contractor can undertake simultaneously. SFST in his memo ref. FT 53/88 Pt. 3 dated 18.11.2004 required Controlling Officers to revisit the need and justification for setting such a restriction. In particular, for tendering of contracts covered by WTO GPA, the procuring bureaux/departments should ensure that such restriction is legally in order and seek legal advice when necessary if they wish to impose such a restriction.

3.12 CONTROL OF OMITTED ITEMS AND SUBSTANTIAL CHANGES IN QUANTITIES

To avoid the occurrence of omitted items and substantial changes in quantities during construction, the following quality assurance procedures should be adopted:-

- (a) In general, the Standard Method of Measurement (SMM) should be followed in the preparation of the BQ. If it is necessary to amend the method of measurement, a Particular Preamble (PP) to that effect should be prepared and included in the BQ in accordance with Rule 10 in Part III of the SMM. Prior approval for the incorporation of the PP (for any method of measurement which deviates from the SMM), as well as any drawings clarifying or defining the method of measurement, should be obtained from an officer at D1 rank or above administering the contract according to Section 7.1 of Chapter 5. Such request and approval must be properly minuted and documented in the project file for future reference. Besides, the project officer should confirm such modified method of measurement in writing with the officers responsible for the preparation of the BQ, in case the PP and the BQ are prepared by different officers. Close liaison between the design team and the taking-off team should be maintained to ensure mutual understanding of the documents and any changes made to the SMM.
- (b) A pre-tender cross-checking procedure should be introduced in the preparation of BQ. An officer in the rank of engineer, quantity surveyor, senior engineer, senior quantity surveyor or other equivalent professional ranks, not being the officer who actually prepared the quantities, should make a bulk checking on the quantities of the cost-significant items (items which carry significant implication on contract expenditure) in the BQ against the tender drawings/specifications, or against the quantity of other related items (i.e. items with quantities comparable to or bearing a well recognized ratio to the quantities of the items being checked) to identify possible omitted items and problems arising out of substantial changes in quantities. Examples of 'bulk checking' are (i) volume of excavation against volume of soil disposal and deposition; (ii) area of formwork wall against area of wall tiles; and (iii) number of moving of piling rig against the total number of piles shown in the drawings, etc. When drawing up a list of the cost-significant items, the concerned officer should take into consideration the nature and size of the works, the value of the items and the likelihood of future changes to the relevant items. Sufficient time should be allowed to conduct the bulk checking. Any mistake/problem identified in the checking process should be rectified before the issue of tender documents.
- (c) The above procedures have been prepared mainly for those projects administered by in-house project team. For those projects administered by Consultants, the Consultants shall be required to adopt similar procedures to ensure the quality of BQ and PP and submit their proposed procedures to the Director's Representative for agreement. Besides, if resources permit, project office should conduct spot-checking on the quantities of some selected cost significant items after the BQ has been prepared by the Consultants. Such spot-checking conducted by the project office should be properly documented.
- (d) Apart from the above, an officer of the project office at a rank not lower than D1 should chair a meeting to vet the BQ and PP prepared and to ensure all the checking and cross-checking procedures have been duly completed and documented. For those projects administered by the Consultants, the Consultants shall assign one of their senior managers to attend the meeting.

No tender invitation should be carried out without undergoing the above procedures. Similar review and approval procedures should also be adopted for any subsequent changes made by tender addenda, subject to the need for a formal meeting required in (d) above to be decided by the chairman.