

GENERAL SPECIFICATION FOR RETAINING STRUCTURES AND EXCAVATION

1.0 SCOPE OF WORKS

The Works comprise the supply of labour, materials, plants, tools, temporary works, attendance and all other things necessary for the Construction, Completion, and Maintenance of the slope retaining system works as shown in the Drawings and amplified in the Schedule of Lump Sum Prices and Bills of Quantities, in accordance with the Conditions of Contract and this Specification.

The Works envisaged under the Contract broadly include but not limited to the following:-

- a) Clearance and preparation of the site for the construction of the contiguous bored pile wall slope retaining system.
- b) Excavation (in front of CBP wall and reconstruct slope)
- c) Permanent ground anchor installation
- d) Construction of surface drainage system.
- e) Installation and monitoring of instrumentation equipment.

All works incidental to the foregoing including any necessary modifications, additions and revisions shall be carried out in accordance with the terms of the Contract.

2.0 DISCREPANCIES IN DRAWINGS

The Contractor shall be responsible for checking all drawings issued to him and if he finds any discrepancies in the drawings or Schedule of Lump Sum Prices and Bills of Quantities, he shall immediately, before proceeding with the Works inform the Engineer of such discrepancies in writing and seek the Engineer's written confirmation.

No claims by the Contractor for any extra costs incurred as a result of discrepancies in the drawings or Schedule of Lump Sum Prices and Bills of Quantities will be entertained if he fails to inform the Engineer of such discrepancies before proceeding with the Works. Any decisions by the Engineer regarding discrepancies shall be final.

3.0 DATE OF COMPLETION AND PROGRAMME OF WORKS

The Tenderer shall submit together with his tender, a detailed programme in bar chart form indicating all the activities for the works commencing from the date of commencement of works up to the completion date.

Should any time progress falls behind the periods shown in the approved Programme of Works, the contractor shall take such steps and employ such methods including the cost of working overtime as will enable him to catch up on the programme all at his own cost and to be in accordance with the requirements and the approval of the Employer/Engineer.

4.0 SITE OF WORKS

The proposed project site is located at APMC Rawang Works Quarry 2 in Rawang, Selangor. Access to the site is through the main gate of the quarry. The Contractor is to ensure that minimum damage or nuisance is caused to the existing road.

The Employer has an existing cement factory and quarry at the Site, which is in full production at all times. Quarry blasting normally occurs twice a week. The contractor shall coordinate with the Employer and stop work completely during quarry blasting. The contractor shall visit the Site and obtain for himself all necessary information for planning and programming the Works including the availability, size and location of the Contractor's working area, so as not to interfere with, cause disruption, damage or nuisance to the operation of the existing plant, property, etc.

5.0 POSSESSION OF THE SITE

Possession of the site under this contract does not constitute a tenancy agreement between the Employer and the Contractor and where full possession of the site is not possible due to delays on the part of the Employer/relevant Authorities, portions of the Site may be given to the Contractor from time to time to achieve the best possible working arrangement under these circumstances.

Any delay on the part of the Employer in failing to give full or part possession of the Site shall be offset by a corresponding extension of time, however, no monetary claim arising from whatsoever cause from the want and delay of possession of site will be entertained by the Employer. The Contractor shall be deemed to have taken into consideration and understood the provision of this clause in the pricing of his tender.

6.0 RESTRICTION TO SITE

The Contractor shall be responsible for restricting his workmen only to the Site of the Works and shall take all necessary precautions to prevent and shall indemnify the Employer against any damages arising from nuisance of any kind.

Proper security passes must be obtained from the Employer for the workmen and employees of the Contractor and the Contractor himself. Relevant particulars are to be forwarded to the Employer for processing of the passes to be issued.

7.0 OBSTRUCTION AND CONTRACTOR'S WORKING YARD

The contractor shall ensure that all his plant, materials, temporary buildings etc. shall be kept within the area on the Site allocated by the Employer. In order to avoid causing any unnecessary inconvenience or obstruction to the Employer's workmen who may be working in the area or vicinity of the Works, the Contractor's working yard may be fenced up with suitable materials throughout the duration of the contract.

8.0 LEVEL DATUM

The Contractor shall prior to commencement of any permanent works, carry out survey to install temporary bench marks from the nearest Bench Mark, the location and level of the control benchmark to which all temporary benchmarks used shall be based. The survey shall be carried out by licensed surveyor and the cost shall be deemed to be included in the rates and prices tendered in the Works.

9.0 CONTRACTOR'S OFFICE, STORES, ETC.

During the period of the contract, the Contractor shall provide and maintain on the Site temporary buildings and store facilities for his own use.

The Contractor's workmen will not be permitted to stay overnight on site. Consequently, the Contractor shall not erect any housing for his workmen.

The location of all temporary buildings shall be subjected to the approval of the Employer/Engineer.

The Contractor shall keep his site office open during working hours to receive instructions, notices, or other communications from the Employer's or Engineer's Representative and such instructions, notices and communications when delivered in writing to his site office shall be deemed to have been delivered to the Contractor.

The Contractor shall provide and maintain one direct line site telephone and a desk top fax machine including an additional line linking up to the fax machine for the full period of the Works and pay all charges for installation and rental in connection therewith including calls made by the Employer, Employer's Consultants and site staff. The Contractor shall also require to provide suitable hand phone for use by the Resident Engineer and pay all charges for calls made.

10.0 WATER AND ELECTRICITY

The Contractor shall at his own expense supply and install piping, valves, wiring, switches etc., and make connection, in compliance with relevant regulations, with the supply/discharge points designated by the Employer. Such connections shall be made without causing any interruptions or damage to existing supplies or nuisance to the Employer.

Electric energy meters are to be installed by the Contractor and he will be charged by APMC at the rates by which they are charged.

The contractor shall dismantle and remove all temporary connections and installation on completion of the Works and restore the permanent supply system to its original conditions.

11.0 SAFETY

The Contractor shall ensure that his workmen in executing the Works, observe all safety regulations in accordance with the Employer's Safety Rules and Regulations.

The Contractor shall provide helmets, boots and other safety gears to the Engineer's representative and visitors.

The cost of complying with the requirements of the safety regulations shall be deemed to be included in the rates and prices tendered in the Works.

12.0 CANTEEN FACILITIES

The Contractor's workmen are not permitted to use the Employer's canteen. Contractor shall make arrangement for their meals and drinks.

13.0 MEDICAL SERVICES

The Contractor shall provide and maintain adequate first aid facilities on site.

14.0 HOURS OF WORKS

Permanent work shall, save as hereinafter provided, be carried out on only during normal office hours between 8.00 a.m. and 5.00 p.m. from Monday to Friday and 8.00 a.m. to 12.30 p.m. on Saturday unless other permission has been given in writing by the Engineer, save when the work is unavoidable or absolutely necessary for saving of life or property or for the safety of the works in which case the Contractor shall immediately advise the Engineer's Representative.

15.0 INCLEMENT WEATHER

The Contractor shall not be allowed any extension of time due to inclement weather and no claim for extras will be entertained on account of unfavourable weather conditions.

16.0 ORDERING MATERIALS

- (a) The Contractor shall place his orders for specified material at the earliest possible date after notification of acceptance of his tender or at such time as may be specifically stated elsewhere herein for any particular materials.
- (b) If, in the opinion of the Engineer, the Contractor, by his failure to order any specified materials, or by his failure to deliver on to the job any specified materials within the time stated for same, causes interruption or delay in the progress of the Works then in either case the Engineer will be at liberty to purchase such specified materials in whatever quantities he deems necessary and at the rate current in local markets at the time of purchase and all charges in connection therewith, including delivery charges, shall be borne by the Contractor and shall be deducted from moneys due or to become due to him under this Contract by means of a Variation Order and no profit shall be allowed to the Contractor.
- (c) All materials shall be purchased from APMC or their associated companies, i.e. CMCM Perniagaan Sdn Bhd, Supermix Concrete (M) Sdn Bhd, Associated Concrete Products Sdn Bhd and Cement Utama Sdn Bhd. etc. All materials delivered to the site shall be accompanied by supporting vouchers to be submitted to the Engineer for verification. Non compliance will result in materials being rejected.

17.0 SAMPLES

Samples of materials and fittings are to be submitted for approval at the earliest possible date after notification of acceptance of the Contractor's Tender. All samples which are approved shall indicate the standard to be maintained in the execution of the Works. In the case of rejection further samples are to be submitted until they are approved. The Engineer may reject any materials or workmanship which are in his opinion not up to the approved standard. All samples submitted are to be free of cost to the Employer and are to remain on deposit at the offices of the Engineer during the currency of the Contract.

18.0 LOCAL AUTHORITIES AND FEES

The Contractor is responsible for application to Local Authorities for permits, payment of fees and any liaison that may be necessary with them.

19.0 MATERIALS, WORKMANSHIP AND ALTERNATIVE MATERIALS

Materials and workmanship throughout the works shall be new and be the best of their respective trades and manufacture and by "best" shall be understood that there is not superior class of the specified materials available locally. Relevant Malaysian Standards, British Standards and Codes of Practice shall be followed in the Works.

Wherever in this Specification any proprietary goods or materials are specified, goods or materials of alternative manufacture may be considered for acceptance provided that in the sole opinion of the Engineer/Employer, they comply in all respects with regards to appearance and quality and are approved by the Engineer/Employer.

20.0 CONTRACTOR'S SITE AGENT

The contractor shall employ a responsible English-speaking Site Agent who shall be full time on the site. Any instruction, etc., given by the Engineer to the Site Agent shall be deemed to be instructions, etc., to the Contractor who shall carry them out efficiently and expeditiously. If in the opinion of the Engineer, the Contractor's site agent is not capable of discharging his duties, the Contractor shall replace him at the instruction of the Engineer and bear the cost of replacement.

21.0 OTHER CONTRACTORS ON SITE

The Contractor shall, when required by the Engineer afford all reasonable opportunities for other Contractors employed by the Employer, the workmen of the Employer and any other duly constituted authorities for carrying out the work.

22.0 WATCHING, LIGHTING AND PROTECTION

The Contractor must provide all necessary watching by day and night, for the due protection and security of the Works, and of the public including any warning lamps and safety signage required during the period of the Contract.

The contractor shall take all necessary precautions to prevent damage to existing buildings, fences, road, pipes, water mains, cables, sewers, drains, etc. and shall indemnify the Employer for any expenses to which they may be put in respect of such damage and for any claims on them in consequence thereof. The Contractor shall provide all things necessary for the proper protection of materials and completed works and must comply with all directions of the Employer/Engineer in this respect.

23.0 FIRE PREVENTION DURING CONSTRUCTION

Attention is drawn to the strict fire regulations to be observed particularly where highly inflammable fuels or materials are stored. Smoking by the workmen and burning of rubbish on site are strictly forbidden in these areas. Proper signage indicating the danger of these materials shall be placed in strategic locations.

The Contractor must also ensure that all his inflammable goods e.g. adhesives, plants, fuel, etc. are stored in combustible stores. Proper instructions must be given to workmen using gas cutting and welding equipment to ensure minimum fire risks. The Contractor shall provide all temporary fire fighting equipment to conform with requirements of the Fire Department and maintain them throughout the duration of this Contract.

24.0 ORDER OF WORKS

The Contractor shall carry out the Works in such orders as the Engineer may direct. The Contractor shall not be entitled to claim any expenses if the Engineer directs the Contractor to reorganise his work force so as to complete the project within the Contract Period.

25.0 PRESERVATION OF EARTH SLOPE

The Contractor shall take all necessary precautions to preserve all earth slopes, both existing i.e. slopes already existing on the site at the time of the site being handed over to the Contractor and new i.e. slopes formed and constructed by the Contractor under the Contract.

He shall construct adequate temporary water-courses and drains and take other necessary steps to prevent slips from occurring. Should slips occur due to the Contractor's neglect to take necessary precautions to preserve the earth slopes and adjacent land, he shall, at his own expense, make good such slips to the satisfaction of the Engineer.

The Contractor shall make daily inspection of the earth slopes and more often, if he deems it necessary or if so instructed by the Engineer. He shall record the result of his inspections in the site book. In the event of slips occurring or in the opinion of the Contractor, may possibly occur, the Contractor shall immediately report to the Engineer, who shall give the necessary instruction to the Contractor.

The Contractor shall be held solely responsible for the sufficiency of the precautions taken by him to preserve the earth slopes and adjacent land, shall be liable for land and indemnify the Employer in respect of any claims or proceedings arising out of his neglect of this clause.

26.0 SOIL INVESTIGATION DATA

The soil investigation Reports are available for the tenderer's reference at the office of the Engineer. The Employer shall not be held responsible for any inaccuracies of this data and neither shall the report be construed as part of the contract documents.

27.0 PROGRESS REPORT

The Contractor shall prepare site daily report for the works submitted daily to the Engineer and to prepare progress report submitted every two weeks. These reports shall be initialled by both the Contractor's Representative and the Clerk-of-Works. The Contractor shall allow for making five copies of the progress report for distribution to all interested parties. This report shall include the following information:

- (i) Progress of each section of works
- (ii) Number of workmen employed. These are to be classified into skilled and unskilled under their respective trades.
- (iii) Major materials delivered.
- (iv) Types of plants employed.
- (v) Weather conditions

28.0 PILING AND CONSTRUCTION RECORD

The Contract shall keep proper piling and construction records in a manner and format as directed by the Engineer of all works and these records must be endorsed by the Clerk-Of-Works. Three sets of these records shall be submitted to the Engineer at weekly intervals.

29.0 CLEARING AND CLEANING UP THE SITE

The Contractor shall clean the site of all rubbish accumulated from the works to ensure that the Site is clean and tidy at all times.

At completion, the entire site including the area occupied by the Contractor's temporary sheds, must be cleared and left tidy and clean to the satisfaction of the Engineer.

The Contractor shall at his own expense dismantle, clear and take away all temporary buildings, temporary works, and reinstate turfed areas, roads, drains, services, etc., to their original condition.

The Contractor is not permitted to burn debris, rubbish, etc., anywhere within the site.

30.0 LAW, REGULATION AND REQUIREMENTS

The Contractor shall comply to Part VIII of the Lembaga Pembangunan Industri Pembinaan Malaysia Act 1994 and the Construction Industry (Levy Collection) Regulations 1996, and shall submit a notification on Form CIDB L1/96 to the Lembaga not later than 14 days after the issuance of the Letter of Acceptance/Letter of Award/or any document that constitutes acceptance of contract works, or not less than 14 days before the commencement of the works, whichever date is earlier.