

SPECIFICATION SECTION 01050

GENERAL WORKS

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SPECIFICATION SECTION 01050 - GENERAL WORKS

1. DESCRIPTION

This Specification Section prescribes the requirements for the performance of the General Works.

2. REQUIREMENTS

2.1 Materials, Equipment and Plants

2.1.1 Delivery Schedule

- (a) No later than 30 days after issue of the Letter of Acceptance, the Contractor shall prepare and submit to the Engineer a delivery schedule for each significant material/equipment required for the Works. The listing shall show the target order dates, shipping and receiving dates and quantities of each required material/equipment.
- (b) The dates in the list shall be in accordance with the approved Contractor's Program and Mobilization Plan (as mentioned in Subsection 2.2 of Specification Section 01300). The Contractor shall update this list when preparing the Statement, or at any time required by the Engineer.

2.1.2 Receiving, Handling & Delivery

- (a) All equipment, component parts, tools, spare parts shall be suitably packaged against damage or deterioration during transit to and short term storage in Vietnam.
- (b) Painted surfaces shall be protected against impact, abrasion, discoloration, and other damage.
- (c) Grease and lubricating oil shall be applied to all bearings and similar items.
- (d) Articles subject to damage or deterioration shall be repaired or replaced by the Contractor at no expense to the Employer.
- (e) The Contractor shall provide required information concerning the shipment and delivery. These requirements also apply to any sub-suppliers making direct shipments to the job site or the port of entry into Vietnam.
- (f) The project name, name of the Contractor, and the name of the Employer must be clearly indicated on the air waybill or bill of lading.

2.1.3 Storage

- (a) **Storage Facilities:** The Contractor shall provide and maintain storage facilities within the limits of the Site. The Contractor shall submit to the Engineer for review complete details of the type of temporary storage facilities proposed with his Mobilization Program.
- (b) **Storage Procedure:**

- (i) Stacked items shall be suitably protected from damage by spacers or load distributing supports that are safely arranged.
- (ii) No metalwork (sheet pilings, reinforcing steel, etc.) shall be stored directly on the ground.
- (iii) Bulk cement shall be stored in silos or bulk cement containers protected from moisture.
- (iv) Packed cement shall be stored in container boxes to keep out moisture, and the Contractor before usage shall check the quality of cement.
- (v) Pipe fittings and valves may be stored outdoors but must be placed on wooden blocking and protected from weather.
- (vi) PC tendons, sheath and related parts shall be kept in warehouse in the manner specified by manufacturers.
- (vii) PVC pipe, geotextile membranes, plastic liner and other plastic materials shall be stored off the ground on pallets and protected from direct sunlight.
- (viii) Pumps, motors, electrical equipment, and all equipment with antifriction or sleeve bearings shall be stored in weather-tight structures. Electrical equipment controls, and insulation shall be protected against moisture and water damage.
- (ix) Equipment having moving parts, such as gears, bearings, and seals, shall be stored fully lubricated with oil, grease, etc., unless otherwise instructed by the manufacturer. The Contractor shall carefully follow the manufacturer's storage instructions.
- (x) Storage arrangements off Site shall be subject to the approval by the Engineer for all materials and Plant. Such off Site storage arrangements shall be recorded in writing, and shall afford adequate and satisfactory security and protection.

2.1.4 Special Loads

- (a) In the preparation of "Traffic Control Plan" specified in Specification Section 01600, where special loads necessitate the strengthening, altering, protecting and/or improving any bridge, culvert or road, the Contractor shall provide to the Engineer complete details of the Contractor's intended procedure.
- (b) The above-mentioned details shall include the following:
 - (i) Details of Contractor's Equipment, Plant and/or Temporary Works to be moved including the total weight of load;
 - (ii) The proposed date and time of such movement;
 - (iii) The starting location and destination;
 - (iv) The proposed route;

- (v) The bridge(s), culvert(s) and/or road(s) which require(s) strengthening, altering, protecting and/or improving;
- (vi) Full details of any such strengthening, altering, protecting and/or improving, including any and all necessary design calculations;
- (vii) Traffic safety measures while the load is in transit; and
- (viii) Evidence that the Contractor has liaised with and obtained all necessary permissions, permits and the like from all appropriate Authorities.

2.2 Meetings

The Contractor shall be responsible for making all the necessary arrangements and incidentals for preparing and supporting the meetings for the Works.

2.2.1 Pre-construction Conference

- (a) A pre-construction conference shall be held at a time and place designated by the Employer, prior to the commencement date specified in Sub-Clause 8.1 of the Conditions of Contract.
- (b) The conference shall be attended by:
 - (i) Employer's Representative
 - (ii) Engineer's Representatives
 - (iii) Contractor's Project Manager
 - (iv) Contractor's General Superintendent
 - (v) Contractor's Project Engineer
 - (vi) Contractor's Quality Control Manager
 - (vii) Contractor's Safety Representative
 - (viii) Governmental representatives, as appropriate
 - (ix) Stakeholders or others, as requested by the Employer, the Engineer, or the Contractor
- (c) The Contractor shall provide and explain the following at the conference:
 - (i) The construction Program and respective schedule
 - (ii) The schedule of values for progress payment purposes
 - (iii) The schedule of his drawings and other submittals
- (d) The Engineer will, in advance; advise the full agenda of the Conference, will preside it and will arrange for keeping and distributing the minutes to all attendants.

2.2.2 Progress Meetings

- (a) The Engineer shall schedule and hold progress meetings regularly either monthly, weekly or at any other time as required by the Engineer or the

Contractor. The Contractor shall provide sufficient support to the Engineer for organizing such meetings.

- (b) The purpose of the meetings is to improve aspects related to coordination, and to review the progress of the Works, monitoring all the approved Programs, plans and schedules for the work, submittals, quality control, etc.
- (c) The meetings shall also be held to prepare, update and monitor the problems, or potential problems, that are affecting or could affect the Works.
- (d) The Engineer will preside the meetings and take care of keeping and distributing the respective minutes.
- (e) The Contractor's project manager, quality control manager, safety officer, scheduler and other key personnel as required by the Engineer or as necessary for presentation of relevant information and data, shall attend the progress meetings.

2.2.3 Meetings with Institutions and Entities Concerned

- (a) The Contractor shall provide sufficient support to the Engineer for preparing and holding periodic meetings for coordination and reporting with all the Works's stakeholders concerned.
- (b) The pertinence and necessity of these meetings will be determined by the Engineer at his discretion.

2.3 Project Ceremonies

The Contractor shall be responsible for making all necessary arrangements and incidentals in preparing and supporting the ceremonies for the Works.

2.3.1 Ground Breaking Ceremony

The Contractor shall organize the "Ground Breaking Ceremony" with the attendance of Government agencies (if necessary), immediately before the pre-construction conference or at a date to be fixed in consultation with the Employer and the Engineer.

2.3.2 Inauguration Ceremony

- (a) The Contractor shall organize the "Inauguration Ceremony" immediately after the issue of the Taking-Over Certificate, and before the commencement of the Works' operation.
- (b) The Ceremony shall be held according to the schedule determined by the Contractor in consultation with the Employer and the Engineer, and shall be capable of handling an expected attendance of Government Agencies (if necessary).

- c) The Contractor shall prepare a pamphlet presenting the main features of the Works, relevant pictures of the Works during their execution and after their completion.

2.4 Insurance and Warranty

- (a) The requirements in this Specification Section are intended to be read in conjunction with and mutually explanatory with the requirements and provisions in Clause 18 of the Conditions of Contract.
- (b) The Contractor shall provide evidence of insurance policies prior to the commencement of the Works.
- (c) With each Statement, the Contractor shall submit evidence consisting of receipts of payment or other verification as approved by the Engineer that insurance policies are in effect.
- (d) The Contractor shall be responsible for all costs during the Defects Notification Period of the Works or up to the issue of the Performance Certificate as applicable in accordance with the related provisions of the Conditions of Contract.

2.5 Protection of Works

- (a) The Contractor shall carefully protect the Works. In the event work defects or damages are detected, these shall be repaired or replaced at the Contractor's expense, subject to the Engineer's approval.
- (b) Prior to installing the temporary facilities in any area, all clearing and grubbing operations shall be done to the satisfaction of the Engineer. The ground elevation of all temporary facilities shall be 20 cm in minimum above the adjacent existing ground. The surface shall be adequately sloped to allow rainwater to adequately drain.

2.6 Protection of Utilities and Existing Structures

- (a) Before commencing construction work the Contractor shall undertake a survey to establish the detailed location of all utilities affected by the Works. Survey results shall be recorded in plan form to the satisfaction of the Engineer and surface pegs fixed on the site to indicate the location of all underground utilities. These pegs shall remain for the duration of the Contract.
- (b) Where works are to be undertaken by the Contractor in the vicinity of utilities, the Contractor shall provide adequate protective devices and take precautionary measures.
- (c) The Contractor shall be responsible for locating all existing structures prior to the start of construction. Any delay or extra expense to the Contractor

shall not provide grounds for a claim for; extra work, additional payment, extension to the Time for Completion, or compensation due to damage.

- (d) The Contractor shall maintain all existing fences until the issue of the Taking-Over Certificate of the Works. They shall not be relocated or dismantled, until written permission is obtained from the fence owner.
- (e) Damage to Existing Property:
 - (i) The Contractor shall be responsible for all damage to streets, roads, railroads, curbs, sidewalks, highways, shoulders, ditches, embankments, culverts, bridges, or other public or private properties.
 - (ii) Unless the Contractor can demonstrate to the contrary all of the damage shall be deemed to be caused by the transport of the Contractor's equipment, materials, or people to or from the Works and shall be deemed the responsibility of the Contractor.
 - (iii) The Contractor shall repair or replace any damaged structures, works, materials, or equipment to the satisfaction of the Engineer, and at no additional cost to the Employer.

2.7 Maintenance of Existing Waterway

- (a) The Contractor shall take all necessary measures to remove all water including ground water flows from the area of his work when necessary, and/or as required by the Engineer, to allow satisfactory execution of work in progress or for the protection of completed work.
- (b) The Contractor shall maintain all of the existing drainage, irrigation channels or waterways entering, crossing or affecting the Works that should be removed, relocated or protected. This shall include, where required by the Engineer, the cleaning of upstream and downstream to an extent of 100 m beyond the construction limits and the right of way.
- (c) If permitted by the Authority owning or responsible for the existing irrigation channels, or drainage ditches and canals, or other waterways entering, crossing or affecting the Works, the Contractor shall maintain all of these existing waterways, that are to be removed, relocated or protected, by the proposed methods and Shop Drawings prepared and submitted to the said Authority and the Engineer for their approval, prior to such operations. The Shop Drawings shall be prepared based on the Drawings and the Public Utilities Survey Reports, as well as the detailed survey of the Site to be undertaken by the Contractor, in accordance with the Specification Section 02300 Protection of Existing Utilities.
- (d) No payment shall be made for the maintenance of the existing drainage or irrigation channels or waterways. However, should any such drainage or

irrigation channels or waterways, in the opinion of the Engineer, require repair, remedial or reconstruction work the Engineer will instruct the extent of such work and issue an appropriate variation order, unless such work is required due to damage caused by the Contractor.

- (e) The Engineer may at any time withhold monies for maintenance of existing drainage and irrigation channels made by the Contractor if, in the opinion of the Engineer, the requirements of this Specification Section are not duly complied with.

2.8 Temporary Installations

- (a) Temporary Power: Temporary power consists of the following:

- (i) Construction Operations (the Works):

The Contractor shall provide a power supply from approved and available power substations or from diesel generators.

The Contractor shall provide all power for operation of Contractor's Equipment and for any other use.

If a mains power source is available, the Contractor shall arrange with the utility company to use such source and pay for the service required for power supply and lighting.

- (b) Other Temporary Installations:

- (i) External Lighting and Power: Suitable external lighting and power shall be provided at the entrance to all buildings, including lighting for roads, security and control of traffic.

- (ii) Maintenance: During the performance of the Works the Contractor shall maintain all temporary facilities in a suitable manner to the satisfaction of the Engineer.

- (iii) Removal: Upon the issue of the Taking-Over Certificate, or as otherwise directed by the Engineer, all plant, temporary facilities and encumbrances used for the Works shall be removed, the area affected properly cleaned and repaired and, if necessary, the property owner paid.

- (c) Removal: Upon completion of the Works, the Contractor shall remove from the Site all Contractor's Equipment provided by the Contractor, any subcontractor or supplier.

- (d) Employer not liable for damage to Contractor's Equipment : The Employer shall not at any time be liable for the loss or damage to any of the Contractor's Equipment provided by the Contractor or any subcontractor or supplier.

2.9 Setting Out the Works

Primary original points, lines and levels of reference are included in the Contract documents in accordance with subclause 4.7 of the Conditions of Contract. The Contractor shall assume responsibility for the protection and maintenance of these points on taking possession of the Site. After taking possession of the Site the Contractor shall check the accuracy and condition of all primary survey points and advise the Engineer of any errors in the given values or damage to the survey points. The Engineer will issue appropriate instructions should any error or damage be reported by the Contractor.

The Contractor shall set out the Works in relation to the primary points. All secondary points, temporary points, stakes and all other markings shall be the responsibility of the Contractor and shall be sufficient for the Contractor to comply with his responsibility for the correct positioning of the Works. Details of the Contractor's survey proposals shall be submitted to the Engineer for his acceptance prior to the start of any of the Works on Site. No work shall start on Site until such time as the Engineer has accepted the proposals.

All survey points shall be included in a register. The register shall include a unique reference for each point and record its value and the date on which it was checked or established. All survey points shall be checked for accuracy and condition on at least a monthly basis as part of the Contractor's quality assurance scheme. Any errors or damage found shall be promptly reported to the Engineer together with the Contractor's proposals for rectifying such errors or damage to the satisfaction of the Engineer.

Survey proposals shall be included in all method statements submitted by the Contractor for each stage or element of the Works. The Contractor should note that method statements will not be accepted if they include survey points that have not been checked in accordance with the quality assurance scheme.

2.10 Specifications

The Contractor shall provide the Engineer with copies of all standards referred to in the Specification Sections.

Reference to particular standards within this Specification Section shall refer to the latest revision of the standards 28 days prior to the submission of bids, unless stated otherwise. Should the Contractor propose the use of an alternative standard he shall demonstrate to the Engineer that the alternative standard is equivalent or superior to the standards specified.

An element of the Works specified in accordance with a particular international standard may be substituted by an element specified in accordance with an alternative international standard. Where an element of the Works is specified in accordance with

Vietnamese Standards the element of the Works may be substituted by an element meeting internationally accepted standards which ensure quality equivalent to or superior to the standard specified.

However approval of alternative standards for the Works shall remain the sole discretion of the Engineer and Employer. Responsibility for demonstrating the equivalence of proposed alternatives shall remain entirely with the Contractor. He shall ensure that all such proposals are made in a timely manner, making due allowance for the Engineer's and Employer's approvals procedures and shall not cause any delay to the construction of the Works. The Contractor shall also ensure that any such proposals are properly coordinated with the provision of laboratory facilities and the testing of the Works.

2.11 Notice of Operations

The Contractor shall give 48 hours notice in writing to the Engineer of his intention to start any stage, element or part of the Permanent Works. In particular the Contractor's attention is directed at subclause 7.3 of the Conditions of Contract concerning work to be covered up, put out of sight or packaged for storage or transport. Such notices shall be supplemental to any information provided in the Contractor's Program issued in accordance with subclause 8.3 of the Conditions of Contract. When issuing such notices the Contractor should note the requirements to be included in his QA scheme.

In addition to the programme submitted in accordance with subclause 8.3 of the Conditions of Contract, the Contractor shall provide the Engineer with notice of his intended detailed programme of Works on a weekly basis. This notice shall be issued on the last day of the week preceding the week to which the notice applies. The notice shall include steps to be taken to recover any delays in the work detailed in the notice for the previous week. Where such delays accumulate to the point where there is a significant effect on the Contractor's overall programme submitted in accordance with subclause 8.3 of the Conditions of Contract, the Engineer may consider action under subclause 8.6 of the Conditions of Contract concerning the rate of progress.

2.12 Final Updated Environmental Management Plan

The Final Updated Environmental Management Plan has been incorporated into Part 2, Section VI, Volume 2.1, Chapter IV of the Bidding Documents; for information. Chapter 8 and Annex 3 of the Final Updated Environmental Management Plan have been modified and incorporated in Specification Section 01700 Environmental Control and Protection and therefore form part of the Contract.

3. MEASUREMENT AND PAYMENT

The performance of the General Works in accordance with the provisions and requirements identified in this Specification Section is defined as Indirectly Paid Work, which shall neither be measured nor paid separately and shall be deemed included in

the rates and prices for other main items or distributed among all the pay items listed in the Bill of Quantities. No separate payment will be made for these items.

Any General Works not specifically identified in this Specification Section but which are necessary for the performance of the Works shall be deemed to be Indirectly Paid Work, which shall neither be measured nor paid separately and shall be deemed included in the rates and prices for other main items or distributed among all the pay items listed in the Bill of Quantities.