
SCHEDULE N - PROJECT MANAGEMENT

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1 DEFINITIONS

In this Schedule, in addition to the definitions set out in the Contract Documents.

“**Construction Execution Plan**” or “**CEP**” has the meaning set out in Section 2.1(a)

“**Construction Work**” has the meaning set out in Section **Error! Reference source not found.**

“**HSSE**” means Health, Safety, Security, and Environment

“**30 Day Detailed Look Ahead Schedule**” has the meaning set out in Section 2.4(a)

“**Management Plan**” has the meaning set out in Section **Error! Reference source not found.**

2 PROJECT MANAGEMENT

2.1 Contractor's Execution and Management Plan

- (a) Contractor will prepare and submit a plan (the “**Construction Execution and Management Plan**”) or (CEMP), no less than 5 days prior to the start of Work at the Site, for Owner approval.
- (b) The Contractor will involve and interface with Owner, any external stakeholders, as necessary in the development of the CEMP to ensure alignment of the Work with other elements of the Project.
- (c) For the development of the CEMP, the Contractor will be responsible for the implementation and management of all construction activities included within the Work (the “**Construction Work**”).
- (d) Upon approval, the CEMP will form the basis for execution of the work by Contractor. Contractor will update the CEMP as required by project circumstances or at the request of Owner.
- (e) The CEMP will be in accordance with the requirements set out in the Contract Documents and Contractor's Quality Management System.

2.2 Content of Contractor's Execution and Management Plan

The CEMP will include a detailed narrative for the execution of the Construction Work including, but not limited to, the following information and sub-plans as applicable:

- (a) the scope of the Construction Work, logic and strategy including key constraints and assumptions.
- (b) Path of Construction Work (combination of written and visual). The path of Construction Work must be aligned with the Turnover milestones and sequence.

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- (c) Risk Management Program including regular risk identification (Construction Risks & Opportunities Log) and review sessions for prefabrication, construction and logistics related risk items to include mitigation plans.
- (d) Fabrication plan
- (e) Construction Work packaging plan including:
 - (i) list of Construction Work packages with the relevant association to provided engineering Work and procurement material and tags;
 - (ii) methodology and plan for sequencing execution of Construction Work packaging (Contractor's Construction sequencing plan);
 - (iii) methodology for progressing Construction Work using the construction Work packaging;
 - (iv) methodology for facilitating management of interfaces requirements using the Construction Work packaging; and
 - (v) Methodology for associating construction Work packaging with systems.
- (f) Crane & Lifting Plan (crane sizes/types, critical lifts identified, special lifting considerations, crane utilization optimization, alternative setting methods).
- (g) Shoring Plan.
- (h) Construction technical services plan (quality, document control).
- (i) Construction Regulatory and environmental requirements.
- (j) Temporary facilities, utilities and Site services plan and layout. Contractor will be responsible for acquiring any facilities required for laydown
- (k) Traffic Accommodation Plan (TAP)
- (l) Workforce logistics plan including entry and off-Site traffic management. On-going 30 day forecasting reports.
- (m) Contractor proposed space for work areas including temporary facilities such as Contractor's offices as well as space for Owner offices.
- (n) Detailed plan describing the methods of transporting staff to, from and on the Site.
- (o) Contractor's mandatory procedures and work instructions.
- (p) Contractor's project management system and software.
- (q) Integrated resource loaded Work Schedule, including manpower curves by trade.

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- (r) Construction & Completions Management Plan including:
- (i) Plan to be prepared to meet Alberta Transportation requirements. All activities shall meet or exceed AT requirements.
 - (ii) Construction, Mechanical Completion and Pre-Commissioning RASCI (Responsible, Accountable, Support, Consult, Inform);
 - (iii) Contractor's Construction Work sequencing plan;
 - (iv) Contractor's Site materials management plan;
 - (v) Contractor's construction contracts management plan; and
 - (vi) Contractor's Site management and administration plan.
- (s) Project Controls Plan including and further outlined in Schedule O – Project Controls:
- (i) Contractor's project coding structure that is aligned with Owners coding structure;
 - (ii) Contractor's planning and scheduling plan;
 - (iii) Contractor's progress measurement and performance plan;
 - (iv) Contractor's invoicing plan; and
 - (v) Contractor's reporting plan and calendar.
- (t) Construction HSSE Plan including;
- (i) Contractor's HSSE policies and standards;
 - (ii) description of Contractor's management involvement and accountability in HSSE matters;
 - (iii) Contractor's HSSE training and competency assessment;
 - (iv) Contractor's implementation methodology of HSSE plan at home office, satellite offices, fabrication site and construction Site;
 - (v) Contractor' Environmental compliance, including waste management; and
 - (vi) Seasonal Work plan.
- (u) Project Permitting Plan including:
- (i) identification of responsibility within the Contractor organization regarding Permits;
 - (ii) Contractor list identifying all Permits required by Contractor; and

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- (iii) Contractor timelines for development of each of the required Permits.
 - (v) Communications and Administration Plan including:
 - (i) Work setup and initiation;
 - (ii) kick off meetings;
 - (iii) communication procedure;
 - (iv) travel policy and procedure;
 - (v) Contractor's organization chart with roles and responsibilities of each functional position;
 - (vi) Contractor's RACI Chart including functional responsibilities in alignment with the organization chart, document approval levels by function, commercial approval levels by function, and accountability for communication with Owner.
 - (w) Project Procurement Management Plan including:
 - (i) Materials Management;
 - (ii) Contractor's purchasing;
 - (iii) Contractor's inspection;
 - (iv) Contractor's expediting; and
 - (v) Contractor's logistics.
 - (x) Project Sub-Contracting Plan including:
 - (i) Contractor's sub-contracts strategy;
 - (ii) Contractor's contract formation, administration and closeout process;
 - (iii) Contractor's substantial performance and completion certificates; and
 - (iv) Contractor's sub-contracts list.

2.3 21-Day Detailed Look Ahead Schedule

- (a) The Contractor will prepare and submit to the Owner, on a weekly basis, a 21-Day Detailed Look Ahead Schedule
- (b) The 21-Day Detailed Look Ahead Schedule will also be part of the Construction Management Team (CMT) weekly progress update and daily activity review meetings

2.4 30-Day Detailed Look Ahead Schedule

- (a) The Contractor will prepare and submit to the Owners, on a bi-monthly basis, a schedule update in accordance with Schedule O – Project Controls.
- (b) The Contractor will take all necessary steps to ensure Subcontractors provide all required information regarding Subcontractor activities in a timely manner so as to ensure that the above documentation and information provided to the Owners is current, updated, accurate and complete.

2.5 Contractor's Site Orientation

- (a) Prior to mobilization, the Contractor will submit its Site orientation package applicable to Work to the Owners Team for review and acceptance.

2.6 Contractor Requirements for Meetings, Action Lists and Project Communication

2.6.1 Project Meetings

Contractor will plan, organize and document proceedings for meetings including:

- (a) kick off meetings including:
 - (i) the overall Work;
 - (ii) project management, procurement and construction;
 - (iii) fabrication;
 - (iv) sub-contracts;
 - (v) major purchase orders;
- (b) recurrent meetings including:
 - (i) daily safety toolbox meetings (construction Site);
 - (ii) daily construction coordination meetings, held at 3:30 pm of each day
 - (iii) weekly construction progress, 3-week look ahead, management and material meetings;
 - (iv) monthly management meetings;
- (c) Contractor shall record, document and issue records of all meetings to the Owner and other attendees within 48 hours.

2.6.2 Project Action List / Needs Log

Contractor will develop a needs log / action list and submit to Owner within one week of the start of Work. Contractor's action list / needs logs for each project function updated during the periodic meetings.

Contractor will establish an action escalation process where actions not closed within two weeks of initial forecast closeout dates, are escalated within the Owner's management team.

2.6.3 Project Communication

Contractor will develop a project communication matrix indicating responsibility for communication between Contractor and Owner. The matrix will include:

- (a) names of individuals from both organizations responsible for formal communication; and
- (b) the function / discipline scope covered by the formal communication associated with the listed names;
- (c) the category of communication and method of communication (formal document control process or other).

All project formal communication will be associated with a transmittal traceable to both Contractor and Owner document management systems.

Contractor will submit a communication procedure for Owner approval. This procedure will be included in the Contractor's Construction Project Execution Plan.

2.7 Deliverables Preparation Requirements

Contractor will develop and prepare construction records, reports, instructions, guides and manuals required for execution, procurement, fabrication, construction (including pre-commissioning) in accordance with Contractor's quality system and the requirements in Schedule I - Quality Management.

2.7.1 Construction Records

Contractor will document all field changes and revise all documents in association with the field changes prior to submission of the turnover package.

Contractor will provide Construction records for all supplier documents.

Construction records will meet or exceed Alberta Transportation requirements.

2.8 Document Management and Document Control

Contractor will demonstrate the quality (completeness, consistency, accuracy, relevance, etc.) of Work documentation at all times, including information obtained from Subcontractors, as well as Project Documentation from other Project participants, as requested by Owner.

Ensure timely delivery of deliverables, equipment / Material documentation, and any other Project Documents required to compile training materials and operating and maintenance manuals for a system as set out in the Project Schedule. These will comply with the documentation deliverables and turnover procedure to be developed by Contractor and submitted to Owner for approval.

3 CLOSE-OUT

Contractor will prepare, maintain and issue turnover documentation, as per Alberta Transportation guidelines.