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Project Construction Field Work Activities Procedure



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Project Construction Field Work Activities Procedure

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Project Construction Field Work Activities Procedure

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1.0 PURPOSE

This procedure provides a roadmap for planning and executing permanent construction installation activities. It describes planning and control activities common to all construction projects.

This procedure applies to works performed under all Government construction projects executed throughout the Kingdom of Saudi Arabia.

For the purposes of the Construction Management Procedures the Project Management Company is the Entity Project Management Organization (EPMO) appointed by the Entity and references prefixed with "Site", such as Site Construction Department, Site Engineering Department, represent the Project Management Company at Project level, on construction sites.

2.0 SCOPE

The scope of this procedure applies to all works performed under the Government Construction Contracts executed throughout the Kingdom of Saudi Arabia.

This procedure applies to planning, mobilization and execution stage of a construction project.

Many of the work activities and deliverables that are documented within this procedure are undertaken and managed by the Construction Contractors. However, these activities and deliverables are covered here to identify those methodologies that a project should expect to see, to be able to effectively audit the Construction Contractors activities and identify poor performance so that mitigation measures can be put in place to ensure the successful delivery of the project.

3.0 DEFINITIONS

Definitions	Description
Inspection and Test Plan (ITP)	A document that outlines specific inspection and testing requirements relevant to a specific process, which is used to monitor the work installation quality. The ITP identifies the items, materials and work to be inspected or tested; by whom, and at what stage or frequency; as well as Hold (H) and Witness (W) points, and references to relevant standards.
Risk Assessment and Method Statement (RAMS)	Written description of each work activity, review any potential hazard and documenting mitigation measures.
Safe Task Analysis and Risk Reduction Talk (STARRT) card	A check-sheet of potential hazard briefed to the workforce, signed and recorded daily for each work activity.
Three-Week Look ahead	Short-term schedule identifying all activities to be completed by work area.
Enterprise Content Management System (ECMS)	Repository for all documents
Entity Project Management Organization (EPMO)	An Entity Project Management Organization, this is an integrated team that comprises the Entity and its PMC responsible for managing all the Entity's projects.
Site Contracts Department	Department within the Project Management Company that is responsible for administering Contracts.
Site Construction Department	Department within Project Management Company that is responsible for Construction Activities.
Site Engineering Department	Department within the Project Management Company that is responsible for Engineering or design activities/operations.
Site Safety Department	Department within the Project Management Company that is responsible for all aspects of the safety program.



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Material Assignment Schedule	A list of approved permanent plant, equipment, materials and services for use on the Project. The Site Engineering Department are usually tasked with the production of this list from the design documentation, specifications and drawings. The Construction Contractor may wish to submit alternative materials for approval or add to the list of approved materials where necessary.
Non-Conformance Reports (NCR)	Report identifying construction non conformities. Can include the approval of remedial works, designer's opinion, inspection of repairs, etc...
Field Change Document (FCD)	A document used to make a change to an issued design document. Once approved, it is a valid design document.

4.0 REFERENCES

1. EPM-KCQ-PR-000005 : Project Construction Quality Management System Procedure
2. EPM-KCM-PR-000001 : Project Construction Field Material Management Procedure
3. EPM-KCE-PR-000003 : Project Construction Field Change Documents Procedure
4. EPM-KCQ-PR-000006 : Project Construction Control of Nonconforming Items Procedure
5. EPM-KCC-PR-000003 : Project Construction Project Completions and Turnover Procedure.
6. EPM-KCE-PR-000006 : Project Construction Temporary Works Procedure
7. EPM-KPC-PR-000009 : Project Schedule Reporting Procedure

5.0 RESPONSIBILITIES

5.1 Construction Contractor

The Construction Contractor is responsible for planning and executing the works in accordance with the contract requirement and specifications

5.2 Site Construction Department

The Site Construction Department is responsible for overseeing the Construction Contractors activities, to ensure compliance with project requirements and to identify and mitigate performance issues.

6.0 PROCESS/INSTRUCTIONS

6.1 Planning the Work

6.1.1 General

Much of the planning activity will have been undertaken by the Construction Contractor during the tender preparation and submission. The period up-until tender award or contract signature is strictly controlled. However, after the contract has been awarded the Site Construction Department will be allowed to work closely with the Construction Contractor to fully understand how the construction project will be built, commissioned and handed-over.

The Construction Contractor will develop a Construction Execution Plan. This will outline the general approach to the project, including:

- How the project will be divided into sections
- Resourcing requirements



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- Subcontracting arrangements
- Safety
- Process Control
- Quality
- Work Breakdown Structure

6.1.2 Defining the Work Scope

The Construction Contractor shall develop a packaging strategy to cover the whole of the Works, this will support the project work breakdown structure. The packaging strategy will be used to develop the project overall schedule and the Three-week look ahead schedule. The packaging strategy should identify whether the Construction Contractor will directly undertake the work scope of each package, subcontract the work, or a combination of both.

It should be noted that the packaging strategy must also include non-permanent works required for the construction, including:

- Site Offices (and facilities for Client representatives, if specified)
- Equipment and Plant
- Temporary Works – refer to EPM-KCE-PR-000006 Project Construction Temporary Works Procedure

6.1.3 Safety

As part of the detailed planning and prior to undertaking any works on-site the Construction Contractor shall undertake a review of the safety risks for each activity or package of work. This review shall be documented in the form of a Risk Assessment and Method Statement (RAMS). Attachment 1 - EPM-KCC-TP-000015 - Project Construction Method Statement Guideline Template provides guidance for the required content. The Construction Contractor may use his own format, however Attachment 1 should be considered the minimum requirements.

6.1.4 Quality

During the planning phase the Construction Contractor shall review the testing and inspection requirements of the contract, specification and design and incorporate these requirements into Inspection and Test Plans (ITPs). These requirements shall be included in the construction schedule, including any pre-commencement approval, Custodian and Third Party Hold points and off-site Factory Inspection Tests. These items are covered in more detail in EPM-KCQ-PR-000005 - Project Construction Quality Management System Procedure.

Inspection and Test Plans (ITP) shall be accepted by the Construction Department prior to commencing any permanent construction activity.

6.1.5 Schedule or Sequencing

The Construction Contractor will be required to develop and update a construction schedule for the project - this is covered in more detail in EPM-KPO-PR-000023 Project Schedule Reporting Procedure.

The Construction Contractor will produce a Three-Week look ahead document for submission and review / discussion with the Construction Department. An example is shown in Attachment 2 - EPM-KCC-TP-000001 Project Construction Three Week Look Ahead Template (Sample).



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The look ahead schedule will include three week forecast and one-week historic report of performance. The look ahead should cover all activities required for a defined scope, including:

- Approvals
- Materials deliveries
- Equipment
- Resources
- Any risks or potential blockers affecting completion of the work.
- Number of Crafts
- Work Packages

The Three-Week look ahead should be jointly reviewed by the Site Construction Department, Construction Contractor and any other relevant parties each week. Should work be falling behind the overall schedule, mitigation plans should be developed by the Construction Contractor and implemented accordingly.

6.1.6 Materials / Services

The Construction Contractor is generally responsible for the procurement and provision of the materials to build the works. The Construction Contractor should prepare a Materials Assignment Schedule, a format will be provided by the Site Construction Department.

The Site Construction Department should be provided a copy of the Material Assignment Schedule periodically to identify likely sources of material and potential testing requirements that may need to be employed. This is particularly relevant for materials or products that will be fabricated or tested internationally.

The Construction Contractor shall seek acceptance of all material to be used in the works from the Construction Department - refer to EPM-KCQ-PR-000005-Project Construction Quality Management System Procedure.

Materials shall be stored according to manufacturers' guidelines – refer to EPM-KCM-PR-000001: Project Construction Field Material Management Procedure.

6.1.7 Design Information

The Construction Contractor must provide a mechanism for the relevant design drawings to be issued to site for the project facility to be built. The Construction Contractor shall establish a master copy of the contract drawings, either electronically or hard-copy, that are revised when new drawings are issued or Technical Query and Field Change Document responses are received.

The Construction Department shall be responsible for ensuring a complete package of the drawings with the latest versions are sent to the site team for a given section of work.

6.1.8 Coordination

The Construction Contractor will generally be responsible for interface and coordination of the Project construction activities with any adjacent construction projects, stakeholders or other interested parties. The Site Construction Department may be able to assist coordination efforts by facilitating meetings or document approvals, however it is not recommended that the Construction Department accept the responsibility.

The Construction Contractor shall prepare all permits and licenses required to mobilize to site and undertake construction activities. In general, these shall be submitted to the Site Construction Department



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for approval prior to formal submission. A log of all permits and licenses shall be available either via the Enterprise Content Management System (ECMS) or separately, so the Site Construction Department or Site Safety Department can undertake an audit at any time during the project.

The Site Construction Department shall hold regular meetings with various stakeholders to review project plans and sequences. The frequency shall be defined by project needs and agreed with key attendees.

6.1.9 Training

The Construction Contractor shall develop a training matrix to record, and make available to the Site Construction Department training records of resources employed on the project.

Examples of training that may need to be tracked are:

- Safety Inductions
- First-aid training
- Working at height training
- Personal Protective Equipment
- Housekeeping
- Lifting – Rigging training
- Excavator operator
- Confined Spaces

The Construction Contractor shall make the training records available to the Site Construction Department as and when requested.

6.2 Performing the Work

6.2.1 STARRT Card

At the commencement of work activities (tasks) a Start Task Analysis and Risk Reduction Talk (STARRT), as shown in Attachment 3, EPM-KCC-TP-000002 Project Construction STAART Card Template (Sample) shall be undertaken to discuss the specific work scope, the anticipated hazards, and the hazard mitigation controls. The Construction Contractor will prepare this STARRT card and forward to the Site Safety Department for approval and will brief the workforce of the hazards relating to the shifts work activities at each location.

The Site Construction Department or Site Safety Department will undertake periodic inspection of work areas to verify hazard mitigation controls are implemented during installation activities.

6.2.2 Supervision of the Works

The Construction Contractor undertakes and supervises the Works to ensure installations are completed in accordance with design documents.

If the work scope cannot be completed as planned, the Construction Contractor shall determine the documentation needed to resolve issues and/or track the work to completion (e.g., 'Non-Conformance Report' (NCR) or 'Field Change Document' (FCD) depending if the issue was identified before or after installation). Further details are provided in procedures EPM-KCE-PR-000003 Project construction Field



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Change Document Procedure: and EPM-KCQ-PR-000006 Project Construction Control of Nonconforming Items.

6.2.3 Tests and Inspections

The Construction Contractor will undertake and supervise the Works to ensure testing and inspection is completed in accordance with the approved Inspection and Test Plans. The Site Construction Department, (Entity or third parties, if applicable) will be invited to Witness Points or Hold Point inspections in a timely manner.

6.2.4 Work Scope Completion

The Construction Contractor shall complete the works in accordance with EPM-KCC-PR-000003 Project Construction Completions and Turnover Procedure.

7.0 ATTACHMENTS

1. EPM-KCC-TP-000015 - Project Construction Method Statement Guideline Template
2. EPM-KCC-TP-000001 - Project Construction Three Week Look Ahead Template
3. EPM-KCC-TP-000002 - Project Construction STARRT Card Template



Attachment 1 - EPM-KCC-TP-000015 - Project Construction Method Statement Guideline Template

1.0 PURPOSE

1.1 Brief Summary Narrative

- Existing As-Found Condition
- Summary of Work Performed To-Date
- work to be Performed
- Completion and End-State Requirements

2.0 SCOPE

2.1 Applicable Documents and Requirements

- Contract Requirements
- Regulatory Requirements – Federal, State and Local
- Applicable Procedures
- As-built drawings, photographs, and surveys

2.2 Work Breakdown Structure (WBS)

2.3 Project Controls

- Budget
- Schedule, Completion Milestones
- Quantity Reporting – Rules of Credit
- Performance Metrics

2.4 Assumptions, Limitations and Restrictions

2.5 Risk and Mitigation Plans

2.6 Overall Approach and Sequence of Activities to Execute the Scope

- Procurement, material and delivery requirements
- Subcontracting plan
 - Extent of the work to be performed remotely
- Breakdown of work packages to execute the scope
 - Work package content requirements
 - Work package approval requirements
- Required sequence of the activities and interface requirements
 - Hold points identified

3.0 REFERENCES

3.1 Specifications

3.2 Procedures

3.3 Drawings

3.4 ITPs

4.0 DEFINITIONS

4.1 MS -Method Statement

4.2 WP- Work Package

4.3 ITP - Inspection Test Plan

4.4 JHA - Job Hazard Analysis

5.0 ROLES & RESPONSIBILITIES

5.1 Project Site Manager

5.2 Site Engineer(s)



Attachment 2 - EPM-KCC-TP-000001 - Project Construction Three Week Look Ahead Template

SAMPLE

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Attachment 3 - EPM-KCC-TP-000002 - Project Construction STARRT Card Template

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