



**Procedure No. PCM-GP-0001**

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**DRAFT**

**THE MEGA PROJECT**  
Path of Construction Development

**ABC Construction Company**

**CANADA**

Rev	Date (MM/DD/YY)	Revision Notes	Originator	Checker	Approver
A	04/20/09	Issued for Review			



# Procedure

Department:	<b>CONSTRUCTION MANAGEMENT</b>	Number: <b>PCM-GP-0001</b>
Subject:	<b>PATH OF CONSTRUCTION</b>	Revision: <b>A</b>

## 1 **PURPOSE** (Why the document has been written)

The purpose of this procedure is to outline the process for developing the path of construction.

### 1.2 **SCOPE** (What to expect in the document)

This document contains detailed information about conducting multiple sessions that follow a process flow diagram by projects stage versus roles outlining the inputs, activities, and outputs necessary to develop a path of construction.

### 1.3 **RESPONSIBILITIES** (Who is responsible for the document and executing its contents)

1.3.1 Construction Director is accountable to ensure the path of construction procedure is followed in the development of the path of construction.

1.3.2 Construction Manager is responsible for using the path of construction procedure as a roadmap for executing the process. The Construction Manager will facilitate the path of construction sessions and have the appropriate level of experience to perform the path of construction activities.

1.3.3 Constructability Coordinator – Has a supporting role to the Construction Manager and the Path of construction activities.

1.3.4 CWP Coordinator – develop and maintain CWP list and interface with engineering to ensure EWPs are in line with the path of construction

1.3.5 Engineering Manager – Participate in path of construction activities as a Subject Matter Expert and to represent Engineering's interests.

1.3.6 Procurement Manager – Participate in path of construction activities as a Subject Matter Expert. Researches and provides identification of long lead items and procurement constraints.

1.3.7 Scheduler – Represent the path of construction in the project schedule in the form of CWPs and EWPs

1.3.8 Contracts Manager - Participate in path of construction activities as a Subject Matter Expert. Contributes high level, or enterprise level contracting strategy.

1.3.9 Project Manager - Participate in path of construction activities as a Subject Matter Expert and manages functional interfaces as required.

1.3.10 C&SU Manager - Participate in path of construction activities as a Subject Matter Expert and contributes high level turn over strategy.

1.3.11 Estimator - Participate in path of construction activities as a Subject Matter Expert and contributes activity durations where required.



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1.3.12 Operations Manager - Participate in path of construction activities as a Subject Matter Expert.

## 1.4 DEFINITIONS (INCLUSIVE OF APPENDICES)

Facilitator – is a person or party with proven credentials to manage the proceedings of a meeting of people from different backgrounds with different agendas and direct them to arrive at consensus decisions in an effective manner, all without interjecting the facilitator’s own preferences.

Construction Work Package (CWP) - An executable construction deliverable that defines in detail a specific scope of work and should include a budget and schedule that can be compared with actual performance. The scope of work is such that it does not overlap another CWP. The CWP can be used as a scoping document for Requests for Proposal and Contracts.

Engineering Work Package (EWP) - An engineering deliverable that is a component of a CWP and that defines a scope of work to support construction in the form of drawings, procurement deliverables, specifications, and vendor support. The EWP is released in an approved sequence that is consistent with the CWP schedule. The scope of work is typically both by discipline and by area.

Field Installation Work Package (FIWP) - A detailed execution plan that ensures all elements necessary to complete the scope of the FIWP are organized and delivered before work is started. This detailed planning enables craft persons to perform quality work in a safe, effective, and efficient manner. Generally, the scope of work associated with the FIWP is small enough that it could be completed by a single-foreman team, typically in a one- or two-week time frame.

WorkFace Planning (WFP) - The process of organizing and delivering all the elements necessary, before work is started, to enable craft persons to perform quality work in a safe, effective, and efficient manner.

Path of Construction – is the articulation of the optimum building sequence of the physical components of a facility.

Design Basis Memorandum (DBM) - A “Controlled Document” produced during the front-end engineering study phase that defines the basic design parameters for the intended project. Generation, review, and approval of the DBM are prerequisites to AFE approval and release for development of the Engineering Design Specification (EDS).

Engineering Design Specification (EDS) - The product of front-end engineering development (basic engineering) that defines all elements of project scope and is the Control Document for commencement of detail engineering and procurement activities on the project. A companion document to the EDS is the Project Execution Plan that sets forth the program for project implementation.

Detailed Design - The phase of engineering following EDS, after approval has been given for the project. The DEP provides the specifications and construction drawings that detail all engineering aspects for the construction of a project.



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2 **PROCEDURE** (A Procedure is a document of the established method of performing work. It explains WHO does WHAT by WHEN. Procedures present a step-by-step sequenced way to do a task consistently and with maximum efficiency.)

## 2.1 SESSION PREPARATION

The Project Construction Manager is responsible for the preparation of the path of construction sessions.

2.1.1 Develop the path of construction agenda. The agenda must have a clearly stated objective and list of activities. This should be based on Appendix A Path of Construction Flow Diagram, Appendix B – Inputs, Tools and Techniques, Outputs and reflect the stage of the project at the time of the meeting. Appendix B Outputs should guide the list of activities for the session.

2.1.2 The time frame and scope of activities discussed during the path of construction session depends on the current project objectives. If the project's current deliverables are for DBM or EDS purposes, then the activities discussed should only detail that phase of project development. If the current scope of the project is detailed design, it is appropriate to discuss detailed engineering activities. This approach avoids wasting time in discussing activities that are not relevant at the time of the path of construction meeting.

2.1.3 Distribute Appendix C Path of Construction Input Checklist and Tracking Log by Functional Area to the participants.

2.1.4 The Project Construction Manager, with help from other functional participants, will assemble the data for review by the meeting participants prior to the session. This will ensure all relevant information is available and complete.

2.1.4 Send out the meeting agenda and data package to attendees. In the meeting request make it clear that attendance is mandatory. If a person is unable to attend they must send a delegate.

## 2.2 MEETING GUIDELINES

2.2.1 Construction Manager, or designate, will facilitate the path of construction sessions according to the agenda. Strong facilitation skills are critical to achieving path of construction outputs in the allotted time.

2.2.2 Provide a sign in sheet for the meeting.

2.2.3 A path of construction log should be set up to keep lists of needs, assumptions and parking lot issues, so they can be addressed during the path of construction development.

2.2.4 Review cycles must be established during the path of construction session to ensure progressive elaboration and updates occur during the Front End of the project.

2.2.5 Holiday periods should not be overlooked during the path of construction development process.



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### 2.3 POST-MEETING ACTIVITIES

2.3.1 The path of construction session provides the basis for or input to the final project modularization strategy, procurement strategy, contracting plan, heavy lift plan, plot plan, work package schedules, and estimate with project team input and buy-in.

2.3.2 Path of construction outputs are critical inputs to participative planning sessions held by project controls to establish the project schedule.

### 3 **IMPLEMENTATION** (Who is responsible to ensure the document is being implemented)

#### 3.1 REFERENCE DOCUMENTS

CWP Best Practice  
EWP Standards  
FIWP Standards  
WFP Implementation Manual

#### 3.2 APPENDICES

Appendix A - Path of Construction Flow Diagram  
Appendix B – Path of Construction Inputs, Tools and Techniques, Outputs  
Appendix C - Path of Construction Input Checklist and Tracking Log

#### 3.3 ACKNOWLEDGEMENTS

COAA WFP Best Practices Committee  
Construction Industry Institute

### 4 **INTERPRETATION AND UPDATING** (Accountable for interpretation and updating to be defined using position titles. Should be one position only.)

4.1 The Director, Construction Management is responsible to interpret and update this procedure.

### 5 **APPROVED BY**

\_\_\_\_\_  
Name  
Title  
Department

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