



Consulting and Training | Reach New Heights

Course Name

Construction Problem Solving for Site Engineers

Sector Name

Civil Engineering

Document Type

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Construction Problem Solving for Site Engineers

Course Introduction

Construction sites rarely progress exactly as drawings, schedules, and method statements predict. Conflicting information, dimensional discrepancies, unforeseen site conditions, material constraints, access limitations, sequencing conflicts, and constructability issues can emerge while work is already moving. For site engineers, the challenge is not simply to identify these problems, but to understand their technical impact, develop workable options, and prevent quick fixes from creating new problems elsewhere in the project.

Boost Consulting & Training has designed this course around the real engineering decisions site engineers face during construction. Participants will learn how to define site problems accurately, separate technical causes from visible symptoms, investigate drawings and field conditions, develop and compare practical solutions, coordinate technical input, and communicate recommendations clearly before implementation. The emphasis is on disciplined engineering problem solving that respects design intent while responding realistically to construction constraints.

The main concept of this course is to turn unexpected site problems into structured engineering decisions, enabling site engineers to

develop practical solutions without compromising technical requirements, quality, or constructability.

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Target Audience

- ✓ Site and civil engineers
- ✓ Construction and project engineers
- ✓ Technical office engineers
- ✓ Site supervisors and engineering coordinators

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Learning Objectives

- ✓ Define construction-site problems accurately before proposing corrective solutions.
- ✓ Analyze technical, dimensional, material, and execution-related causes of site issues.
- ✓ Resolve discrepancies between drawings, specifications, and actual site conditions.
- ✓ Evaluate the engineering impact of proposed field changes before implementation.
- ✓ Develop practical alternatives that respect design intent and construction constraints.
- ✓ Coordinate technical solutions across relevant disciplines and project stakeholders.
- ✓ Document site problems and recommendations clearly for review and approval.
- ✓ Apply structured problem-solving techniques to recurring and complex construction challenges.

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Course Outline

✓ DAY 1

Defining the Real Site Problem

From Site Observation to Engineering Problem

- ✓ Separating visible symptoms from the technical issue requiring resolution
- ✓ Establishing what was expected, what occurred, and where the discrepancy exists
- ✓ Determining the immediate effect on dimensions, quality, sequence, access, or subsequent works

Building Technical Evidence

- ✓ Gathering relevant drawings, specifications, measurements, photographs, records, and field information
- ✓ Checking whether available documents represent the latest approved project requirements
- ✓ Completing a Site Problem Definition Exercise from fragmented construction information



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Course Outline

✓ DAY 2

Resolving Drawings and Field Conflicts

Managing Design Information Discrepancies

- ✓ Identifying inconsistencies between drawings, details, specifications, schedules, and site conditions
- ✓ Determining which discrepancies require clarification rather than informal field interpretation
- ✓ Preparing focused technical queries that communicate the problem without unnecessary information

Working Through Dimensional and Spatial Conflicts

- ✓ Analyzing levels, dimensions, clearances, openings, alignments, and interface constraints
- ✓ Understanding how a local dimensional adjustment can affect connected construction elements
- ✓ Completing a Drawing-to-Site Conflict Challenge using a coordinated project scenario

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Course Outline

✓ DAY 3

Developing Buildable Engineering Solutions

Creating Practical Alternatives

- ✓ Generating technically viable options instead of committing immediately to the first available fix
- ✓ Considering materials, equipment, workforce, access, sequence, tolerances, and site limitations
- ✓ Preserving essential design requirements while improving practical execution

Comparing Solutions Before Implementation

- ✓ Evaluating alternatives according to technical impact, quality, constructability, time, and disruption
- ✓ Identifying secondary consequences that a proposed solution may create for later activities
- ✓ Running a Site Solution Workshop to compare and defend alternative engineering responses



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Course Outline

✓ DAY 4

Solving Problems Across Construction Interfaces

Managing Multidisciplinary Site Conflicts

- ✓ Resolving interfaces between structural, architectural, civil, and building-services requirements
- ✓ Identifying solutions that resolve one discipline's problem without transferring it to another
- ✓ Coordinating technical input when several parties influence the final field solution

Managing Sequence and Execution Constraints

- ✓ Replanning construction sequence when access, preceding work, temporary conditions, or dependencies create obstacles
- ✓ Evaluating the implications of rework, temporary measures, and alternative execution methods
- ✓ Completing a Construction Interface Resolution Case involving competing site requirements

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Course Outline

✓ DAY 5

Controlling and Learning from Site Solutions

From Proposed Solution to Controlled Implementation

- ✓ Presenting the technical basis, implications, and requirements of the recommended solution
- ✓ Obtaining appropriate review and approval before changes are incorporated into permanent work
- ✓ Verifying that the approved solution is implemented correctly and reflected in project records

Preventing Recurring Site Problems

- ✓ Identifying recurring issues that indicate weaknesses in coordination, information, detailing, or execution
- ✓ Capturing practical lessons for upcoming activities and similar project areas
- ✓ Developing a Site Engineering Problem-Solving Playbook from a complete construction case



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Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
Dec. 7, 2026	Dec. 11, 2026	5 days	4250.00 \$	UAE , Dubai
Feb. 1, 2027	Feb. 5, 2027	5 days	5950.00 \$	switzerland , Geneva
April 25, 2027	April 29, 2027	5 days	4250.00 \$	Oman , Muscat
Aug. 2, 2027	Aug. 6, 2027	5 days	4250.00 \$	UAE , Dubai

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