
Certificate in Real Estate Project Management

Construction management

Construction Management is a critical aspect of Real Estate Project Management that involves planning, coordinating, and controlling a project from inception to completion. It encompasses a wide range of activities, including budgeting, scheduling, quality control, and risk management, to ensure that projects are completed on time, within budget, and to the required quality standards. Construction managers play a crucial role in overseeing the construction process, collaborating with various stakeholders, and ensuring that all project objectives are met.

Key Terms and Vocabulary

1. **Project Management:** Project management involves planning, organizing, and managing resources to achieve specific project goals. In real estate project management, this includes overseeing the development of a property from acquisition to completion.
2. **Construction Manager:** The construction manager is responsible for overseeing all aspects of the construction process, including planning, scheduling, budgeting, and quality control. They act as a liaison between the project owner, design team, contractors, and subcontractors.
3. **Scope of Work:** The scope of work defines the specific tasks and deliverables that need to be completed to achieve the project objectives. It outlines the responsibilities of each party involved in the project.
4. **Request for Proposal (RFP):** An RFP is a document issued by the project owner to solicit bids from potential contractors for the construction project. It outlines the project requirements, scope of work, and evaluation criteria.
5. **Contract Documents:** Contract documents include the project plans, specifications, and other contractual agreements that define the scope of work, schedule, and budget for the construction project. They serve as the legal basis for the project.
6. **Bid Evaluation:** Bid evaluation involves reviewing and comparing bids submitted by contractors to select the most qualified and competitive bidder for the project. Factors considered in the evaluation process include price, experience, and proposed schedule.
7. **Change Order:** A change order is a written document that modifies the scope of work, schedule, or budget of the construction project. It is issued when there are changes or unforeseen circumstances that impact the project.
8. **Value Engineering:** Value engineering is a systematic process of analyzing project costs and finding ways

to optimize value without sacrificing quality. It involves identifying cost-saving opportunities and finding alternative solutions to reduce project costs.

9. Quality Control: Quality control involves monitoring and inspecting the construction process to ensure that work meets the required quality standards. It includes conducting inspections, testing materials, and addressing any quality issues that arise during construction.

10. Risk Management: Risk management involves identifying, assessing, and mitigating risks that could impact the project's success. It includes developing risk management plans, implementing risk mitigation strategies, and monitoring risks throughout the project lifecycle.

11. Cost Estimating: Cost estimating is the process of predicting the cost of a construction project based on the project requirements, scope of work, and market conditions. It involves preparing detailed cost estimates for labor, materials, equipment, and overhead.

12. Scheduling: Scheduling involves developing a project timeline that outlines the sequence of activities, milestones, and deadlines for the construction project. It helps ensure that work is completed on time and within budget.

13. Subcontractor: A subcontractor is a company or individual hired by the general contractor to perform specific tasks or provide specialized services on the construction project. Subcontractors are typically responsible for a specific portion of the work.

14. Closeout: Closeout is the final phase of the construction project where all work is completed, and the project is turned over to the owner. It includes final inspections, punch lists, and the handover of project documentation.

15. Commissioning: Commissioning is the process of testing and verifying that all systems and components of the building are installed, calibrated, and functioning correctly. It ensures that the building operates as intended and meets the owner's requirements.

16. Green Building: Green building involves designing and constructing buildings that are energy-efficient, environmentally friendly, and sustainable. It includes using sustainable materials, energy-efficient systems, and environmentally friendly practices.

17. Bid Package: A bid package is a set of documents prepared by the project owner that includes the project plans, specifications, and other information required for contractors to submit bids. It provides detailed instructions on how to bid on the project.

18. Value Management: Value management is a systematic approach to maximizing the value of a project by optimizing costs, quality, and performance. It involves identifying project objectives, analyzing options, and finding the best value solution.

19. **Permitting:** Permitting involves obtaining the necessary permits, approvals, and licenses from regulatory authorities to start construction on a project. It ensures that the project complies with building codes, zoning regulations, and other legal requirements.
20. **Constructability Review:** A constructability review is a process of evaluating the construction plans and specifications to identify potential construction issues, conflicts, or inefficiencies. It helps optimize the construction process and prevent costly changes during construction.
21. **Value Proposition:** A value proposition is a statement that describes the unique benefits and value that a project or product offers to the stakeholders. It helps differentiate the project from competitors and attract potential investors or buyers.
22. **Life Cycle Cost Analysis:** Life cycle cost analysis is a method of evaluating the total cost of owning and operating a building over its life cycle, including construction, maintenance, and energy costs. It helps identify cost-saving opportunities and optimize long-term performance.
23. **Constructability:** Constructability refers to the ease and efficiency with which a project can be constructed. It involves considering construction methods, sequencing, and logistics during the design phase to optimize construction efficiency.
24. **Submittal:** A submittal is a formal document submitted by a contractor or subcontractor to the project owner or design team for review and approval. It includes product data, samples, and other information required for the construction process.
25. **Value Chain:** A value chain is a series of activities that add value to a product or service from raw materials to the final delivery. In construction management, the value chain includes all activities involved in the design, procurement, construction, and delivery of a project.
26. **Performance Specification:** A performance specification defines the required performance criteria and standards for a construction project without specifying how the work is to be accomplished. It focuses on the desired outcomes rather than specific methods.
27. **Constructability Consultant:** A constructability consultant is a specialist who provides expertise in evaluating construction plans and specifications to identify constructability issues and optimize the construction process. They help improve project efficiency and reduce costs.
28. **Change Management:** Change management involves managing changes to the project scope, schedule, or budget throughout the construction process. It includes documenting changes, assessing impacts, and communicating changes to all stakeholders.
29. **Value Stream Mapping:** Value stream mapping is a lean management tool used to analyze and optimize the flow of materials, information, and processes in a construction project. It helps identify waste,

inefficiencies, and opportunities for improvement.

30. Building Information Modeling (BIM): BIM is a digital representation of a building's physical and functional characteristics. It allows for collaborative design, visualization, and simulation of construction projects to improve coordination and efficiency.

31. Lean Construction: Lean construction is a management philosophy that aims to maximize value and minimize waste in the construction process. It focuses on improving efficiency, reducing costs, and enhancing project outcomes through continuous improvement.

32. Value Engineering Change Proposal (VECP): A VECP is a proposal submitted by a contractor to the project owner to suggest changes that will improve project value without increasing costs. It aims to optimize project performance and reduce overall costs.

33. Design-Build: Design-build is a project delivery method where the design and construction services are provided by a single entity. It streamlines the project process, improves communication, and reduces project risks.

34. Constructability Score: A constructability score is a rating assigned to a construction project based on its ease of construction, potential risks, and opportunities for improvement. It helps identify areas where constructability can be optimized.

35. Third-Party Review: Third-party review involves hiring an independent consultant or organization to review and verify the project plans, specifications, and construction documents. It helps ensure quality, compliance, and accuracy in the project.

36. Integrated Project Delivery (IPD): IPD is a collaborative project delivery approach that involves integrating all project stakeholders, including the owner, design team, and contractors, into a single team. It promotes collaboration, innovation, and shared risk-reward.

37. Constructability Workshop: A constructability workshop is a collaborative session where project stakeholders come together to review and identify constructability issues, risks, and opportunities in the project. It helps improve project efficiency and coordination.

38. Value Management Workshop: A value management workshop is a structured session where project stakeholders explore and identify opportunities to optimize project value, reduce costs, and improve performance. It helps align project objectives and priorities.

39. Master Format: Master Format is a standard system for organizing and formatting construction specifications, schedules, and other project documents. It helps facilitate communication, coordination, and consistency in construction projects.

40. Life Cycle Assessment: Life cycle assessment is a method of evaluating the environmental impacts of a

building or construction project throughout its life cycle, including design, construction, operation, and disposal. It helps identify sustainable design strategies and reduce environmental footprint.

41. **Constructability Review Checklist:** A constructability review checklist is a tool used to systematically evaluate construction plans and specifications for potential constructability issues, conflicts, or inefficiencies. It helps ensure that the project is well-coordinated and optimized for construction.

42. **Value Engineering Workshop:** A value engineering workshop is a collaborative session where project stakeholders explore cost-saving opportunities, analyze project value, and identify alternative solutions to improve project performance. It helps optimize project costs and value.

43. **Building Performance:** Building performance refers to how well a building meets the functional, operational, and environmental requirements over its life cycle. It includes energy efficiency, indoor air quality, comfort, and sustainability.

44. **Constructability Review Meeting:** A constructability review meeting is a formal session where project stakeholders discuss and address constructability issues, risks, and opportunities in the construction project. It helps ensure that the project is well-coordinated and optimized for construction.

45. **Value Management Study:** A value management study is a comprehensive analysis of project objectives, requirements, and constraints to identify opportunities to optimize project value, reduce costs, and improve performance. It helps align project goals and priorities.

46. **Building Envelope:** The building envelope is the physical barrier that separates the interior and exterior environments of a building. It includes the walls, roof, windows, and doors that protect the building from weather, moisture, and air infiltration.

47. **Constructability Review Report:** A constructability review report is a formal document that summarizes the findings, recommendations, and action items from the constructability review process. It helps communicate constructability issues and solutions to project stakeholders.

48. **Value Engineering Analysis:** Value engineering analysis is a systematic process of analyzing project costs, functions, and requirements to identify opportunities to improve project value and performance. It involves evaluating alternatives, trade-offs, and risks.

49. **Building Performance Evaluation:** Building performance evaluation is a process of assessing how well a building meets its design objectives, operational requirements, and user needs. It includes monitoring energy use, indoor air quality, comfort, and maintenance.

50. **Constructability Review Team:** A constructability review team is a group of project stakeholders, including architects, engineers, contractors, and subcontractors, who collaborate to identify and address constructability issues in the construction project. It helps optimize project efficiency and coordination.

51. Value Engineering Proposal: A value engineering proposal is a formal document submitted by a contractor to the project owner to propose changes that will improve project value and performance. It includes cost estimates, benefits, and risks associated with the proposed changes.
52. Building Performance Metrics: Building performance metrics are quantitative measures used to evaluate and compare the performance of buildings in terms of energy efficiency, indoor air quality, comfort, and sustainability. They help assess building performance and identify opportunities for improvement.
53. Constructability Review Process: The constructability review process is a systematic approach to evaluating construction plans and specifications to identify potential constructability issues, conflicts, or inefficiencies. It involves reviewing the design, coordinating with stakeholders, and developing solutions.
54. Value Engineering Workshop Facilitator: A value engineering workshop facilitator is a trained professional who leads and guides project stakeholders through the value engineering workshop process. They help facilitate discussions, generate ideas, and drive consensus on project value and performance.
55. Building Performance Simulation: Building performance simulation is a computer-based modeling tool used to predict and optimize the performance of a building in terms of energy use, indoor comfort, and environmental impact. It helps design energy-efficient and sustainable buildings.
56. Constructability Review Meeting Minutes: Constructability review meeting minutes are detailed notes and action items documented during the constructability review meeting. They provide a record of discussions, decisions, and follow-up actions related to constructability issues in the construction project.
57. Value Engineering Cost Analysis: Value engineering cost analysis is a method of evaluating the costs and benefits of proposed value engineering changes to a construction project. It helps assess the impact on project value, performance, and overall costs.
58. Building Performance Standards: Building performance standards are guidelines and criteria used to define and measure the performance requirements for buildings in terms of energy efficiency, indoor air quality, comfort, and sustainability. They help ensure that buildings meet specified performance goals.
59. Constructability Review Workshop: A constructability review workshop is a collaborative session where project stakeholders come together to review and address constructability issues, risks, and opportunities in the construction project. It helps improve project coordination and efficiency.
60. Value Engineering Study: A value engineering study is a detailed analysis of project costs, functions, and requirements to identify opportunities to optimize project value, reduce costs, and improve performance. It helps generate cost-saving ideas and alternatives for the project.
61. Building Performance Testing: Building performance testing involves conducting tests and evaluations to assess how well a building meets its design objectives, operational requirements, and user needs. It includes

testing energy systems, indoor air quality, and thermal performance.

62. Constructability Review Workshop Facilitator: A constructability review workshop facilitator is a trained professional who leads and guides project stakeholders through the constructability review workshop process. They help facilitate discussions, identify issues, and develop solutions to optimize project efficiency.

63. Value Engineering Workshop Report: A value engineering workshop report is a formal document that summarizes the findings, recommendations, and action items from the value engineering workshop process. It helps communicate cost-saving opportunities, alternatives, and risks to project stakeholders.

64. Building Performance Monitoring: Building performance monitoring involves tracking and evaluating the performance of a building over time to ensure that it meets its design objectives, operational requirements, and user needs. It includes collecting data, analyzing trends, and identifying opportunities for improvement.

65. Constructability Review Checklist Template: A constructability review checklist template is a standardized tool used to evaluate construction plans and specifications for potential constructability issues, conflicts, or inefficiencies. It helps ensure consistency and thoroughness in the constructability review process.

66. Value Engineering Proposal Form: A value engineering proposal form is a document used by contractors to submit proposed changes that will improve project value and performance. It includes a description of the proposed changes, benefits, costs, and potential risks.

67. Building Performance Evaluation Criteria: Building performance evaluation criteria are specific measures and indicators used to assess the performance of buildings in terms of energy efficiency, indoor air quality, comfort, and sustainability. They help define the performance requirements and goals for the building.

68. Constructability Review Process Map: A constructability review process map is a visual representation of the steps and stages involved in the constructability review process. It helps project stakeholders understand the review process, roles, responsibilities, and key milestones.

69. Value Engineering Workshop Agenda: A value engineering workshop agenda is a structured plan that outlines the topics, activities, and schedule for the value engineering workshop. It helps guide discussions, focus on key issues, and achieve the objectives of the workshop.

70. Building Performance Evaluation Report: A building performance evaluation report is a formal document that summarizes the results, findings, and recommendations from the building performance evaluation process. It helps communicate building performance metrics, trends, and opportunities for improvement.

71. Constructability Review Workshop Agenda: A constructability review workshop agenda is a structured plan that outlines the topics, activities, and schedule for the constructability review workshop. It helps guide discussions, focus on key issues, and achieve the objectives of the workshop.

72. Value Engineering Workshop Summary: A value engineering workshop summary is a concise document

that highlights the key findings, recommendations, and action items from the value engineering workshop. It helps communicate cost-saving opportunities, alternatives, and risks to project stakeholders.

73. Building Performance Evaluation Plan: A building performance evaluation plan is a formal document that outlines the objectives, scope, methods, and schedule for conducting the building performance evaluation. It helps define the evaluation criteria, data collection methods, and reporting requirements.

74. Constructability Review Workshop Summary: A constructability review workshop summary is a concise document that highlights the key findings, recommendations, and action items from the constructability review workshop. It helps communicate constructability issues, risks, and opportunities to project stakeholders.

75. Value Engineering Workshop Action Plan: A value engineering workshop action plan is a detailed document that outlines the recommended actions, responsibilities, and timelines for implementing the cost-saving opportunities identified during the value engineering workshop. It helps track progress and ensure follow-through on proposed changes.

76. Building Performance Evaluation Schedule: A building performance evaluation schedule is a timeline that outlines the activities, milestones, and deadlines for conducting the building performance evaluation. It helps coordinate data collection, analysis, and reporting activities to meet project objectives.

77. Constructability Review Workshop Action Plan:</p>