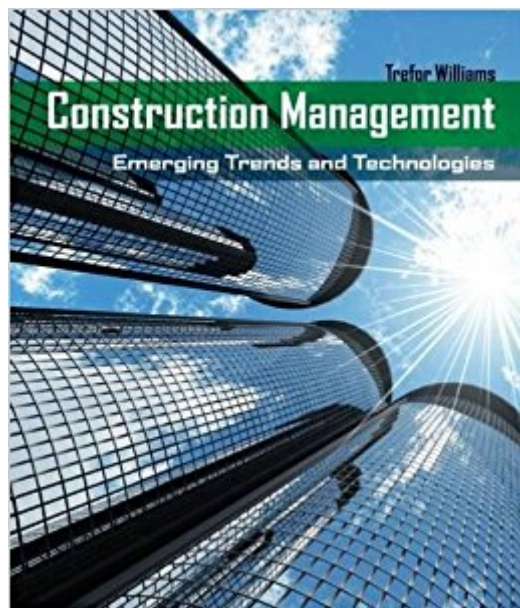


The book was found

Construction Management: Emerging Trends & Technologies (Go Green With Renewable Energy Resources)



Synopsis

With a fresh approach that addresses the unique features of construction management for the 21st century, this book provides an overview of the construction industry and the management of construction projects. Construction Management: Emerging Trends and Technologies offers solid, foundational concepts in "traditional" areas, including construction contracts, cash flow, estimating and scheduling. Setting it apart from traditional books on the subject, it breaks away from these traditional areas to explore emerging areas of interest, such as "mega-projects," design-build construction, public private partnerships, the application of information technology to construction, configuration management, and sustainable construction. With thorough, up-to-date information and detailed explanations, this is an indispensable resource for anyone seeking a better understanding of the up-and-coming state of the construction management industry.

Book Information

Series: Go Green with Renewable Energy Resources

Paperback: 288 pages

Publisher: Delmar Cengage Learning; 1 edition (September 25, 2009)

Language: English

ISBN-10: 1428305181

ISBN-13: 978-1428305182

Product Dimensions: 8 x 0.6 x 9.2 inches

Shipping Weight: 1.1 pounds (View shipping rates and policies)

Average Customer Review: 3.8 out of 5 stars 4 customer reviews

Best Sellers Rank: #210,427 in Books (See Top 100 in Books) #85 in [Books > Engineering & Transportation > Engineering > Industrial, Manufacturing & Operational Systems > Project Management](#) #85 in [Books > Business & Money > Management & Leadership > Project Management > Technical](#) #495 in [Books > Crafts, Hobbies & Home > Home Improvement & Design > How-to & Home Improvements > Design & Construction](#)

Customer Reviews

1. The Nature of the Construction Industry Introduction to Construction. Some Statistics About the Construction Industry. Projects and the Construction Industry. Comparison of Construction and Automobile Manufacturing. Construction Project participants. Specialization within the Construction Industry. Emerging Trends in the Construction Industry. Megaprojects. Globalization. The US Transportation Infrastructure Crisis. The Importance of Ethics in the Construction Industry. Careers

in Construction. 2. Methods of Delivering Construction Projects. Introduction. Basic Construction Contractual Arrangements. Public and Private Owners: Construction Contract Types. Competitive Bidding. Unit Price and Lump Sum Projects. Steps in the Competitive Bidding Process. Completion of the Design and the Development of the Bid Package. Advertising the Bid. Obtaining the Bid Package. Preparing the Bid. Design Changes During the Bidding Period. Pre-Bid Meetings. Submitting the Bid and the Bid Opening. Award of Contract Notice to Proceed. Bid Security and Bid Bonds. Bid Package Details. Specifications. General Conditions. Special Conditions. The Complexity of Bidding. The Importance of General Conditions During Construction. Change Orders. Time Extensions. The Ethics of Competitive Bidding. 3. Change Orders and Disputes during Construction. Introduction. Change Orders. Changed Conditions. Design Errors and Omissions. Change in Project Design. Negotiating Change Orders. Contractor's Duty to Perform Change Order Work. Issues Related to Time and Delay. Liquidated Damages. Time Extensions. Resolving Construction Disputes. Dispute Resolution Boards and On-Site Neutrals. Arbitration and Mediation. Litigation. Partnering. Value Engineering. 4. Construction Management Contracts: An Alternative to Design-Bid-Build. Introduction. Construction Management Contract Formats. Agency Construction Management. At-Risk Construction Management Contracts. 5. Design Build Procurement: Combining the Designer and the Contractor. Introduction. Potential Benefits of Using Design-Build. The Design-Bid Process. The Request for Proposals: Defining the Project Scope. Competitive Procurement: One-Step and Two-Step Procurement. Preliminary Designs Included in the RFP. Formations of Teams and Consortiums. Additional Legal Risks for Contractors with Design-Build. 6. Emerging Trends in Project Procurement: Public Private Partnerships. Introduction. Reasons for the Emergence of Public-Private Partnerships. The Structure of Public Private Partnerships. Build-Operate-Transfer. Design-Build-Finance-Operate. Examples of Public Private Partnerships. BOT Projects. DBFO Projects. Conclusions. 7. Cost Control, Profitability and Cash Flow. Monitoring costs during construction. Assessing project profitability. Construction accounting and the profitability of the firm. Cash flow during construction. Unbalanced bids. Financing. Using computer software for accounting cost control. The JobView software. Monitoring project profitability using the software. Producing financial documents. 8. A Short Introduction to Scheduling and Planning. The importance of planning. Increasing project complexity. Linear scheduling techniques. Line-of-Balance Analysis. Example applications. The Critical Path Method. Introduction. Benefits. History. The Basics of CPM. Activity. Network diagrams. Calculations. Computers and Scheduling. Discussion of available programs. Examples of input and output. Interpretation of output. 9. Managing Project Complexity: Configuration Management. Introduction. Increasing project

complexity. The need to manage the effect of changes on project scope. Definition of Configuration Management. The Configuration Management Methodology. Configuration Management Plan. Document Management Process. Baseline Management Process. Contract Change Management Process. Specialized Configuration Management Software. The ccsNet software. 10. Construction Equipment Productivity. Productivity Concepts. What is productivity? How is it measured? Heavy Construction equipment basics. Earthmoving Equipment. Calculating equipment productivity. Calculations of capacity and cycle times. Selecting equipment numbers using the balance point calculation. Emerging Applications of Automation. Automated Earthmoving. Automated paving. Geo-tracking of equipment. Limitations on the adoption of automation in building construction. 11 Estimating Basics. What is estimating? Different Levels of Estimating. Contract Type and estimate detail. Engineer's Estimates. Bid Estimates. Equipment Costs. Depreciation. Operating costs. Calculation of an hourly charging rate. Labor Costs. Costs from Union agreements. Calculation of fringe benefit cost. Material Costs. Supply chain management. Using estimating reference books. Using the computer to prepare estimates. Solutions for Heavy and commercial contractors. Simple programs for residential contractors. Using the computer for quantity take-off. 12. Construction Labor and Safety. Union and Non-Union Construction. Labor Law. Important legislation. Right-to work states. Important construction unions. Contractor organizations. AGC. Negotiation of union contracts. ABC. Safety. The need to provide a safe working environment. Negative effects of accidents on insurance rating. Other cost of accidents. OSHA regulation. 13. The Emerging Role of Information Technology. Why are computers and the web important in Construction? Definition of Information Technology. Data exchange. Using web-based systems in construction. Computers and PDAs in the field. Computer and Web-based Systems to Manage Projects. Project Web-Portals. Mobile computers for scheduling. Mobile data collection . Field office management. Wireless communications and mobile computing at the Construction Site. Wi-Fi. Mesh Networks. Simple solutions for small contractors. Peer-to-Peer Networking. Weblogs and Wiki. 14. Sustainability in Construction. The importance of sustainability for society. The sustainability of constructed facilities. How sustainability changes residential construction contracting. Commercial Building Sustainability. Changes in methods and materials. Green Roofs. How does consideration of sustainability effect construction? Reusable and recyclable materials. Emissions from construction equipment. Demolition of facilities.

Trefor P. Williams, Ph.D., P.E., is a Professor of Civil and Environmental Engineering at Rutgers University, and a registered professional engineer in New York and New Jersey. He is the author of

It could use a reprint to resolve a few specific issues that seem to be mishaps faulted by the publishers. Notwithstanding, the book provides a solid, holistic knowledge of this industry in a current and approachable format. I am currently taking a course with the author, himself, and this book has, so far, proven to be a very valuable resource. I recommended it to anyone who is interested in managing construction on a larger scale, especially as an engineer (in training or professional).

Great it was shipped on time

While the other review cited many errors within the book, that may have been a slight exaggeration. There are some mistakes in the book, which are found mostly (if not exclusively) within the chapter review problems. These mistakes range from referencing in-existent tables or typographical errors within figures. The chapter content, however, is very easy to understand without any help from the professor. The only chapter that is a little tricky on its own is Chapter 7 involving Scheduling and planning. While this is a crucial method to understand, it is very easy to get the hang of it. Once you understand this method (the forward-pass and backward-pass), it's easy to tackle any problem of the nature. In fact, the book references software that deals with this kind of scheduling. I recommend checking out the trial versions of the software listed in the book to make it easier to understand the concept of calculation total float, free float, critical path (method), and calculating total project duration. Again, the book has some mistakes (a lot of which are typographical errors, seemingly done on the publisher's part) but the core material is present and easy to understand.

I found many errors on Schedule and estimating chapters. I called the publisher and even e-mailed them regarding this issue and I have received no answer. This book contains simple errors as well as technical one. It will confuse you in one way because it uses tables that do not exist to solve some of the problems. Sometimes, it refers you to the wrong table as well, and even has errors as to simple adding like $3+6=3$. You would be distracted trying to make sense out of this book.

[Download to continue reading...](#)

Construction Management: Emerging Trends & Technologies (Go Green with Renewable Energy Resources) Construction Materials, Methods and Techniques: Building for a Sustainable Future (Go

Green with Renewable Energy Resources) Unconventional Oil and Gas Resources: Exploitation and Development (Emerging Trends and Technologies in Petroleum Engineering) The Renewable Energy Handbook: The Updated Comprehensive Guide to Renewable Energy and Independent Living Green Homes: An Everyman's Guide to Energy-Efficient Design and Renewable Technologies Modern Hydronic Heating: For Residential and Light Commercial Buildings (Go Green with Renewable Energy Resources) Trends in Hip-Hop Dance (Dance and Fitness Trends) (Dance & Fitness Trends) African Dance Trends (Dance and Fitness Trends) (Dance & Fitness Trends) Trends in Martial Arts (Dance and Fitness Trends) (Dance & Fitness Trends) Renewable Energy Made Easy: Free Energy from Solar, Wind, Hydropower, and Other Alternative Energy Sources Real Goods Solar Living Sourcebook: Your Complete Guide to Living beyond the Grid with Renewable Energy Technologies and Sustainable Living Renewable Energy Sources in Saudi Arabia: A New Age Look at the Sustainability of the Natural Resources in the Middle East Inclusive of Solar Panels, Hydro-Electric ... Hybrids, Hydroelectric Power & More Energy for Keeps: Creating Clean Electricity from Renewable Resources The New Net Zero: Leading-Edge Design and Construction of Homes and Buildings for a Renewable Energy Future Mathematical Bioeconomics: The Optimal Management of Renewable Resources, 2nd Edition Coal Power Technologies Explained Simply: Energy Technologies Explained Simply (Volume 6) Intelligent Network Integration of Distributed Renewable Generation (Green Energy and Technology) The Homeowner's Guide to Renewable Energy: Achieving Energy Independence Through Solar, Wind, Biomass, and Hydropower Introduction to Renewable Energy, Second Edition (Energy and the Environment) The Homeowner's Guide to Renewable Energy: Achieving Energy Independence through Solar, Wind, Biomass and Hydropower (Mother Earth News Wiser Living)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

[FAQ & Help](#)