

Sustainable Construction Green Building Design And Delivery

Energy Efficient BuildingsRegenerative
Development and DesignSustainable Landscape
Construction, Third EditionA Handbook of
Sustainable Building Design and
EngineeringFundamentals of Integrated Design
for Sustainable BuildingThe Law of Green
BuildingsMarketing Green BuildingsHandbook of
Green Building Design and
ConstructionContractor's Guide to Green
Building ConstructionGreen Construction
Project Management and Cost
OversightSustainable ConstructionSustainable
Energy System EngineeringGreen Architecture
(GreenSource Books)Green Healthcare
InstitutionsSustainable FacilitiesSustainable
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BIMGreen BuildingSustainable BuildingsBest
Practices in Sustainable Building
DesignSustainable ConstructionGreen Building:
Principles and Practices in Residential
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Design and ConstructionSustainable
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Concrete Principles of Sustainable Project Management Sustainable Building Design Sustainable Construction Techniques Renewable Energy and Sustainable Buildings Integrated Sustainable Design of Buildings Green Building Illustrated The Integrative Design Guide to Green Building Sustainability in Architecture and Urban Design

Energy Efficient Buildings

Written for contractors and endorsed by the Associated General Contractors of America Written specifically for contractors, this "how-to" book enables you to meet the challenges of green building construction. You'll discover how constructing environmentally friendly, sustainable buildings influences project management, delivery, documentation, and risk. Moreover, the book guides you through these important considerations at all phases of a green construction project, including: Bidding and contracting Managing green design when the contractor works as a design builder Subcontracting Procurement Construction management Project commissioning and closeout This book is endorsed by the Associated General Contractors of America (AGC) and was written with the assistance and advice of a specially assembled AGC task force. With a focus on the green building process from the

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contractor's viewpoint, the book avoids endorsing any one green building rating system in favor of presenting the business fundamentals common to them all. Throughout the presentation, flowcharts and other features offer working tools for successfully managing green construction projects. Plus, real-world case studies developed through discussions with the actual contractors involved help you understand exactly what to expect and how to best manage constructing a green building. In short, this is one book that you need to have on hand to be a part of the rapidly growing green building movement.

Regenerative Development and Design

Written for architects and the design and construction team, this is a comprehensive guide to an integrated design process to create more sustainable buildings. The book is organized in a sequence similar to that employed by conventional design, so that it can be utilized as a real-world guide. Learning how to shift into the mindset essential to implementing integrated design, readers will explore into such processes as systems thinking, appreciative inquiry, non-hierarchical leadership, holistic mapping, and linear versus integrated architectural design progression. Multiple case studies are incorporated to provide concrete examples of successful integrated design implementation.

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Sustainable Landscape Construction, Third Edition

Green Construction is a specialized and skilled profession, and the author has extensive experience in this field. With this in mind, the reference is designed to provide practical guidelines and essential insights in preparing competent and professional looking ?Project Analysis Reports? and ?Project Status Reports?. The book also provides numerous tips on how to phrase the language of reports in a manner that is articulate and clearly understood by Real Estate Lenders and investors, as well as being an indispensable companion for both information and stimulus. Written in a conversational manner, this book will clarify the nuts and bolts of green construction, finance, and cost monitoring? as a profession, and will outline the many attributes required to being successful in this field. Moreover, it will scrutinize the mechanics of organizing monthly meetings, contractor payment certifications, budgets, change orders, construction schedules, code compliance, waivers of lean, and much more. Drawing on over 30 years of personal experience across the world - both as an employee and as an employer, the reader will learn how to plan and implement sound business strategies and form alliances in a global context. The book also offers

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important information and penetrating insights into the process of setting up and working as a due-diligence consultant. In a clear, practical style, it will be explained how to identify opportunities for business development and how to maximize return. It will also articulate how to meet new challenges as well as avoid many of the pitfalls along the way. For the individual professional, this guide provides useful information and tips to help secure a high paying professional position. The book will include amongst other things, up-to-date information on hundreds of useful contacts. Topics covered in this guide include: types of services offered, the consultant's role on the construction loan team, what the lender needs to know, and marketing techniques. The guide will also include a comprehensive appendix that will contain numerous sample letters (e.g. for marketing and certification), building loan agreements, AIA forms, lender/consultant agreement, closeout documents and much more. Likewise included will be an extensive list of useful references from a variety of resources, and much more. Indeed, this handbook will be the most detailed & comprehensive program on the market. It meets all the criteria of a major work and will provide vital and absorbing reading. Provides a detailed blueprint of how to conduct monthly meetings, investigations, understand typical client/consultant agreements, analyze contractor requisitions

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Includes sample letters, reports, forms and agreements for easy reference. Practical guidelines for preparing Property Analysis and Property Status Reports Includes a glossary of important terms, abbreviations and acronyms

A Handbook of Sustainable Building Design and Engineering

Successfully Measure the Benefits of Green Design and Construction Sustainability in Engineering Design and Construction outlines the sustainable practices used in engineering design and construction operations for all types of engineering and construction projects. Aimed at ushering the engineering and construction industry into embracing sustainable practices and green construction techniques, this book addresses sustainability in engineering design and construction operations from a historical and global perspective, and delves into specific sustainability concepts and processes. The book explains the concepts of sustainable development, corporate social responsibility (CSR), the Dow Jones Global Sustainability Index (DJGSI), key performance indicators (KPIs), corporate sustainability, and the triple bottom line (economic, environmental, and social values in design and construction). Relevant to sustainability in every facet of engineering and construction,

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it also covers life-cycle environmental cost analysis, discusses sustainable engineering and site selection, the economic considerations evaluated when making sustainability decisions, and explains how to measure and quantify sustainable performance and apply these practices in the real world. It also covers project and corporate level sustainability practices, sustainable construction materials and processes, sustainable heavy construction equipment, traditional and alternative energy sources, provides implementation resources for starting and evaluating sustainability programs, and includes a checklist for measuring the sustainability of construction operations. The text contains detailed information on sustainable construction materials and processes, heavy construction equipment, and traditional and alternative energy sources. It presents information on sustainable designs, selecting sustainable sites, designing for passive survivability, designing for disassembly, and the ISO 14,000 standards. It provides implementation resources for starting and evaluating sustainability programs and a checklist for measuring the sustainability of construction operations In addition, it provides definitions of sustainability terms and expressions, as well as case studies, examples, discussion questions, and a list of supplemental references at the end of each chapter. This book provides information on:

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Definitions for sustainability terms Sources for locating global sustainability requirements Current sustainability issues Environmental laws related to sustainability and their implications Sustainable design Life-cycle cost assessment models Sustainable practices currently being used in the engineering and construction (E&C) industry Corporate-level sustainability practices Project-level sustainability practices Global sustainability trends and implications Sustainable materials Sustainable heavy construction equipment Traditional and alternative energy sources LEED Green Building Rating System Sustainability organizations and certification programs Sustainability implementation resources A summary of sustainable engineering design and construction

Fundamentals of Integrated Design for Sustainable Building

Sustainability in Architecture and Urban Design will help you understand the nature of the sustainability problem and show you how to implement your design for a sustainable future. Organized in six parts, the problem, the environment, the residential scale, the commercial scale, the urban scale, and energy sources, the book presents essential information in context, so that you get the full picture. Hundreds of drawings, sketches,

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charts, and diagrams illustrate points author Carl Bovill makes in his clear and direct style, which communicates the basics in a concise way. You'll learn: -About environmental economics -How sustainable architectural design relates to ecology -How fractal geometry can lead to a new understanding of the structure of the world around us -How to design energy efficient houses and commercial buildings -How to design and live in our cities to lower energy use per person -About LEED points at all scales A glossary and reading lists encourage you to explore the topics further.

The Law of Green Buildings

Chapter 1.Green Architecture: An Overview;Chapter 2.Definitions and Operationalizations of Green Architecture;Chapter 3.Brief History of Green Architecture;Chapter 4.Green Technologies: Energy Generation;Chapter 5.Green Technologies: Energy Retention;Chapter 6.Green Materials;Chapter 7.Smart Materials;Chapter 8.Case Studies;BibliographyIndexOsman Attmannis an architect and associate professorat the College of Architecture and Planning, University of Colorado.

Marketing Green Buildings

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Packed with conceptual sketches and photos, real world case studies and green construction details, Handbook of Green Building Design and Construction provides a wealth of practical guidelines and essential insights that will facilitate the design of green buildings. Written in an easy to understand style, the Handbook draws on over 35 years of personal experience across the world, offering vital information and penetrating insights into two major building rating systems such as LEED and BREEAM both used extensively in the United States, Europe, Asia and the Middle East. Develop a project schedule that allows for systems testing and commissioning. Create contract plans and specifications to ensure building performance A step-by-step approach for integrating technologies into the different stages of design and execution.

Handbook of Green Building Design and Construction

Let a Team of Leading Architects Take You through 20 Large-Scale, Sustainable Facilities Designed with Green Methods and Materials! A vital working tool for all building professionals interested in green architecture and construction, Sustainable Facilities presents an in-depth look at 20 facilities that were designed for environmental organizations and were

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constructed and now operate using green building methods and materials. Featuring contributions by leading architects in green building, this expert resource examines each building from planning through operations--covering new construction, energy-efficient design, operational cost savings, historic preservation, renovation and expansion, land conservation, and LEED ratings. Packed with 200 black & white and full-color illustrations, Sustainable Facilities takes readers through the Woods Hole Research Center Chesapeake Bay Foundation Environmental Center Conservation Law Foundation Headquarters Marion Art and Environmental Center Thoreau Center for Sustainability California EPA Headquarters BuildingForestech CentreInstitute for Forestry and Nature Research and many other facilities. This skills-building reference features: Authoritative and up-to-date, Sustainable Facilities now equips architects, engineers, and contractors with a state-of-the-art guide to green design, construction, and operations. The reference contains information on materials, methods, and costs that will enable them to take an integrated team approach to green design and building for facilities of all kinds.

Contractor's Guide to Green Building Construction

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This book discusses energy efficient buildings and the role they play in our efforts to address climate change, energy consumption and greenhouse gas emissions by considering buildings and the construction sector's unique position along a critical path to decarbonisation from a multi-perspective and holistic viewpoint. Topics covered in the book range from daylighting, building topology comparison, building envelope design, zero energy homes in hot arid regions, life-cycle considerations and energy efficiency analysis to managing energy demand through equipment selection. Each chapter addresses an important aspect of energy efficient building and serves as a vital building block towards constructing a timely and relevant body of knowledge in energy efficient buildings.

Green Construction Project Management and Cost Oversight

The leading green building reference, updated with the latest advances in the field Sustainable Construction is the leading reference for the design, construction, and operation of high performance green buildings. With broad coverage including architecture, engineering, and construction, this book nevertheless delivers detailed information on all aspects of the green building process, from materials selection to

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building systems and more. This new fourth edition has been updated to reflect the latest codes and standards, including LEED v4, and includes new coverage of carbon accounting. The discussion has been updated to align with the current thinking on economics, climate change, net zero buildings, and more, with contributions by leaders in the field that illustrate the most recent shifts in thinking and practice. Ancillary materials including an instructor's manual and PowerPoint presentations for each chapter help bring this clear and up-to-date information into the classroom, making this book a valuable reference for working construction professionals. Also, Interactive graphics found throughout the course help activate the content and highlight key concepts for students. Sustainable construction has gone mainstream, and will one day be the industry norm. This book provides a comprehensive reference to all aspects of a project to show you how green building concepts and principles apply throughout the design and construction process. Get up to date on the latest green building codes and standards Learn about the newest technology in green building materials Adopt the best practices in procurement and delivery systems Apply sustainability concepts to all aspects of construction and design Green buildings operate at a very high level of efficiency, which is made possible only by careful consideration every step of

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the way. Appropriate land use, landscaping, construction materials, siting, water use, and more all play a role in a structure's ultimate carbon footprint. Sustainable Construction provides clear guidance for all aspects of green building, including the most recent advances and the latest technology.

Sustainable Construction

An important consideration for energy-efficient buildings is their primary energy requirements over the entire life cycle. How to determine this? What integrative factors influence the performance of a healthy and sustainable building? This, while it may be important for clients and architects to know, is frequently not very transparent. This book has been written to assist with clarifying target criteria and expanding horizons when it comes to ecological buildings. It is meant as a handbook and source of reference for clients, architects, planners and building operators, to provide them with pertinent information about their design, construction and operation: how to do this in the most energy-efficient and economical manner? Also, there is feedback and documentation about prominent buildings like the Hamburg Dockland or the Landesbank Baden-Wuerttemberg in Stuttgart. They provide excellent architectural examples for detailed construction and design solutions. Further,

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there are insightful interviews with architects and clients about many important buildings, which help turn this book into an integrated source of reference for sustainable architecture. - A Guideline for Planning, Construction and Operation of sustainable Buildings - A source of reference for clients, architects, planners and building operators - Innovative architectural examples with sustainable concepts and design

Sustainable Energy System Engineering

"Fundamentals of Integrated Design for Sustainable Building offers an introduction to green building concepts as well as design approaches that reduce and can eventually eliminate the need for fossil fuel use in buildings while also conserving materials, maximizing their efficiency, protecting the indoor air from chemical intrusion, and reducing the introduction of toxic materials into the environment. It represents a necessary road map to the future designers, builders, and planners of a post-carbon world." -from the Foreword by Ed Mazria A rich sourcebook covering the breadth of environmental building, Fundamentals of Integrated Design for Sustainable Building introduces the student and practitioner to the history, theory and technology of green building. Using an active learning approach, the concepts of sustainable architecture are

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explained and reinforced through design problems, research exercises, study questions, team projects, and discussion topics. Chapters by specialists in the green movement round out this survey of all the important issues and developments that students and professionals need to know. From history and philosophy to design technologies and practice, this sweeping resource is sure to be referenced until worn out.

Green Architecture (GreenSource Books)

The evolution of sustainability, with a practical framework for integration Regenerative Development and Design takes sustainability to the next level, and provides a framework for incorporating regenerative design principles into your current process. The Regeneration Group is a coalition of experienced design, land-use, planning, business, and development professionals who represent the forefront of the movement; in this book, they explain what regenerative development is, how and why it works, and how you can incorporate the fundamental principles into your practice. A clear, focused framework shows you how to merge regenerative concepts with your existing work, backed by numerous examples that guide practical application while illustrating regenerative design and development in action. As the most

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comprehensive and systemic approach to regenerative development, this book is a must-have resource for architects, planners, and designers seeking the next step in sustainability. Regenerative design and development positions humans as co-creative and mutually-evolving participants in an ecosystem—not just a built environment. This book describes how to bring that focus to your design from the earliest stages. Understand the fundamentals of regenerative design and development Learn how regenerative development contributes to sustainability Integrate regenerative development concepts into practice Examine sample designs that embody the regenerative concept To create a design with true sustainability, considerations must extend far beyond siting, materials, and efficiency. Designers must look at the place, it's inhabitants, and the purpose—the whole living ecosystem—and proceed with their work from that more humbling perspective. The finished product should itself be an ecosystem and sustainable economy, which is the root of the regenerative development approach. Sustainability has evolved, and the designer's responsibility has increased in kind. Regenerative Development and Design provides an authoritative resource for those ready to take the next step forward.

Green Healthcare Institutions

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Annotation Engineers, architects and contractors seeking to expand their involvement in the green buildings market need a firm grounding in the marketing strategies and tactics which are being used most successfully in this specialized and growing field. This book is intended to serve as an effective tool for professional green building enthusiasts and advocates in presenting green design features, sustainable strategies and new products to the potential green building client. The author addresses key questions such as: How is green building marketing different from other types of professional service marketing? What tools and techniques from conventional marketing can be used to greater effect in marketing green buildings? What is the size and potential of the green buildings market? And how should a firm position itself to succeed in this growing marketplace? You'll find clear descriptions of successful strategies and approaches to marketing and selling green building-related services, as well as up-to-date information on the role of LEED in green building projects.

Sustainable Facilities

This unique book and DVD is an interactive learning environment composed of seven content areas: building form, envelopes, structures, climate control systems,

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renewable energy, lighting, and landscape design. Each of these content areas is subdivided into learning modules introducing the subject matter and investigates best practices for climate responsive and ecologically sustainable building design and construction. The DVD will help visualize and engage with concepts that may otherwise be too ambiguous or difficult to comprehend in a book format. Key Features: --Interactive format: Takes advantage of the interactive capabilities of state-of-the-art computing technology including hypertext functionality, animations, and open information referencing --Highly visual: Demonstrates building sustainability concepts using well detailed, realistic, 3-D computer generated models and interactive animations --Educational materials serving a variety of learning styles: Combines a traditional textbook format with multimedia graphics and interactive animations, thereby serving both those who learn better through visual media as well as those who prefer reading a textbook --Interdisciplinary nature: Provides a wide range of information for various disciplines engaged in building design and construction including building envelope, mechanical systems, lighting systems, landscape, and energy resources

Sustainable Buildings and Structures

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Handbook of Green Building Design and Construction: LEED, BREEAM, and Green Globes, Second Edition directly addresses the needs of building professionals interested in the evolving principles, strategies, and concepts of green/sustainable design. Written in an easy to understand style, the book is updated to reflect new standards to LEED. In addition, readers will find sections that cover the new standards to BREEAM that involve new construction Infrastructure, data centers, warehouses, and existing buildings. Provides vital information and penetrating insights into three of the top Green Building Codes and Standards applied Internationally Includes the latest updates for complying with LEED v4 Practices and BREEAM Presents case studies that draws on over 35 years of personal experience from across the world

Sustainability & Scarcity

What makes building materials sustainable? How to reduce the amount of embodied energy in building constructions? And how does a Life Cycle Analysis work? These are questions which are becoming increasingly more common in the context of sustainable construction. The DETAIL Green Book "Sustainable Construction Techniques" offers a thorough guide to ecological building design and sustainable construction methods, which will be particularly valuable for architects. The

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authors provide an overview of the most relevant databases and certification standards for building products and illustrate how a Life Cycle Analysis is conducted. They also identify key ways of optimising the planning process in line with ecological criteria, while offering advice for the selection of building materials and elements. Detailed documentation from five buildings constructed in Europe and North America serve to illustrate the associated assessment processes in this book.

Sustainable Construction

The combined challenges of health, comfort, climate change and energy security cross the boundaries of traditional building disciplines. This authoritative collection, focusing mostly on energy and ventilation, provides the current and next generation of building engineering professionals with what they need to work closely with many disciplines to meet these challenges. A Handbook of Sustainable Building Engineering covers: how to design, engineer and monitor a building in a manner that minimises the emissions of greenhouse gases; how to adapt the environment, fabric and services of existing and new buildings to climate change; how to improve the environment in and around buildings to provide better health, comfort, security and productivity; and provides

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crucial expertise on monitoring the performance of buildings once they are occupied. The authors explain the principles behind built environment engineering, and offer practical guidance through international case studies.

Environmentally Sustainable Buildings Challenges and Policies

Integrated Sustainable Design of Buildings aims to provide a guide to members of design and masterplanning teams on how to deliver sustainable development and buildings cost effectively, meeting current and emerging UK and international statutory and planning requirements. Using a series of case histories and examples from the author's ten years of providing sustainability advisory services the book sets out a clear and understandable strategy that deals with all aspects of sustainable design and construction and the implications for delivery, costs, saleability and long term operation. The extensive scope includes all aspects of environmental, social and economic sustainability, including strategies to reduce carbon emissions and the impact of climate change. Integrated Sustainable Design of Buildings appeared in the Cambridge Top 40 Sustainability Books of 2010.

Sustainable Design and Construction in

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Africa

Thanks to economic incentives such as tax credits, green building has become a booming trend in the construction industry. This title is intended for electrical engineers, construction managers, construction and building inspectors.

Green BIM

Meet the challenge of integrating Building Information Modeling and sustainability with this in-depth guide, which pairs these two revolutionary movements to create environmentally friendly design through a streamlined process. Written by an award-winning team that has gone beyond theory to lead the implementation of Green BIM projects, this comprehensive reference features practical strategies, techniques, and real-world expertise so that you can create sustainable BIM projects, no matter what their scale.

Green Building

GREEN BUILDING: PRINCIPLES AND PRACTICES IN RESIDENTIAL CONSTRUCTION provides a current, comprehensive guide to this exciting, emerging field. From core concepts to innovative applications of cutting-edge technology and the latest industry trends,

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this text offers an in-depth introduction to the construction of green homes. Unlike many texts that adopt a product-oriented approach, this book emphasizes the crucial planning, processes, and execution methods necessary for effective, environmentally sound construction. This text demonstrates that Earth-friendly products and energy-efficient materials take planning in order to make a building truly green. This visionary text helps students and professionals develop the knowledge and skills to think green from start to finish, empowering and inspiring them to build truly sustainable homes. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Sustainable Buildings

In an era of digital transformation and sharing economy, it is quite challenging to move to such vibrant future with past-tense methodologies. 'Principles of Sustainable Project Management' provides a unique approach to managing projects by combining the principles of sustainable management theory with the main processes and areas of knowledge in the currently established project management theory, in an applied context. Taking a truly international viewpoint, this important text: * Provides a

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broad scope that covers the main pillars (dimensions) of sustainability; social, environmental and economic; * Presents, explains and discusses the theory in the context of digital transformation linking to the contemporary tools such as AI and IoT with emphasis on Block chain applications in project management; * Uses international cases studies spanning all three dimensions of sustainability in the context of smart cities with emphasis on the shift towards disruptive innovation and lean start-ups; * Links contemporary tools and methodologies in project management (including Agile, Scrum, Lean) to the sustainable development projects in a variety of sectors including construction, energy, IT, tourism, logistics, new product development (NPD), and many more; * Presents, explains and discusses the imperative new approach required to address soft issues such as leadership and managing virtual teams as part of the shift towards sustainable project management. Written by a team of international experts, it tackles issues such as digital transformation, smart cities, green project management, sustainable infra-structure projects, IT software developments, managing innovation, corporate social responsibility and much more. With a complete set of online tutor resources to accompany the text, it is a vital resource for all those researching and working in all areas of sustainability.

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Best Practices in Sustainable Building Design

A career guide for professionals in sustainable architecture, design, planning, development, and related consulting. For those considering a new career or a career change focused on green and sustainable building and design, *Becoming a Green Building Professional* offers practical information on educational requirements, career options, guidance and tips, and first-hand interviews with green building professionals. Perfect for underemployed architects and other building and design professionals who want to reinvent and renew their careers, as well as students considering such a career, this is a vital and informative guide to a growing field.

Sustainable Construction

'Sustainable Construction' uses the latest US Green Building Council's Leadership in Energy and Environmental Design standard to explain the best practices in building procurement and delivery systems.

Green Building: Principles and Practices in Residential Construction

The second edition of *Sustainable Construction* provides a masterclass on the principles and techniques involved in the

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design and delivery of practical, affordable, high quality sustainable buildings and places. It presents precedents, theory, concepts and principles alongside 120 wide ranging case studies that highlight current best practice and encourage implementation. Topics in the book include: • the history of ideas in sustainable construction • policy • materials • cost issues • appraisal techniques • environmental design • energy • water • construction processes • and urban ecology. The book is heavily illustrated in full colour and is an ideal, contemporary, accessible primer to courses in Architecture, Construction, Building Engineering, Environmental Engineering, Project Management, Landscape, Urbanism and Development.

The Whole Building Handbook

The Whole Building Handbook is a compendium of all the issues and strategies that architects need to understand to design and construct sustainable buildings for a sustainable society. The authors move beyond the current definition of sustainability in architecture, which tends to focus on energy-efficiency, to include guidance for architecture that promotes social cohesion, personal health, renewable energy sources, water and waste recycling systems, permaculture, energy conservation - and

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crucially, buildings in relation to their place. The authors offer a holistic approach to sustainable architecture and authoritative technical advice, on:

- * How to design and construct healthy buildings, through choosing suitable materials, healthy service systems, and designing a healthy and comfortable indoor climate, including solutions for avoiding problems with moisture, radon and noise as well as how to facilitate cleaning and maintenance.
- * How to design and construct buildings that use resources efficiently, where heating and cooling needs and electricity use is minimized and water-saving technologies and garbage recycling technologies are used.
- * How to 'close' organic waste, sewage, heat and energy cycles. For example, how to design a sewage system that recycles nutrients.
- * Includes a section on adaptation of buildings to local conditions, looking at how a site must be studied with respect to nature, climate and community structure as well as human activities. The result is a comprehensive, thoroughly illustrated and carefully structured textbook and reference.

Sustainability in Engineering Design and Construction

Sustainability & Scarcity addresses a gap in the literature on green building recognized by many in the fields of international

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development, architecture, construction, housing and sustainability. Rather than being based on the experiences of more economically-developed countries, this book describes the nature of green building in the developing world, elaborating the main issues that define sustainability in those particular contexts. Through more than 30 years of development work in design and construction in Africa and the Middle East, the author has seen well-intentioned development projects, both in theory and in practice, that ultimately do not contribute to sustainable development. Starting from the basis of green building rating tools used in the more economically-developed countries, the author draws from his own experiences to make available to other practitioners green building strategies relevant to the developing country context that promise effective solutions to their need for sustainable green design. The book looks in detail at examples of buildings in Tanzania, Madagascar, Nepal, Haiti, and Vietnam, illustrating the application of the green building strategies described. Fully illustrated with drawings and full colour photos, the book is a practical guide for practitioners and policy-makers working in the poorest regions of the world. Sustainability & Scarcity is quite simply an essential handbook for anyone concerned with sustainable design and building in the developing world.

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Handbook of Green Building Design and Construction

This book has been written to represent the efficient applications of sustainability upon building designs. The book intends to illustrate various techniques of action of sustainability on building conceptions. The book is divided into four parts and eight chapters. Part I "Introduction into Target Theme" includes a chapter with title "Introductory Chapter." It makes an overview of the meaning and the target of sustainable building and sustainable building material. Part II "Sustainable Building Design, Process, and Management" discusses many forms and concepts of sustainable building and includes three chapters. Part III "Sustainable Building by Using Energy Efficiency in Building Design" includes one chapter. Part IV "Sustainability in Building Materials: Study Cases" includes three chapters.

Sustainable Construction

"Green Building Illustrated is a must-read for students and professionals in the building industry. The combination of incredibly expressive illustrations and accessible technical writing make concepts of green building on paper as intuitive as they would be if you toured a space with experts

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in sustainable building.” –Rick Fedrizzi, President, CEO, and Founding Chair of the U.S. Green Building Council “The authors of Green Building Illustrated deliver clear and intelligent text, augmented by straightforward but compelling illustrations describing green building basics. This comprehensive book covers everything from the definition of green building, to details of high performance design, to sensible applications of renewable energy. This is a book with appeal for all architects and designers, because it addresses general principles such as holistic and integrated design, along with practical realities like affordability and energy codes. Green Building Illustrated describes a pathway for reaching Architecture 2030’s carbon emission reduction targets for the built environment.”–Ed Mazria, founder of Architecture 2030 “...a neophyte will have a very good overview of all the factors involved in green building. I see some excellent pedagogy at work!” – Jim Gunshinan, Editor, Home Energy Magazine Francis D.K. Ching brings his signature graphic style to the topic of sustainable design In the tradition of the classic Building Construction Illustrated, Francis D.K. Ching and Ian M. Shapiro offer a graphical presentation to the theory, practices, and complexities of sustainable design using an approach that proceeds methodically. From the outside to the inside of a building, they

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cover all aspects of sustainability, providing a framework and detailed strategies to design buildings that are substantively green. The book begins with an explanation of why we need to build green, the theories behind it and current rating systems before moving on to a comprehensive discussion of vital topics. These topics include site selection, passive design using building shape, water conservation, ventilation and air quality, heating and cooling, minimum-impact materials, and much more. Explains the fundamental issues of sustainable design and construction in a beautifully illustrated format Illustrated by legendary author, architect, and draftsman Francis D.K. Ching, with text by recognized engineer and researcher Ian M. Shapiro Ideal for architects, engineers, and builders, as well as students in these fields Sure to be the standard reference on the subject for students, professionals, and anyone interested in sustainable design and construction of buildings, Green Building Illustrated is an informative, practical, and graphically beautiful resource.

Becoming a Green Building Professional

Green Healthcare Institutions : Health, Environment, and Economics, Workshop Summary is based on the ninth workshop in a series of workshops sponsored by the Roundtable on

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Environmental Health Sciences, Research, and Medicine since the roundtable began meeting in 1998. When choosing workshops and activities, the roundtable looks for areas of mutual concern and also areas that need further research to develop a strong environmental science background. This workshop focused on the environmental and health impacts related to the design, construction, and operations of healthcare facilities, which are part of one of the largest service industries in the United States. Healthcare institutions are major employers with a considerable role in the community, and it is important to analyze this significant industry. The environment of healthcare facilities is unique; it has multiple stakeholders on both sides, as the givers and the receivers of care. In order to provide optimal care, more research is needed to determine the impacts of the built environment on human health. The scientific evidence for embarking on a green building agenda is not complete, and at present, scientists have limited information. Green Healthcare Institutions : Health, Environment, and Economics, Workshop Summary captures the discussions and presentations by the speakers and participants; they identified the areas in which additional research is needed, the processes by which change can occur, and the gaps in knowledge.

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Green Building with Concrete

This book presents an analysis of the environmental impacts of the building sector and of current policies to mitigate these impacts, in particular with regard to reduction of CO2 emission, minimisation of construction and demolition waste and prevention of indoor air pollution.

Principles of Sustainable Project Management

This book addresses some of the countless challenges faced by developing countries when adopting sustainable design and construction and offers suggestions for the way forward for African development projects. The authors argue that the pervasive non-consideration of the interrelationship between the elements of sustainable design and construction is the reason for the current failures in sustainable design and construction in developed countries. By treating sustainability as a complex system, the authors provide the missing link between the design and construction of projects in a sustainable way with a view to improving industry and project performance. In doing so the book posits the need for improved sustainability practice in developing countries, lessons for developing countries from the successes and failures of

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sustainability adoption by developed nations, factors influencing adoption of sustainability and effects of sustainable designs and construction on productivity, human health and the environment at large. This book will be of interest to construction researchers, practitioners, professional bodies, housing policy makers and government institutions as well as training and funding providers in these areas.

Sustainable Building Design

Sustainable Buildings and Structures collects the contributions presented at the 1st International Conference on Sustainable Buildings and Structures (Suzhou, China, 29 October-1 November 2016). The book aims to share thoughts and ideas on sustainable approaches to urban planning, engineering design and construction. The topics discussed include:-

Sustainable Construction Techniques

Basic principles : "Sustainability" in context -- Principle 1 : Keep healthy sites healthy -- Principle 2 : Heal injured soils and sites -- Principle 3 : Favor living, flexible materials -- Principle 4 : Respect the waters of life -- Principle 5 : Pave less -- Principle 6 : Consider origin and fate of materials -- Principle 7 : Know the costs of

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energy over time -- Principle 8 : Celebrate light, respect darkness -- Principle 9 : Quietly defend silence -- Principle 10 : Maintain to sustain -- Principle 11 : Demonstrate performance, learn from failure -- Sustaining principles, evolving efforts.

Renewable Energy and Sustainable Buildings

With superior fire resistance, strength, and a long service life, concrete is the most widely used construction material in the world. A sustainable material, concrete is also easily and affordably reused and rehabilitated. The first book to provide an overview of sustainability and concrete, *Green Building with Concrete: Sustainable Design and Construction* surveys the material's history in the green building movement and presents state-of-the-art methodologies and best practices. From the manufacturing of cement to the rehabilitation of concrete, this comprehensive book explains how concrete can be used for sustainable design and construction. It offers insight into new technological and social developments guiding the introduction of green buildings and examines the attributes that concrete has to offer the green building movement. The text also highlights research on economic analysis—particularly life cycle costing—to provide a full picture of the

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economic benefits of concrete. Expert contributors from around the world offer diverse viewpoints on global sustainability. Topics covered include: Principles of sustainable design Benefits of concrete's thermal mass Mitigation of urban heat island effects Surface runoff and the application of pervious concrete for sidewalks and parking areas Reduction of construction waste Leadership in energy and environmental design (LEED) standards Emphasizing environmental impact and occupational and consumer health and safety, this book explains how to make the most of concrete in sustainable design. Written for university and concrete industry continuing education courses, it also serves as a reference for building owners and industry professionals who recognize the value of green building.

Integrated Sustainable Design of Buildings

The classic reference for high-performance green building delivery systems No longer just a buzzword, sustainable construction is going mainstream—and soon will be the norm. Revised to reflect the latest developments of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) rating system and other tools, Sustainable Construction: Green Building Design and Delivery, Third Edition guides construction

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and design professionals through the process of developing commercial and institutional high-performance green buildings in today's marketplace. Charles Kibert provides an introduction to green building, covering the theory, history, and state of the industry as well as best practices in building procurement and delivery systems. From green building and Green Globes assessments to building hydrological systems and materials and product selection, this comprehensive text covers all of the factors involved with sustainable construction. In a clear and accessible writing style, Kibert addresses issues so that the reader can think critically and independently as part of the cutting edge in green building. The Third Edition includes up-to-date coverage of: The latest developments leading up to LEED version 4 Carbon neutral design and carbon accounting Green Globes and international building assessment systems The Living Building Challenge Environmental product declarations (EPDs) as the norm for green building products The trends in net-zero energy building design and policies Broad enough to cover the needs of faculty and students and detailed enough to serve as a professional reference, Sustainable Construction, Third Edition is a must for the builder/owner and construction manager looking to take advantage of the opportunities in this rapidly evolving field, the designer looking to be LEED certified, or

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anyone interested in sustainability.

Green Building Illustrated

An inside view of how one of the world's leading architecture and engineering practice does business Sustainable Built Environments: Principles and Practice offers detailed, environmentally sound design solutions to a wide range of building engineering challenges. The text uses case examples and project data provided by engineers and designers at Arup Associates. It covers a broad range of relevant issues, with focused commentaries and explanations presented in an accessible format for use by students, busy practitioners and informed clients. Whilst this book stresses the importance of a unified approach to design, the text is divided into six principal chapters, each addressing an important aspect of sustainable architecture and engineering. These chapters (Master Planning, Transport, Energy, The Building Envelope, Environmental Services, and Materials) may be read on their own or in sequence as part of a narrative. Throughout the book, photographs, architectural and engineering drawings and diagrams, examples, and other data illustrate the case studies. Numerous web links are provided to additional information. This inspirational book: Focuses on the work of Arup Associates, the award winning architectural and engineering

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practice Uses real-life examples of functioning buildings and structures to provide information and guidance on the development of sustainable solutions Is packed with informative illustrations Sustainable Built Environments: Principles and Practice is a unique text that will inform and inspire architects and engineers, as well as students of those disciplines, around the globe.

The Integrative Design Guide to Green Building

This book contains selected papers presented during the World Renewable Energy Network's 28th anniversary congress at the University of Kingston in London. The forum highlighted the integration of renewables and sustainable buildings as the best means to combat climate change. In-depth chapters written by the world's leading experts highlight the most current research and technological breakthroughs and discuss policy, renewable energy technologies and applications in all sectors - for heating and cooling, agricultural applications, water, desalination, industrial applications and for the transport sectors. Presents cutting-edge research in green building and renewable energy from all over the world; Covers the most up-to-date research developments, government policies, business models, best

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practices and innovations; Contains case studies and examples to enhance practical application of the technologies.

Sustainability in Architecture and Urban Design

Examining the most important issues in achieving the goal of building more efficient and less damaging buildings, this book highlight the significant statutes and regulations as well as other legal issues that need to be considered when advising clients in the development, construction, financing, and leasing of a green building. Topics include federal incentive programs, financing, alternative energy, site selection, land use planning, green construction practices and materials, emerging legal issues, and the effects of climate change on planning and architectural design.

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