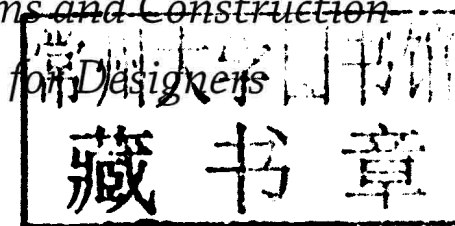


A photograph of a modern building interior, likely a lobby or atrium. The ceiling is made of horizontal wooden slats and features two large, circular, recessed light fixtures. The walls are primarily glass, reflecting the interior and exterior. In the background, there is a staircase with a glass railing and a wall with a grid pattern. The floor is dark and polished. The overall atmosphere is clean, bright, and modern.

LISA M. TUCKER

SUSTAINABLE BUILDING SYSTEMS AND CONSTRUCTION FOR DESIGNERS

*Sustainable Building
Systems and Construction
for Designers*



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New York



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Library of Congress Catalog Card Number: 2009926331
ISBN: 978-1-56367-712-0
GST R 133004424
Printed in the United States of America
TP11

SUSTAINABLE BUILDING
SYSTEMS AND CONSTRUCTION
FOR DESIGNERS

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Preface

I HAD SEVERAL goals in mind when I initiated this project. The first of these goals was to gather in one place all the information an interior design educator needs to provide an overview of construction and building systems as it relates to interior design. Over the past ten years of teaching building systems courses under a variety of different course names, I was continuously struck by the need to use multiple books to really touch on all the subjects that a student needs to learn within a CIDA accredited interior design program. Coupled with this was the need I felt to emphasize sustainability.

Few books covered general building systems and construction, and none of these addressed sustainable design directly. Those that do exist were intended for architecture audiences specifically. Many of the books addressing sustainable design were technically oriented, and relied on scientific and technological approaches to making buildings more energy efficient, smarter, and more complex.

I believe it is important to show students that sustainability is not a problem of science, but one of values and ethics first. Our way of building in North America is fundamentally obsolete. We do not have the resources to continue along this path. It is destined for failure. I have tried to include a variety of approaches to sustainable design. Underlying this are some basic assumptions. First, the most sustainable approach is not to build new buildings in every case. Building reuse should always be considered before new construction.

Second, less is more. In this case, what I intend is less square footage. Smaller space that is optimized through excellent interior design far outweighs throwing square footage at design problems. Finally, I come from an historic preservation background. A sensibility for how we built



in the past can provide a simpler and more sustainable approach to building construction—new methods and materials are not always the answer.

This book is formatted to include a wide variety of visual components. I have sketched as many of the details as I could to encourage students (and faculty members) to think graphically in the design process and about how materials are assembled and shown in drawings. The designer must communicate his/her design intent through drawing. The computer is a tool that is relied upon heavily today. The skill to be able to sit down and think through a connection using paper and pencil is disappearing. Despite this, I have stressed this as a pedagogical tool of this book. I cannot ask students to do that which I will not attempt. Mastery of the details of how one can have what occurs first as an idea and later in actual form comes from knowing materials and their tolerances, and through thinking through the connections based on this knowing. Any good designer needs to practice and master this. Hand sketches are supplemented by a wide variety of interior photographs that demonstrate the application of the text in actual project samples.

If I have been successful, this book will be the one that interior design educators charged with teaching building systems and construction as well as new graduates who need to know how to do something for a project will use. It is my hope that it will sit at the desks of students and practitioners and inspire designers with the confidence to create beautiful and sustainable interior spaces that enhance our health, safety, and overall welfare.

Specifically, this book addresses accreditation criteria in Standards 6 and 11, and covers in detail Standards 12, 13, and 14 of the 2009 CIDA Standards. All of this has been underscored using a sustainability approach.

To use this book effectively, I would encourage you to create a building detailing sketchbook, and to actively sketch building details and components throughout the process until it becomes second nature to dissect what you see and create what you intend when detailing any aspect of an interior space.

Acknowledgments

AS IT TURNS out, writing a book is a much bigger undertaking than I could have even imagined. It is also the product of the efforts of many people, not just the author. First, I would like to thank Olga Kontzias for always believing in this project and me. I would also like to give a special thanks to Joe Miranda, my editor, for always cheerfully answering a lot of questions about the process and for allowing me to make changes as the project developed.

I would like to give a special thanks to Tama Duffy Day, a principal at Perkins + Will for sharing my request for images and case studies with all of the Perkins + Will offices. Thanks to Tama, I heard from her colleagues around North America and was able to include an amazing collection of case studies that illustrate the green design principles of this book. Thank you to J.D. McKibbin, AIA, AMA, LEED AP in the Chicago office, Lora Ingram in the Seattle office, Howard Weiss, principal in the San Francisco office, Joan Blumenfeld and Abigail Carlen, LEED AP in the NYC office, Melissa Radatz in the Vancouver, British Columbia office, Cathy Falwell in the D.C. office, and John Morris, project manager in the Charlotte, North Carolina office.

Thank you to Todd Ray, a principal of studio27architecture, for sharing information about their projects.

Thank you to Linda Segerson (OTJ) and Steven Sorrells (RTKL), two former students of mine at Virginia Tech, for providing case studies from the offices where they work. Thank you to the marketing department at RTKL and Laura Knox at OTJ Architects.

I also want to thank current students Amrita Raja, Hyun-Jun (Steve) Chang, Lauren Shaw, Katherine Johnson, and Britney Bishop for their generosity in sharing current projects with me to inspire future students along the path of sustainable design. A special thanks to Dana Ricci

my graduate student assistant who has spent an entire semester scanning and working with the hundreds of images for this book.

Most importantly, I want to thank my husband, Jim, who has put up with all of the time and effort this type of project takes away from everyday living. He is an inspiration and walks the talk of a sustainable life.

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