# Contents

**Preface** ................................................................. ix  
**Introduction** ........................................................... xi  

## CHAPTER 1  
### Planning Methodology ......................................... 1  
- Defining Terms and Intent ........................................ 2  
- The Synthesis Gap ................................................... 3  
- The Design Program ................................................ 5  
- Criteria Matrix ...................................................... 12  
- Prototypical Plan Sketches ........................................ 14  
- Completing the Criteria Matrix .................................. 21  
- Relationship Diagrams ............................................ 28  
- A Final Note on Planning Methodology .......................... 33  
- Recommended Reading ............................................. 34  

## CHAPTER 2  
### The First Planning Steps:  
**Bubble Diagrams and Block Plans** ............................... 35  
- Bubble Diagramming ................................................ 35  
- Space Planning Exercises ........................................ 41  
- Block Planning ....................................................... 42  
- Recommended Reading ............................................. 46
CHAPTER 3
Small and Dimensionally Demanding Spaces ............... 47
Human Factors ........................................... 52
Barrier-Free Design Standards .......................... 53
Travel and Egress ........................................ 54
Furniture Planning and Placement ...................... 59
Recommended Reading .................................. 62

CHAPTER 4
The Building Shell and Major Systems ....................... 63
The Building Shell ......................................... 64
Plumbing Systems ........................................ 67
Heating, Ventilating, and Air-Conditioning Systems .... 69
Recommended Reading .................................... 72

CHAPTER 5
Important Influencing Factors .............................. 73
Building Codes ........................................... 73
Green Building Rating Systems .......................... 75
Lighting Design ........................................... 75
Acoustical Planning ....................................... 81
Planning Rules of Thumb .................................. 84
Flexibility/Multiuse ........................................ 85
Furniture ..................................................... 86
Spatial Quality ............................................. 86
Interior Design Specialties ................................. 87
Recommended Reading .................................... 88

CHAPTER 6
Developing a Rough Floor Plan ............................. 91
Getting Started ............................................ 93
Construction Reality ....................................... 94
Start with Plumbing ....................................... 95
Major Spaces Next ....................................... 96
Circulation Spaces ........................................ 96
Basic Room Allocations ................................... 98
Furniture and Equipment ................................ 98
Storage and Filing ........................................ 101
Spatial Quality ............................................ 101
Sustainability Objectives ................................ 103
CHAPTER 7
Refining the Solution ........................................... 111
Refining the Rough Plan  112
The Preliminary Floor Plan  113
Drawing Quality and Techniques  114
Recommended Reading  124

CHAPTER 8
Developing Skills beyond the Basic Level  .................. 125
Basic Implications  125
Programs within Programs  127
Open Plan/Systems Furniture  129
The Speculative Office Building  130
Future Expansion  131
Planning New Buildings  132
A Final Note  134

CHAPTER 9
Stair Design Basics ................................................ 135
Codes, Dimensions, and Configurations  148
Stair Design Case Studies—Phase I  168
Stair Design Case Studies—Phase II  179
Recommended Reading  189

Appendix A: Stair Terminology .................................. 191
Appendix B: Design Programs and Building Shells ....... 193
Design Program 1A: Suite for Dual Pediatric Practice  193
Design Program 1B: Township Youth Organization  195
Design Program 1C: A Small Accounting Firm Suite  197
Design Program 2A: Regional Management Office  199
Design Program 2B: Popular Culture Institute  201
Design Program 2C: Meeting/Marketing Facility  204
Design Program 2S: University Career Counseling Center  206
Design Program 3A: Market Research Group  209
Design Program 3B: The Cosmopolitan Club  212
Design Program 3C: Community Counseling Consortium  213
BUILDING SHELLS  216
Building Description 1A  216
Building Description 1B  218
Building Description 1C  219
Building Description 2A  220
Building Description 2B  222
Building Description 2C  223
Building Description 2S  225
Building Description 3A  225
Building Description 3B  228
Building Description 3C  229

Index  ................................................................. 231