



Contents

Foreword	ix
Acknowledgments	xi
Prologue	xiii
Todd L. Seidler, University of New Mexico	
Bernie Goldfine, Kennesaw State University	

Section I Common Facility Components

1	Planning Facilities: Master Plan, Site Selection, and Development Phases	3
	Thomas H. Sawyer, <i>Indiana State University</i>	
	Michael G. Hypes, <i>Morehead State University</i>	
	Tonya L. Gimbert, <i>Indiana State University</i>	
2	Planning Facilities for Safety and Risk Management.....	21
	Todd L. Seidler, <i>University of New Mexico</i>	
3	Sustainable Design, Construction, and Building Operations	29
	Rick Gonzales, <i>University of Wisconsin, Eau Claire</i>	
	Jeffrey C. Petersen, <i>Baylor University</i>	
4	Universal and Accessible Design: Creating Facilities That Work for All People.....	39
	Richard J. LaRue, <i>University of New England</i>	
	Donald Rogers, <i>Indiana State University</i>	
5	Electrical, Mechanical, and Energy Management.....	49
	Richard J. LaRue, <i>University of New England</i>	
	Thomas H. Sawyer, <i>Indiana State University</i>	
6	Ancillary Areas.....	71
	Jeffrey C. Petersen, <i>Baylor University</i>	
	Rick Gonzales, <i>University of Wisconsin, Eau Claire</i>	
7	Graphics and Signage.....	95
	Michael G. Hypes, <i>Morehead State University</i>	
	Julia Ann Hypes, <i>Morehead State University</i>	
	Mark Cryan, <i>Elon University</i>	

8	Indoor and Outdoor Surfaces	107
	Hal Walker, <i>Elon University</i> Tony Weaver, <i>Elon University</i>	
9	Landscape Design, Sports Turf, and Parking Lots	125
	Richard J. LaRue, <i>University of New England</i> David A. LaRue, <i>Landscape Designer</i> Thomas H. Sawyer, <i>Indiana State University</i>	

Section II Field and Court Specifications

10	Indoor and Outdoor Courts	141
	Bernie Goldfine, <i>Kennesaw State University</i>	
11	Field Spaces	163
	Thomas H. Sawyer, <i>Indiana State University</i> Tonya L. Gimbert, <i>Indiana State University</i>	
12	Bleachers	179
	Michael G. Hypes, <i>Morehead State University</i>	

Section III Recreational Spaces

13	Aquatic Facilities	187
	Leland Yarger, <i>Ball State University</i> Steven Dalcher, <i>Water LLC</i>	
14	Playgrounds	201
	Donna Thompson, <i>University of Northern Iowa</i> Susan Hudson, <i>University of Northern Iowa</i>	
15	Designing Facilities for Parks and Recreation	215
	Kimberly J. Bodey, <i>Indiana State University</i> John H. Pommier, <i>Indiana State University</i> Thomas H. Sawyer, <i>Indiana State University</i>	
16	Campus Recreational Sports Centers	237
	Thomas H. Sawyer, <i>Indiana State University</i> Tonya L. Gimbert, <i>Indiana State University</i>	
17	Strength and Cardiovascular Training Facilities	243
	Lawrence W. Judge, <i>Ball State University</i>	
18	Adventure Programming Facilities	265
	Donald Rogers, <i>Indiana State University</i>	

19	Skateparks, Roller Skating Rinks, and Winter Sports Areas	281
	Thomas H. Sawyer, <i>Indiana State University</i>	
	Tonya L. Gimbert, <i>Indiana State University</i>	
20	Camps	295
	Thomas H. Sawyer, <i>Indiana State University</i>	
	Tonya L. Gimbert, <i>Indiana State University</i>	

Section IV Specialty Areas

21	Track and Field and Cross-Country Facilities.....	305
	Lawrence W. Judge, <i>Ball State University</i>	
	Thomas H. Sawyer, <i>Indiana State University</i>	
22	Designing Facilities for K-12 Health, Physical Education, and Driver Education	323
	Thomas H. Sawyer, <i>Indiana State University</i>	
	Tonya L. Gimbert, <i>Indiana State University</i>	
23	Developing Combative Areas for Boxing and Martial Arts.....	343
	Jason Winkle, <i>Indiana State University</i>	
	Thomas H. Sawyer, <i>Indiana State University</i>	
24	Equestrian Spaces.....	353
	Michael G. Hypes, <i>Morehead State University</i>	
	Julia Ann Hypes, <i>Morehead State University</i>	
25	Athletic Training Facilities	361
	Michael G. Hypes, <i>Morehead State University</i>	
26	Shooting Facilities: Archery, Rifle, and Pistol.....	373
	Jason Winkle, <i>Indiana State University</i>	
27	Dance Spaces	383
	Thomas H. Sawyer, <i>Indiana State University</i>	

Section V Trends, History, and Standards

28	Design Trends in Stadiums and Arenas, 1975–2012.....	393
	Todd L. Seidler, <i>University of New Mexico</i>	
	John J. Miller, <i>Troy University</i>	
29	Trends in Equipment and Supplies, 1975–2012.....	407
	Jeffrey C. Petersen, <i>Baylor University</i>	
30	History of the Council on Facilities.....	419
	Thomas H. Sawyer, <i>Indiana State University</i>	
	Michael G. Hypes, <i>Morehead State University</i>	

31	Equipment and Facility Design Standards	427
	Thomas H. Sawyer, <i>Indiana State University</i>	
	Tonya L. Gimbert, <i>Indiana State University</i>	

Appendices 435

A	Planning Checklist for Indoor and Outdoor Spaces	435
B	Existing Facility Assessment and Future Planning Checklist	441
C	Indoor Activity Area Planning Checklist	442
D	Indoor Activity Dimensions	446
E	Park and Recreation Open Space Standards	447
F	Metric Conversion Formulas	460
G	Associations Pertinent to Planning	461
H	Associations Pertinent to Planning for Accessibility	463
I	Retrofitting or Replacing Facilities	464
J	Facility Maintenance	466
	References	475
	Glossary	486
	About the Authors.....	497
	Index	502

	Section III	
	Recreational Spaces	24
	Athletic Training Facilities	25
	Shooting Facilities: Archery, Rifle, and Pistol	26
	Dance Spaces	27
	Section V	
	Trends, History, and Standards	
	Design Trends in Stadiums and Arenas, 1975-2012	28
	Trends in Equipment and Supplies, 1975-2012	29
	History of the Council on Facilities	30