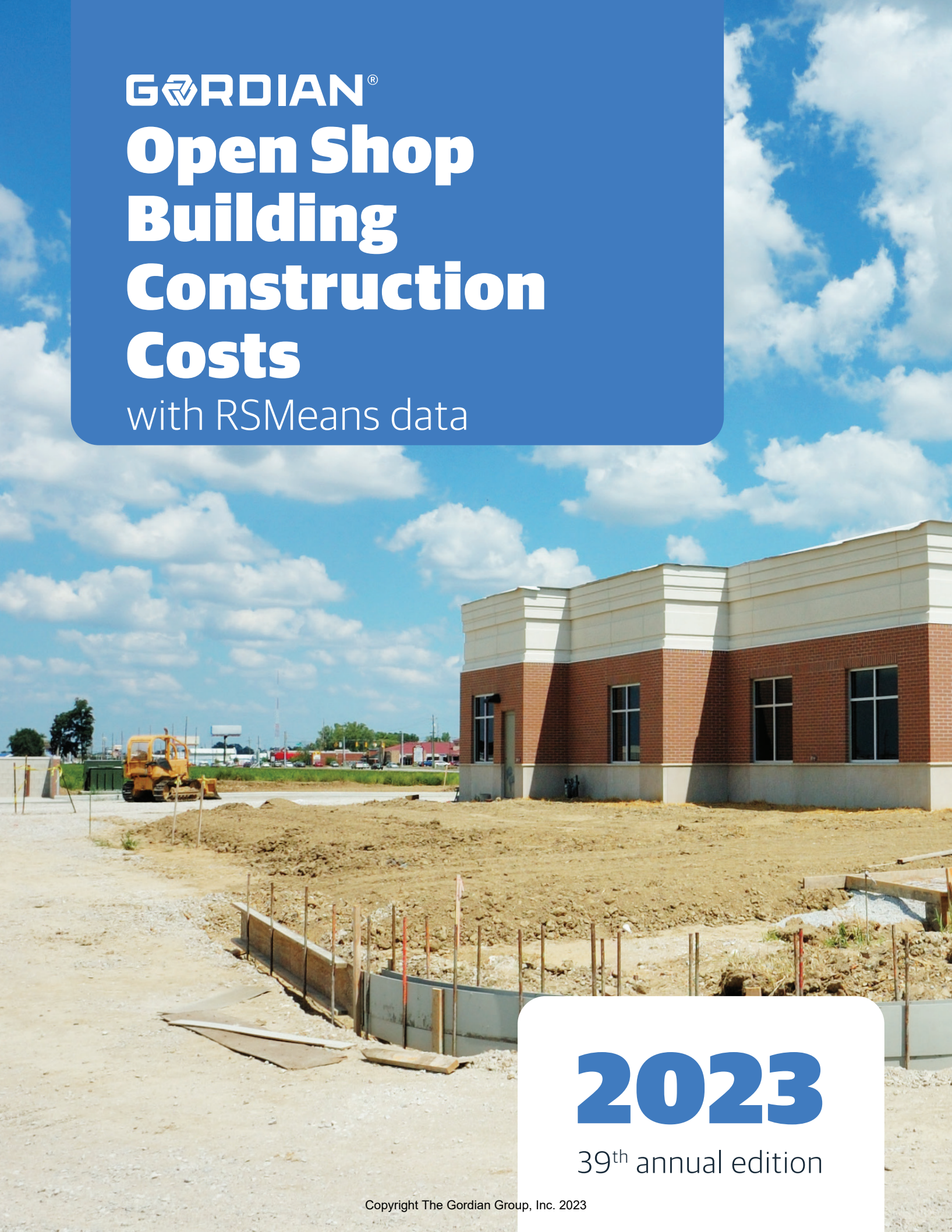




GORDIAN®

Open Shop Building Construction Costs

with RSMeans data

2023

39th annual edition

Open Shop Building Construction Costs with RSMeans data

Matthew Doheny, Senior Editor

GORDIAN®

2023

39th annual edition

**Chief Technology
Officer**

Chris Gaudreau

Chief Product Officer

Ted Kail

**Director, Data
Operations**

Sam Giffin

Principal Engineer

Bob Mewis

**Engineering and
Research**

Matthew Doheny,
Sr. Manager

**Engineers:
Architectural Divisions**

1, 3, 4, 5, 6, 7, 8, 9, 10, 11,
12, 13, 41

Sam Babbitt

Stephen Bell

Sergeleen Edouard

Richard Goldin

Scott Keller

Thomas Lane

**Engineers: Civil
Divisions and Wages**

2, 31, 32, 33, 34, 35,
44, 46

Derrick Hale, PE

Christopher Babbitt

Michael Lynch

Elisa Mello

Giles Munyard

David Yazbek

**Engineers: Mechanical,
Electrical, Plumbing &
Conveying Divisions**

14, 21, 22, 23, 25, 26, 27,
28, 48

Joseph Kelble

Brian Adams

Michelle Curran

Antonio D'Aulerio

Thomas Lyons

Jake MacDonald

Contributing Engineers

John Melin, PE, Manager

Paul Cowan

Barry Hutchinson

Gerard Lafond, PE

Matthew Sorrentino

Production

Debra Panarelli, Manager

Jonathan Forgit

Sheryl Rose

Janice Thalín

Data Quality

Patrice Bruesch, QA Lead
and Testing Strategist,

Technology

David Byars

Ellen D'Amico

Cover Design

Blaire Collins

**Data Management
Ecosystem**

Audrey Considine

Kedar Gaikwad

Todd Glowac

Srini Narla



RSMeans data from Gordian

Construction Publishers & Consultants

30 Patewood Dr., Suite 350

Greenville, SC 29615

United States of America

1.800.448.8182

rsmeans.com

Copyright 2022 by The Gordian Group Inc.

All rights reserved.

Cover photo © iStock.com/Purdue9394

Printed in the United States of America

ISSN 0883-8127

ISBN 978-1-955341-64-6

Gordian's authors, editors, and engineers apply diligence and judgment in locating and using reliable sources for the information published. However, Gordian makes no express or implied warranty or guarantee in connection with the content of the information contained herein, including the accuracy, correctness, value, sufficiency, or completeness of the data, methods, and other information contained herein. Gordian makes no express or implied warranty of merchantability or fitness for a particular purpose. Gordian shall have no liability to any customer or third party for any loss, expense, or damage, including consequential, incidental, special, or punitive damage, including lost profits or lost revenue, caused directly or indirectly by any error or omission, or arising out of, or in connection with, the information contained herein. For the purposes of this paragraph, "Gordian" shall include The Gordian Group, Inc., and its divisions, subsidiaries, successors, parent companies, and their employees, partners, principals, agents and representatives, and any third-party providers or sources of information or data. Gordian grants the purchaser of this publication limited license to use the cost data

contained herein for purchaser's internal business purposes in connection with construction estimating and related work. The publication, and all cost data contained herein, may not be reproduced, integrated into any software or computer program, developed into a database or other electronic compilation, stored in an information storage or retrieval system, or transmitted or distributed to anyone in any form or by any means, electronic or mechanical, including photocopying or scanning, without prior written permission of Gordian. This publication is subject to protection under copyright law, trade secret law and other intellectual property laws of the United States, Canada and other jurisdictions. Gordian and its affiliates exclusively own and retain all rights, title and interest in and to this publication and the cost data contained herein including, without limitation, all copyright, patent, trademark and trade secret rights. Except for the limited license contained herein, your purchase of this publication does not grant you any intellectual property rights in the publication or the cost data.

0153

\$385.00 per copy (in United States)

Price is subject to change without prior notice.

Table of Contents

Foreword	iv
How the Cost Data Is Built: An Overview	v
Estimating with RSMeans data: Unit Prices	vii
How to Use the Cost Data: The Details	ix
Unit Price Section	1
RSMeans data: Unit Prices—How They Work	4
Reference Section	707
Construction Equipment Rental Costs	709
Crew Listings	721
Historical Cost Indexes	756
City Cost Indexes	757
Location Factors	800
Reference Tables	806
Change Orders	868
Project Costs	871
Abbreviations	876
Index	880
Training Class Options	914
Labor Trade Rates including Overhead & Profit	Inside Back Cover

Unit Price Section

Table of Contents

Sect. No.	Page	Sect. No.	Page	Sect. No.	Page
General Requirements		Concrete Unit Masonry	107	Exterior Insulation and Finish	
01 11 Summary of Work	10	04 23 Glass Unit Masonry	113	07 24 Systems	235
01 21 Allowances	11	04 24 Adobe Unit Masonry	114	07 25 Weather Barriers	236
01 31 Project Management and		04 25 Unit Masonry Panels	114	07 26 Vapor Retarders	236
Coordination	12	04 27 Multiple-Wythe Unit Masonry	114	07 27 Air Barriers	237
01 32 Construction Progress		04 41 Dry-Placed Stone	115	07 31 Shingles and Shakes	237
Documentation	14	04 43 Stone Masonry	115	07 32 Roof Tiles	239
01 41 Regulatory Requirements	15	04 51 Flue Liner Masonry	119	07 33 Natural Roof Coverings	240
01 45 Quality Control	15	04 54 Refractory Brick Masonry	119	07 41 Roof Panels	241
01 51 Temporary Utilities	17	04 57 Masonry Fireplaces	120	07 42 Wall Panels	242
01 52 Construction Facilities	17	04 71 Manufactured Brick Masonry	120	07 44 Faced Panels	243
01 54 Construction Aids	18	04 72 Cast Stone Masonry	120	07 46 Siding	244
01 55 Vehicular Access and Parking	22	04 73 Manufactured Stone Masonry	121	07 51 Built-Up Bituminous Roofing	247
01 56 Temporary Barriers and Enclosures	23			07 52 Modified Bituminous Membrane	
01 57 Temporary Controls	25	Metals		Roofing	248
01 58 Project Identification	25	05 01 Maintenance of Metals	124	07 53 Elastomeric Membrane Roofing	249
01 66 Product Storage and Handling		05 05 Common Work Results for Metals	124	07 54 Thermoplastic Membrane Roofing	250
Requirements	25	05 12 Structural Steel Framing	131	07 55 Protected Membrane Roofing	251
01 71 Examination and Preparation	25	05 14 Structural Aluminum Framing	139	07 56 Fluid-Applied Roofing	251
01 74 Cleaning and Waste Management	26	05 15 Wire Rope Assemblies	140	07 57 Coated Foamed Roofing	251
01 76 Protecting Installed Construction	26	05 21 Steel Joist Framing	142	07 58 Roll Roofing	252
01 91 Commissioning	26	05 31 Steel Decking	145	07 61 Sheet Metal Roofing	252
Existing Conditions		05 35 Raceway Decking Assemblies	147	07 65 Flexible Flashing	253
02 21 Surveys	28	05 41 Structural Metal Stud Framing	147	07 71 Roof Specialties	255
02 31 Geophysical Investigations	28	05 42 Cold-Formed Metal Joist Framing	151	07 72 Roof Accessories	260
02 32 Geotechnical Investigations	28	05 44 Cold-Formed Metal Trusses	157	07 76 Roof Pavers	261
02 41 Demolition	29	05 51 Metal Stairs	158	07 81 Applied Fireproofing	261
02 42 Removal and Diversion of		05 52 Metal Railings	160	07 84 Firestopping	262
Construction Materials	35	05 53 Metal Gratings	161	07 91 Preformed Joint Seals	264
02 43 Structure Moving	38	05 54 Metal Floor Plates	163	07 92 Joint Sealants	265
02 56 Site Containment	38	05 55 Metal Stair Treads and Nosings	164	07 95 Expansion Control	266
02 58 Snow Control	39	05 56 Metal Castings	165		
02 65 Underground Storage Tank Rmvl	39	05 58 Formed Metal Fabrications	165	Openings	
02 81 Transportation and Disposal of		05 71 Decorative Metal Stairs	167	08 05 Common Work Results for	
Hazardous Materials	40	05 73 Decorative Metal Railings	168	Openings	268
02 82 Asbestos Remediation	40	05 75 Decorative Formed Metal	168	08 11 Metal Doors and Frames	269
02 83 Lead Remediation	44	Wood, Plastics & Composites		08 12 Metal Frames	270
02 87 Biohazard Remediation	45	06 05 Common Work Results for Wood,		08 13 Metal Doors	271
02 91 Chemical Sampling, Testing and		Plastics, and Composites	170	08 14 Wood Doors	274
Analysis	48	06 11 Wood Framing	185	08 16 Composite Doors	280
Concrete		06 12 Structural Panels	192	08 17 Integrated Door Opening	
03 01 Maintenance of Concrete	52	06 13 Heavy Timber Construction	193	Assemblies	281
03 05 Common Work Results for		06 15 Wood Decking	194	Access Doors and Panels	282
Concrete	52	06 16 Sheathing	195	08 32 Sliding Glass Doors	283
03 11 Concrete Forming	54	06 17 Shop-Fabricated Structural Wood	197	08 33 Coiling Doors and Grilles	284
03 15 Concrete Accessories	63	06 18 Glued-Laminated Construction	198	08 34 Special Function Doors	285
03 21 Reinforcement Bars	71	06 22 Millwork	200	08 36 Panel Doors	287
03 22 Fabric and Grid Reinforcing	76	06 25 Prefinished Paneling	212	08 38 Traffic Doors	288
03 23 Stressed Tendon Reinforcing	77	06 26 Board Paneling	213	08 41 Entrances and Storefronts	289
03 24 Fibrous Reinforcing	78	06 43 Wood Stairs and Railings	213	08 42 Entrances	290
03 30 Cast-In-Place Concrete	78	06 44 Ornamental Woodwork	216	08 43 Storefronts	291
03 31 Structural Concrete	81	06 48 Wood Frames	217	08 44 Curtain Wall and Glazed	
03 35 Concrete Finishing	84	06 49 Wood Screens and Exterior Wood		Assemblies	291
03 37 Specialty Placed Concrete	86	Shutters	218	08 45 Translucent Wall and Roof	
03 39 Concrete Curing	87	06 51 Structural Plastic Shapes and Plates	219	Assemblies	292
03 41 Precast Structural Concrete	87	06 52 Plastic Structural Assemblies	220	08 51 Metal Windows	292
03 45 Precast Architectural Concrete	89	06 63 Plastic Railings	221	08 52 Wood Windows	294
03 47 Site-Cast Concrete	90	06 65 Plastic Trim	221	08 53 Plastic Windows	299
03 48 Precast Concrete Specialties	90	06 73 Composite Decking	223	08 54 Composite Windows	301
03 51 Cast Roof Decks	90	06 81 Composite Railings	223	08 56 Special Function Windows	301
03 52 Lightweight Concrete Roof		Thermal & Moisture Protection		08 62 Unit Skylights	301
Insulation	91	07 01 Operation and Maint. of Thermal		08 63 Metal-Framed Skylights	302
03 53 Concrete Topping	91	and Moisture Protection	226	08 71 Door Hardware	302
03 54 Cast Underlayment	91	07 05 Common Work Results for		08 75 Window Hardware	314
03 62 Non-Shrink Grouting	92	Thermal and Moisture Protection	226	08 79 Hardware Accessories	314
03 63 Epoxy Grouting	92	07 11 Dampproofing	228	08 81 Glass Glazing	315
03 81 Concrete Cutting	93	07 12 Built-up Bituminous Waterproofing	228	08 83 Mirrors	317
03 82 Concrete Boring	93	07 13 Sheet Waterproofing	229	08 84 Plastic Glazing	317
Masonry		07 16 Cementitious and Reactive		08 87 Glazing Surface Films	318
04 01 Maintenance of Masonry	98	Waterproofing	229	08 88 Special Function Glazing	319
04 05 Common Work Results for		07 17 Bentonite Waterproofing	229	08 91 Louvers	320
Masonry	99	07 19 Water Repellents	230	08 95 Vents	321
04 21 Clay Unit Masonry	103	07 21 Thermal Insulation	230		
		07 22 Roof and Deck Insulation	234		

Table of Contents (cont.)

Sect. No.	Page	Sect. No.	Page	Sect. No.	Page
	Finishes				
09 01	Maintenance of Finishes 324	11 14	Pedestrian Control Equipment 412	13 53	Meteorological Instrumentation 474
09 05	Common Work Results for Finishes 326	11 21	Retail and Service Equipment 413		Conveying Equipment
09 21	Plaster and Gypsum Board Assemblies 329	11 22	Banking Equipment 414	14 11	Manual Dumbwaiters 476
09 22	Supports for Plaster and Gypsum Board 330	11 30	Residential Equipment 415	14 12	Electric Dumbwaiters 476
09 23	Gypsum Plastering 335	11 32	Unit Kitchens 418	14 21	Electric Traction Elevators 476
09 24	Cement Plastering 336	11 41	Foodservice Storage Equipment 418	14 24	Hydraulic Elevators 477
09 25	Other Plastering 336	11 42	Food Preparation Equipment 420	14 27	Custom Elevator Cabs and Doors 478
09 26	Veneer Plastering 336	11 43	Food Delivery Carts and Conveyors 421	14 28	Elevator Equipment and Controls 479
09 28	Backing Boards and Underlayments 337	11 44	Food Cooking Equipment 421	14 31	Escalators 480
09 29	Gypsum Board 338	11 46	Food Dispensing Equipment 422	14 32	Moving Walks 481
09 30	Tiling 342	11 48	Foodservice Cleaning and Disposal Equipment 423	14 42	Wheelchair Lifts 481
09 31	Thin-Set Tiling 342			14 45	Vehicle Lifts 481
09 32	Mortar-Bed Tiling 343	11 52	Audio-Visual Equipment 423	14 91	Facility Chutes 482
09 34	Waterproofing-Membrane Tiling 345	11 53	Laboratory Equipment 424	14 92	Pneumatic Tube Systems 482
09 35	Chemical-Resistant Tiling 345	11 57	Vocational Shop Equipment 426		Fire Suppression
09 51	Acoustical Ceilings 346	11 61	Broadcast, Theater, and Stage Equipment 426	21 05	Common Work Results for Fire Suppression 486
09 53	Acoustical Ceiling Suspension Assemblies 347	11 62	Musical Equipment 427	21 11	Facility Fire-Suppression Water-Service Piping 486
09 54	Specialty Ceilings 348	11 66	Athletic Equipment 427	21 12	Fire-Suppression Standpipes 487
09 57	Special Function Ceilings 349	11 67	Recreational Equipment 429	21 13	Fire-Suppression Sprinkler Systems 488
09 61	Flooring Treatment 349	11 68	Play Field Equipment and Structures 429	21 21	Carbon-Dioxide Fire-Extinguishing Systems 489
09 62	Specialty Flooring 349	11 71	Medical Sterilizing Equipment 431	21 22	Clean-Agent Fire-Extinguishing Systems 489
09 63	Masonry Flooring 350	11 72	Examination and Treatment Equipment 431	21 31	Centrifugal Fire Pumps 490
09 64	Wood Flooring 350	11 73	Patient Care Equipment 431		Plumbing
09 65	Resilient Flooring 352	11 74	Dental Equipment 432	22 01	Operation and Maintenance of Plumbing 492
09 66	Terrazzo Flooring 355	11 76	Operating Room Equipment 433	22 05	Common Work Results for Plumbing 493
09 67	Fluid-Applied Flooring 357	11 77	Radiology Equipment 433	22 07	Plumbing Insulation 499
09 68	Carpeting 358	11 78	Mortuary Equipment 433	22 11	Facility Water Distribution 500
09 69	Access Flooring 360	11 81	Facility Maintenance Equipment 434	22 13	Facility Sanitary Sewerage 508
09 72	Wall Coverings 360	11 82	Facility Solid Waste Handling Equipment 434	22 14	Facility Storm Drainage 510
09 74	Flexible Wood Sheets 362	11 91	Religious Equipment 435	22 31	Domestic Water Softeners 512
09 77	Special Wall Surfacing 362	11 97	Security Equipment 436	22 33	Electric Domestic Water Heaters 512
09 81	Acoustic Insulation 362	11 98	Detention Equipment 436	22 34	Fuel-Fired Domestic Water Heaters 513
09 84	Acoustic Room Components 363			22 35	Domestic Water Heat Exchangers 514
09 91	Painting 363		Furnishings	22 41	Residential Plumbing Fixtures 514
09 93	Staining and Transparent Finishing 374	12 21	Window Blinds 438	22 42	Commercial Plumbing Fixtures 517
09 96	High-Performance Coatings 374	12 22	Curtains and Drapes 438	22 45	Emergency Plumbing Fixtures 521
09 97	Special Coatings 376	12 23	Interior Shutters 439	22 47	Drinking Fountains and Water Coolers 522
	Specialties	12 24	Window Shades 439	22 51	Swimming Pool Plumbing Systems 523
10 05	Common Work Results for Specialties 378	12 32	Manufactured Wood Casework 440	22 52	Fountain Plumbing Systems 523
10 11	Visual Display Units 378	12 35	Specialty Casework 442	22 66	Chemical-Waste Systems for Lab. and Healthcare Facilities 524
10 13	Directories 381	12 36	Countertops 443		Heating Ventilation Air Conditioning
10 14	Signage 382	12 46	Furnishing Accessories 446	23 05	Common Work Results for HVAC 526
10 17	Telephone Specialties 384	12 48	Rugs and Mats 446	23 07	HVAC Insulation 528
10 21	Compartments and Cubicles 384	12 51	Office Furniture 447	23 09	Instrumentation and Control for HVAC 529
10 22	Partitions 388	12 52	Seating 448	23 13	Facility Fuel-Storage Tanks 531
10 26	Wall and Door Protection 391	12 54	Hospitality Furniture 448	23 21	Hydronic Piping and Pumps 533
10 28	Toilet, Bath, and Laundry Accessories 392	12 55	Detention Furniture 449	23 22	Steam and Condensate Piping and Pumps 536
10 31	Manufactured Fireplaces 395	12 56	Institutional Furniture 449	23 31	HVAC Ducts and Casings 537
10 32	Fireplace Specialties 396	12 61	Fixed Audience Seating 450	23 33	Air Duct Accessories 538
10 35	Stoves 397	12 63	Stadium and Arena Seating 451	23 34	HVAC Fans 540
10 43	Emergency Aid Specialties 397	12 67	Pews and Benches 451	23 37	Air Outlets and Inlets 544
10 44	Fire Protection Specialties 397	12 92	Interior Planters and Artificial Plants 451	23 38	Ventilation Hoods 547
10 51	Lockers 398	12 93	Interior Public Space Furnishings 452	23 41	Particulate Air Filtration 547
10 55	Postal Specialties 400		Special Construction	23 42	Gas-Phase Air Filtration 547
10 56	Storage Assemblies 400	13 05	Common Work Results for Special Construction 454	23 43	Electronic Air Cleaners 548
10 57	Wardrobe and Closet Specialties 401	13 11	Swimming Pools 457	23 51	Breechings, Chimneys, and Stacks 548
10 73	Protective Covers 402	13 12	Fountains 459	23 52	Heating Boilers 549
10 74	Manufactured Exterior Specialties 403	13 17	Tubs and Pools 459	23 54	Furnaces 550
10 75	Flagpoles 404	13 18	Ice Rinks 460	23 55	Fuel-Fired Heaters 551
10 81	Pest Control Devices 405	13 21	Controlled Environment Rooms 460	23 56	Solar Energy Heating Equipment 552
10 86	Security Mirrors and Domes 405	13 24	Special Activity Rooms 462	23 57	Heat Exchangers for HVAC 553
10 88	Scales 405	13 28	Athletic and Recreational Special Construction 463	23 62	Packaged Compressor and Condenser Units 554
	Equipment	13 31	Fabric Structures 463	23 63	Refrigerant Condensers 554
11 05	Common Work Results for Equipment 408	13 33	Geodesic Structures 465	23 64	Packaged Water Chillers 555
11 11	Vehicle Service Equipment 410	13 34	Fabricated Engineered Structures 465		
11 12	Parking Control Equipment 410	13 36	Towers 471		
11 13	Loading Dock Equipment 411	13 42	Building Modules 471		
		13 48	Sound, Vibration, and Seismic Control 472		
		13 49	Radiation Protection 472		

Table of Contents (cont.)

<i>Sect. No.</i>	<i>Page</i>	<i>Sect. No.</i>	<i>Page</i>	<i>Sect. No.</i>	<i>Page</i>
23 65	Cooling Towers 556	28 23	Video Management System 609	32 84	Planting Irrigation 668
23 73	Indoor Central-Station Air-Handling Units 557	28 31	Intrusion Detection 609	32 91	Planting Preparation 669
23 74	Packaged Outdoor HVAC Equipment 557	28 42	Gas Detection and Alarm 610	32 92	Turf and Grasses 670
23 81	Decentralized Unitary HVAC Equipment 558	28 46	Fire Detection and Alarm 610	32 93	Plants 671
23 82	Convection Heating and Cooling Units 559	28 47	Mass Notification 611	32 94	Planting Accessories 673
23 83	Radiant Heating Units 561		Earthwork	32 96	Transplanting 673
23 84	Humidity Control Equipment 563	31 05	Common Work Results for Earthwork 614		Utilities
	Electrical	31 06	Schedules for Earthwork 614	33 01	Operation and Maintenance of Utilities 676
26 01	Operation and Maintenance of Electrical Systems 566	31 11	Clearing and Grubbing 615	33 05	Common Work Results for Utilities 677
26 05	Common Work Results for Electrical 567	31 13	Selective Tree and Shrub Removal and Trimming 616	33 11	Groundwater Sources 679
26 09	Instrumentation and Control for Electrical Systems 584	31 14	Earth Stripping and Stockpiling 617	33 14	Water Utility Transmission and Distribution 680
26 12	Medium-Voltage Transformers 586	31 22	Grading 617	33 16	Water Utility Storage Tanks 682
26 22	Low-Voltage Transformers 586	31 23	Excavation and Fill 618	33 31	Sanitary Sewerage Piping 683
26 24	Switchboards and Panelboards 587	31 25	Erosion and Sedimentation Controls 638	33 34	Onsite Wastewater Disposal 684
26 25	Low-Voltage Enclosed Bus Assemblies 590	31 31	Soil Treatment 638	33 41	Subdrainage 685
26 27	Low-Voltage Distribution Equipment 591	31 32	Soil Stabilization 638	33 42	Stormwater Conveyance 686
26 28	Low-Voltage Circuit Protective Devices 593	31 33	Rock Stabilization 639	33 52	Hydrocarbon Transmission and Distribution 689
26 29	Low-Voltage Controllers 593	31 36	Gabions 639	33 71	Electrical Utility Transmission and Distribution 690
26 32	Packaged Generator Assemblies 594	31 37	Riprap 639	33 81	Communications Structures 691
26 33	Battery Equipment 594	31 41	Shoring 640		Transportation
26 35	Power Filters and Conditioners 595	31 43	Concrete Raising 641	34 01	Operation and Maintenance of Transportation 694
26 51	Interior Lighting 595	31 45	Vibroflotation and Densification 641	34 11	Rail Tracks 694
26 52	Safety Lighting 597	31 46	Needle Beams 641	34 41	Roadway Signaling and Control Equipment 695
26 54	Classified Location Lighting 598	31 48	Underpinning 641	34 71	Roadway Construction 695
26 55	Special Purpose Lighting 598	31 52	Cofferdams 642	34 72	Railway Construction 696
26 56	Exterior Lighting 599	31 56	Slurry Walls 642		Waterway & Marine
26 61	Lighting Systems and Accessories 601	31 62	Driven Piles 643	35 24	Dredging 698
	Communications	31 63	Bored Piles 645	35 51	Floating Construction 698
27 13	Communications Backbone Cabling 604		Exterior Improvements		Material Processing & Handling Equipment
27 41	Audio-Video Systems 604	32 01	Operation and Maintenance of Exterior Improvements 650	41 21	Conveyors 700
27 51	Distributed Audio-Video Communications Systems 605	32 06	Schedules for Exterior Improvements 651	41 22	Cranes and Hoists 700
27 52	Healthcare Communications and Monitoring Systems 606	32 11	Base Courses 651		Water and Wastewater Equipment
27 53	Distributed Systems 606	32 12	Flexible Paving 652	46 07	Packaged Water and Wastewater Treatment Equipment 704
	Electronic Safety & Security	32 13	Rigid Paving 654		Electrical Power Generation
28 15	Access Control Hardware Devices ... 608	32 14	Unit Paving 655	48 15	Wind Energy Electrical Power Generation Equipment 706
28 18	Security Access Detection Equipment 608	32 16	Curbs, Gutters, Sidewalks, and Driveways 656		
		32 17	Paving Specialties 657		
		32 18	Athletic and Recreational Surfacing 659		
		32 31	Fences and Gates 660		
		32 32	Retaining Walls 664		
		32 33	Site Furnishings 666		
		32 34	Fabricated Bridges 667		
		32 35	Screening Devices 668		

Reference Section

All the reference information is in one section, making it easy to find what you need to know . . . and easy to use the data set on a daily basis. This section is visually identified by a vertical black bar on the page edges.

In this Reference Section, we've included Equipment Rental Costs, a listing of rental and operating costs; Crew Listings, a full listing of all crews and equipment, and their costs; Historical Cost Indexes for cost comparisons over time; City Cost Indexes and Location Factors for adjusting costs to the region you are in; Reference Tables, where you will find explanations, estimating information and procedures, or technical data; Change Orders, information on pricing changes to contract documents; and an explanation of all the Abbreviations in the data set.

Table of Contents

Construction Equipment Rental Costs

709

Crew Listings

721

Historical Cost Indexes

756

City Cost Indexes

757

Location Factors

800

Reference Tables

806

R01 General Requirements..... 806

R02 Existing Conditions 818

R03 Concrete..... 821

R04 Masonry 836

R05 Metals 838

R06 Wood, Plastics & Composites 845

R07 Thermal & Moisture Protection 845

R08 Openings..... 847

R09 Finishes 850

R13 Special Construction 853

R14 Conveying Equipment..... 855

Reference Tables (cont.)

R22 Plumbing 856

R23 Heating, Ventilating &
Air Conditioning..... 858

R26 Electrical..... 859

R31 Earthwork 862

R32 Exterior Improvements..... 866

R33 Utilities..... 867

R34 Transportation..... 867

Change Orders 868

Project Costs 871

Abbreviations 876