



Facilities Construction Costs

with RSMeans Data

The background of the cover is a photograph of a construction site. It shows a corner of a room with walls that are partially painted green and partially left in a light beige or off-white color. A silver A-frame step ladder is leaning against the green-painted wall. Several red electrical wires are visible, some bundled together and others hanging loosely. The floor is a plain, light-colored concrete.

2024

39th annual edition

Facilities Construction Costs with RSMeans Data

Brian Adams, Senior Editor

GORDIAN®

2024

39th annual edition

Chief Product Officer

Chris Gaudreau

**Chief Technology
Officer**

Chris Gaudreau

**Director, Data
Operations**

Sam Giffin

**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

Richard Goldin

Scott Keller

Thomas Lane

Melissa Stewart

**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

Chris Clough

Contributing Engineers

John Melin, PE, Manager

Paul Cowan

Gerard Lafond, PE

Matthew Sorrentino

Production

Debra Panarelli, Manager

Sheryl Rose

Janice Thalín

Data Quality

Patrice Bruesch

Ellen D'Amico

Cover Design

Blaire Collins

**Data Management
Ecosystem**

Audrey Considine

Kedar Gaikwad

Mike Bruesch

Jonathan Forgit



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 2023 by The Gordian Group Inc.

All rights reserved.

Cover photo © iStock.com/rsaulyte

Printed in the United States of America

ISSN 1540-6202

ISBN 978-1-961006-06-5

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.

2024

\$1,180.00 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
Assemblies Section	1273
RSMeans Data: Assemblies—How They Work	1276
Reference Section	1379
Construction Equipment Rental Costs	1381
Crew Listings	1393
Historical Cost Indexes	1429
City Cost Indexes	1430
Location Factors	1473
Reference Tables	1479
Change Orders	1556
Project Costs	1559
Abbreviations	1564
Index	1568
Training Class Options	1618
Labor Trade Rates including Overhead & Profit	Inside Back Cover

Unit Price Section

Table of Contents

<i> Sect. No.</i>	<i> Page</i>	<i> Sect. No.</i>	<i> Page</i>	<i> Sect. No.</i>	<i> Page</i>
	General Requirements	04 25	Unit Masonry Panels	07 27	Air Barriers
01 11	Summary of Work	04 27	Multiple-Wythe Unit Masonry	07 31	Shingles and Shakes
01 21	Allowances	04 41	Dry-Placed Stone	07 32	Roof Tiles
01 31	Project Management and Coordination	04 43	Stone Masonry	07 33	Natural Roof Coverings
01 32	Construction Progress Documentation	04 51	Flue Liner Masonry	07 41	Roof Panels
01 41	Regulatory Requirements	04 54	Refractory Brick Masonry	07 42	Wall Panels
01 45	Quality Control	04 57	Masonry Fireplaces	07 44	Faced Panels
01 51	Temporary Utilities	04 71	Manufactured Brick Masonry	07 46	Siding
01 52	Construction Facilities	04 72	Cast Stone Masonry	07 51	Built-Up Bituminous Roofing
01 54	Construction Aids	04 73	Manufactured Stone Masonry	07 52	Modified Bituminous Membrane Roofing
01 55	Vehicular Access and Parking		Metals	07 53	Elastomeric Membrane Roofing
01 56	Temporary Barriers and Enclosures ..	05 01	Maintenance of Metals	07 54	Thermoplastic Membrane Roofing ...
01 57	Temporary Controls	05 05	Common Work Results for Metals ...	07 55	Protected Membrane Roofing
01 58	Project Identification	05 12	Structural Steel Framing	07 56	Fluid-Applied Roofing
01 66	Product Storage and Handling Requirements	05 14	Structural Aluminum Framing	07 57	Coated Foamed Roofing
01 71	Examination and Preparation	05 15	Wire Rope Assemblies	07 58	Roll Roofing
01 74	Cleaning and Waste Management	05 21	Steel Joist Framing	07 61	Sheet Metal Roofing
01 76	Protecting Installed Construction	05 31	Steel Decking	07 62	Sheet Metal Flashing and Trim
01 91	Commissioning	05 35	Raceway Decking Assemblies	07 65	Flexible Flashing
01 93	Facility Maintenance	05 42	Structural Metal Stud Framing	07 71	Roof Specialties
	Existing Conditions	05 44	Cold-Formed Metal Joist Framing ...	07 72	Roof Accessories
02 21	Surveys	05 45	Cold-Formed Metal Trusses	07 76	Roof Pavers
02 31	Geophysical Investigations	05 51	Metal Stairs	07 81	Applied Fireproofing
02 32	Geotechnical Investigations	05 52	Metal Railings	07 84	Firestopping
02 41	Demolition	05 53	Metal Gratings	07 91	Preformed Joint Seals
02 42	Removal and Diversion of Construction Materials	05 54	Metal Floor Plates	07 92	Joint Sealants
02 43	Structure Moving	05 55	Metal Stair Treads and Nosings	07 95	Expansion Control
02 58	Snow Control	05 56	Metal Castings		Openings
02 65	Underground Storage Tank Rem.	05 58	Formed Metal Fabrications	08 01	Operation and Maintenance of Openings
02 81	Transportation and Disposal of Hazardous Materials	05 71	Decorative Metal Stairs	08 05	Common Work Results for Openings
02 82	Asbestos Remediation	05 73	Decorative Metal Railings	08 11	Metal Doors and Frames
02 83	Lead Remediation	05 75	Decorative Formed Metal	08 12	Metal Frames
02 87	Biohazard Remediation		Wood, Plastics & Composites	08 13	Metal Doors
	Concrete	06 05	Common Work Results for Wood, Plastics, and Composites	08 14	Wood Doors
03 01	Maintenance of Concrete	06 11	Wood Framing	08 16	Composite Doors
03 05	Common Work Results for Concrete	06 12	Structural Panels	08 17	Integrated Door Opening Assemblies
03 11	Concrete Forming	06 13	Heavy Timber Construction	08 31	Access Doors and Panels
03 15	Concrete Accessories	06 15	Wood Decking	08 32	Sliding Glass Doors
03 21	Reinforcement Bars	06 16	Sheathing	08 33	Coiling Doors and Grilles
03 22	Fabric and Grid Reinforcing	06 17	Shop-Fabricated Structural Wood	08 34	Special Function Doors
03 23	Stressed Tendon Reinforcing	06 18	Glued-Laminated Construction	08 36	Panel Doors
03 24	Fibrous Reinforcing	06 22	Millwork	08 38	Traffic Doors
03 30	Cast-In-Place Concrete	06 25	Prefinished Paneling	08 41	Entrances and Storefronts
03 31	Structural Concrete	06 26	Board Paneling	08 42	Entrances
03 35	Concrete Finishing	06 43	Wood Stairs and Railings	08 43	Storefronts
03 37	Specialty Placed Concrete	06 44	Ornamental Woodwork	08 44	Curtain Wall and Glazed Assemblies
03 39	Concrete Curing	06 48	Wood Frames	08 45	Translucent Wall and Roof Assemblies
03 41	Precast Structural Concrete	06 49	Wood Screens and Exterior Wood Shutters	08 51	Metal Windows
03 45	Precast Architectural Concrete	06 51	Structural Plastic Shapes and Plates	08 52	Wood Windows
03 47	Site-Cast Concrete	06 52	Plastic Structural Assemblies	08 53	Plastic Windows
03 48	Precast Concrete Specialties	06 63	Plastic Railings	08 54	Composite Windows
03 51	Cast Roof Decks	06 65	Plastic Trim	08 56	Special Function Windows
03 52	Lightweight Concrete Roof Insulation	06 73	Composite Decking	08 61	Roof Windows
03 53	Concrete Topping	06 81	Composite Railings	08 62	Unit Skylights
03 54	Cast Underlayment		Thermal & Moisture Protection	08 63	Metal-Framed Skylights
03 62	Non-Shrink Grouting	07 01	Operation and Maint. of Thermal and Moisture Protection	08 71	Door Hardware
03 63	Epoxy Grouting	07 05	Common Work Results for Thermal and Moisture Protection	08 75	Window Hardware
03 81	Concrete Cutting	07 11	Dampproofing	08 79	Hardware Accessories
03 82	Concrete Boring	07 12	Built-up Bituminous Waterproofing ..	08 81	Glass Glazing
	Masonry	07 13	Sheet Waterproofing	08 83	Mirrors
04 01	Maintenance of Masonry	07 16	Cementitious and Reactive Waterproofing	08 84	Plastic Glazing
04 05	Common Work Results for Masonry	07 17	Bentonite Waterproofing	08 85	Glazing Accessories
04 21	Clay Unit Masonry	07 19	Water Repellents	08 87	Glazing Surface Films ..

Table of Contents

Sect. No.	Page	Sect. No.	Page	Sect. No.	Page
	Finishes				
09 01	Maintenance of Finishes 366	11 14	Pedestrian Control Equipment 464	13 31	Fabric Structures 541
09 05	Common Work Results for Finishes 369	11 21	Retail and Service Equipment 465	13 33	Geodesic Structures 542
09 21	Plaster and Gypsum Board Assemblies 371	11 22	Banking Equipment 467	13 34	Fabricated Engineered Structures 543
09 22	Supports for Plaster and Gypsum Board 373	11 30	Residential Equipment 468	13 36	Towers 549
09 23	Gypsum Plastering 378	11 32	Unit Kitchens 470	13 42	Building Modules 549
09 24	Cement Plastering 379	11 41	Foodservice Storage Equipment 470	13 47	Facility Protection 549
09 25	Other Plastering 379	11 42	Food Preparation Equipment 472	13 48	Sound, Vibration, and Seismic Control 550
09 26	Veneer Plastering 380	11 43	Food Delivery Carts and Conveyors 473	13 49	Radiation Protection 550
09 28	Backing Boards and Underlayments 380	11 44	Food Cooking Equipment 473	13 53	Meteorological Instrumentation 552
09 29	Gypsum Board 381	11 46	Food Dispensing Equipment 474		Conveying Equipment
09 30	Tiling 385	11 48	Foodservice Cleaning and Disposal Equipment 475	14 05	Common Work Results for Conveying Equipment 554
09 31	Thin-Set Tiling 385	11 52	Audio-Visual Equipment 476	14 11	Manual Dumbwaiters 554
09 32	Mortar-Bed Tiling 387	11 53	Laboratory Equipment 477	14 12	Electric Dumbwaiters 555
09 34	Waterproofing-Membrane Tiling 388	11 57	Vocational Shop Equipment 478	14 21	Electric Traction Elevators 555
09 35	Chemical-Resistant Tiling 388	11 61	Broadcast, Theater, and Stage Equipment 479	14 24	Hydraulic Elevators 556
09 51	Acoustical Ceilings 389	11 62	Musical Equipment 479	14 27	Custom Elevator Cabs and Doors 557
09 53	Acoustical Ceiling Suspension Assemblies 390	11 66	Athletic Equipment 480	14 28	Elevator Equipment and Controls 558
09 54	Specialty Ceilings 391	11 67	Recreational Equipment 481	14 31	Escalators 559
09 57	Special Function Ceilings 392	11 68	Play Field Equipment and Structures 482	14 32	Moving Walks 560
09 61	Flooring Treatment 392	11 71	Medical Sterilizing Equipment 484	14 42	Wheelchair Lifts 560
09 62	Specialty Flooring 393	11 72	Examination and Treatment Equipment 484	14 45	Vehicle Lifts 560
09 63	Masonry Flooring 393	11 73	Patient Care Equipment 484	14 91	Facility Chutes 561
09 64	Wood Flooring 394	11 74	Dental Equipment 485	14 92	Pneumatic Tube Systems 561
09 65	Resilient Flooring 396	11 76	Operating Room Equipment 486		Fire Suppression
09 66	Terrazzo Flooring 399	11 77	Radiology Equipment 486	21 05	Common Work Results for Fire Suppression 564
09 67	Fluid-Applied Flooring 401	11 78	Mortuary Equipment 486	21 11	Facility Fire-Suppression Water-Service Piping 565
09 68	Carpeting 402	11 81	Facility Maintenance Equipment 487	21 12	Fire-Suppression Standpipes 572
09 69	Access Flooring 403	11 82	Facility Solid Waste Handling Equipment 487	21 13	Fire-Suppression Sprinkler Systems 576
09 72	Wall Coverings 404	11 91	Religious Equipment 488	21 21	Carbon-Dioxide Fire-Extinguishing Systems 579
09 74	Flexible Wood Sheets 405	11 92	Agricultural Equipment 489	21 22	Clean-Agent Fire-Extinguishing Systems 579
09 77	Special Wall Surfacing 406	11 97	Security Equipment 490	21 31	Centrifugal Fire Pumps 580
09 81	Acoustic Insulation 407	11 98	Detention Equipment 490		Plumbing
09 84	Acoustic Room Components 407		Furnishings	22 01	Operation and Maintenance of Plumbing 584
09 91	Painting 408	12 05	Common Work Results for Furnishings 492	22 05	Common Work Results for Plumbing 585
09 93	Staining and Transparent Finishing 421	12 12	Wall Decorations 493	22 07	Plumbing Insulation 606
09 96	High-Performance Coatings 421	12 21	Window Blinds 493	22 11	Facility Water Distribution 622
09 97	Special Coatings 423	12 22	Curtains and Drapes 494	22 12	Facility Potable-Water Storage Tanks 703
	Specialties	12 23	Interior Shutters 497	22 13	Facility Sanitary Sewerage 704
10 05	Common Work Results for Specialties 428	12 24	Window Shades 497	22 14	Facility Storm Drainage 720
10 11	Visual Display Units 428	12 32	Manufactured Wood Casework 498	22 15	General Service Compressed-Air Systems 723
10 13	Directories 431	12 35	Specialty Casework 500	22 31	Domestic Water Softeners 724
10 14	Signage 432	12 36	Countertops 502	22 32	Domestic Water Filtration Equipment 725
10 17	Telephone Specialties 435	12 43	Portable Lamps 504	22 33	Electric Domestic Water Heaters 726
10 21	Compartments and Cubicles 435	12 45	Bedroom Furnishings 505	22 34	Fuel-Fired Domestic Water Heaters 727
10 22	Partitions 439	12 46	Furnishing Accessories 506	22 35	Domestic Water Heat Exchangers 729
10 26	Wall and Door Protection 443	12 48	Rugs and Mats 506	22 41	Residential Plumbing Fixtures 729
10 28	Toilet, Bath, and Laundry Accessories 444	12 51	Office Furniture 507	22 42	Commercial Plumbing Fixtures 736
10 31	Manufactured Fireplaces 447	12 52	Seating 510	22 43	Healthcare Plumbing Fixtures 741
10 32	Fireplace Specialties 448	12 54	Hospitality Furniture 511	22 45	Emergency Plumbing Fixtures 742
10 35	Stoves 449	12 55	Detention Furniture 519	22 46	Security Plumbing Fixtures 743
10 43	Emergency Aid Specialties 449	12 56	Institutional Furniture 519	22 47	Drinking Fountains and Water Coolers 743
10 44	Fire Protection Specialties 449	12 59	Systems Furniture 522	22 51	Swimming Pool Plumbing Systems 746
10 51	Lockers 450	12 61	Fixed Audience Seating 524	22 52	Fountain Plumbing Systems 746
10 55	Postal Specialties 452	12 63	Stadium and Arena Seating 524	22 62	Vacuum Systems for Laboratory and Healthcare Facilities 746
10 56	Storage Assemblies 453	12 67	Pews and Benches 524	22 63	Gas Systems for Laboratory and Healthcare Facilities 747
10 57	Wardrobe and Closet Specialties 453	12 92	Interior Planters and Artificial Plants 524	22 66	Chemical-Waste Systems for Lab. and Healthcare Facilities 750
10 73	Protective Covers 454	12 93	Interior Public Space Furnishings 528		Heating Ventilation Air Conditioning
10 74	Manufactured Exterior Specialties 455		Special Construction	23 05	Common Work Results for HVAC 758
10 75	Flagpoles 456	13 05	Common Work Results for Special Construction 532	23 07	HVAC Insulation 769
10 86	Security Mirrors and Domes 457	13 11	Swimming Pools 535		
10 88	Scales 457	13 17	Tubs and Pools 537		
	Equipment	13 18	Ice Rinks 537		
11 05	Common Work Results for Equipment 460	13 21	Controlled Environment Rooms 538		
11 11	Vehicle Service Equipment 462	13 24	Special Activity Rooms 540		
11 12	Parking Control Equipment 462	13 28	Athletic and Recreational Special Construction 540		
11 13	Loading Dock Equipment 463				

Table of Contents

Sect. No.	Page	Sect. No.	Page	Sect. No.	Page
23 09	Instrumentation and Control for HVAC	26 71	Electrical Machines	32 16	Curbs, Gutters, Sidewalks, and Driveways
23 11	Facility Fuel Piping		Communications	32 17	Paving Specialties
23 12	Facility Fuel Pumps	27 01	Operation and Maintenance of Communications Systems	32 18	Athletic and Recreational Surfacing
23 13	Facility Fuel-Storage Tanks	27 05	Common Work Results for Communications	32 31	Fences and Gates
23 21	Hydronic Piping and Pumps	27 11	Communications Equipment Room Fittings	32 32	Retaining Walls
23 22	Steam and Condensate Piping and Pumps	27 13	Communications Backbone Cabling	32 33	Site Furnishings
23 23	Refrigerant Piping	27 15	Communications Horizontal Cabling	32 34	Fabricated Bridges
23 31	HVAC Ducts and Casings	27 21	Data Communications Network Equipment	32 84	Planting Irrigation
23 33	Air Duct Accessories	27 32	Voice Communications Terminal Equipment	32 91	Planting Preparation
23 34	HVAC Fans	27 41	Audio-Video Systems	32 92	Turf and Grasses
23 35	Special Exhaust Systems	27 42	Electronic Digital Systems	32 93	Plants
23 36	Air Terminal Units	27 51	Distributed Audio-Video Communications Systems	32 94	Planting Accessories
23 37	Air Outlets and Inlets	27 52	Healthcare Communications and Monitoring Systems	32 96	Transplanting
23 38	Ventilation Hoods	27 53	Distributed Systems		Utilities
23 41	Particulate Air Filtration		Electronic Safety & Security	33 01	Operation and Maintenance of Utilities
23 42	Gas-Phase Air Filtration	28 01	Operation and Maint. of Electronic Safety and Security	33 05	Common Work Results for Utilities
23 43	Electronic Air Cleaners	28 05	Common Work Results for Electronic Safety and Security	33 11	Groundwater Sources
23 51	Breechings, Chimneys, and Stacks	28 15	Access Control Hardware Devices	33 14	Water Utility Transmission and Distribution
23 52	Heating Boilers	28 18	Security Access Detection Equipment	33 16	Water Utility Storage Tanks
23 54	Furnaces	28 23	Video Management System	33 31	Sanitary Sewerage Piping
23 55	Fuel-Fired Heaters	28 31	Intrusion Detection	33 34	Onsite Wastewater Disposal
23 56	Solar Energy Heating Equipment	28 33	Security Monitoring and Control	33 41	Subdrainage
23 57	Heat Exchangers for HVAC	28 41	Radiation Detection and Alarm	33 42	Stormwater Conveyance
23 61	Refrigerant Compressors	28 42	Gas Detection and Alarm	33 52	Hydrocarbon Transmission and Distribution
23 62	Packaged Compressor and Condenser Units	28 46	Fire Detection and Alarm	33 59	Hydrocarbon Utility Metering
23 63	Refrigerant Condensers	28 47	Mass Notification	33 61	Hydronic Energy Distribution
23 64	Packaged Water Chillers	28 52	Detention Security Systems	33 63	Steam Energy Distribution
23 65	Cooling Towers		Earthwork	33 71	Electrical Utility Transmission and Distribution
23 72	Air-to-Air Energy Recovery Equipment	31 05	Common Work Results for Earthwork	33 81	Communications Structures
23 73	Indoor Central-Station Air-Handling Units	31 06	Schedules for Earthwork		Transportation
23 74	Packaged Outdoor HVAC Equipment	31 11	Clearing and Grubbing	34 01	Operation and Maintenance of Transportation
23 76	Evaporative Air-Cooling Equipment	31 13	Selective Tree and Shrub Removal and Trimming	34 11	Rail Tracks
23 81	Decentralized Unitary HVAC Equipment	31 14	Earth Stripping and Stockpiling	34 41	Roadway Signaling and Control Equipment
23 82	Convection Heating and Cooling Units	31 22	Grading	34 43	Airfield Signaling and Control Equipment
23 83	Radiant Heating Units	31 23	Excavation and Fill	34 71	Roadway Construction
23 84	Humidity Control Equipment	31 25	Erosion and Sedimentation Controls	34 72	Railway Construction
	Electrical	31 31	Soil Treatment	34 77	Transportation Equipment
26 01	Operation and Maintenance of Electrical Systems	31 32	Soil Stabilization		Waterway & Marine
26 05	Common Work Results for Electrical	31 33	Rock Stabilization	35 22	Hydraulic Gates
26 09	Instrumentation and Control for Electrical Systems	31 36	Gabions	35 24	Dredging
26 12	Medium-Voltage Transformers	31 37	Riprap	35 31	Shoreline Protection
26 13	Medium-Voltage Switchgear	31 41	Shoring	35 51	Floating Construction
26 22	Low-Voltage Transformers	31 43	Concrete Raising		Material Processing & Handling Equipment
26 24	Switchboards and Panelboards	31 45	Vibroflotation and Densification	41 21	Conveyors
26 25	Low-Voltage Enclosed Bus Assemblies	31 46	Needle Beams	41 22	Cranes and Hoists
26 27	Low-Voltage Distribution Equipment	31 48	Underpinning		Pollution Control Equipment
26 28	Low-Voltage Circuit Protective Devices	31 52	Cofferdams	44 11	Particulate Control Equipment
26 29	Low-Voltage Controllers	31 56	Slurry Walls		Water and Wastewater Equipment
26 31	Photovoltaic Collectors	31 62	Driven Piles	46 07	Packaged Water and Wastewater Treatment Equipment
26 32	Packaged Generator Assemblies	31 63	Bored Piles	46 23	Grit Removal And Handling Equipment
26 33	Battery Equipment		Exterior Improvements	46 25	Oil and Grease Separation and Removal Equipment
26 35	Power Filters and Conditioners	32 01	Operation and Maintenance of Exterior Improvements		Electrical Power Generation
26 36	Transfer Switches	32 06	Schedules for Exterior Improvements	48 15	Wind Energy Electrical Power Generation Equipment
26 41	Facility Lighting Protection	32 11	Base Courses		
26 51	Interior Lighting	32 12	Flexible Paving		
26 52	Safety Lighting	32 13	Rigid Paving		
26 54	Classified Location Lighting	32 14	Unit Paving		
26 55	Special Purpose Lighting				
26 56	Exterior Lighting				
26 61	Lighting Systems and Accessories				

Assemblies Section

Table of Contents

<i>Table No.</i>	<i>Page</i>
A SUBSTRUCTURE	
A1010 Standard Foundations	
A1010 110 Strip Footings	1282
A1010 260 Column Footing in Existing Building	1283
A1020 Special Foundations	
A1020 810 Equipment Foundations	1284
B SHELL	
B1010 Floor Construction	
B1010 310 Mezzanine Addition to Existing Building, Slab Form Deck	1286
B1010 320 Mezzanine Addition to Existing Build., Composite Deck	1287
B1010 710 Steel Beam Fireproofing	1288
B1010 720 Steel Column Fireproofing	1290
B2010 Exterior Walls	
B2010 143 Masonry Restoration - Cleaning	1292
B2020 Exterior Windows	
B2020 108 Vinyl Clad Windows	1293
B3010 Roof Coverings	
B3010 120 Single Ply Membrane	1294
C INTERIORS	
C1010 Partitions	
C1010 124 Drywall Partitions/Wood Stud Framing	1296
C1010 128 Drywall Components	1297
C1020 Interior Doors	
C1020 114 Metal Door/Metal Frame	1298
C1020 310 Hardware	1300
C3010 Wall Finishes	
C3010 230 Paint & Covering	1301
C3020 Floor Finishes	
C3020 410 Tile & Covering	1302
C3030 Ceiling Finishes	
C3030 105 Plaster Ceilings	1303
D SERVICES	
D1010 Elevators and Lifts	
D1010 140 Traction Geared Elevators	1306
D1020 Escalators and Moving Walks	
D1020 110 Moving Stairs	1307
D1020 210 Moving Walks	1307
D2010 Plumbing Fixtures	
D2010 110 Water Closet Systems	1308
D2010 210 Urinal Systems	1309
D2010 310 Lavatory Systems	1310

<i>Table No.</i>	<i>Page</i>
D2010 410 Kitchen Sink Systems	1311
D2010 510 Bathtub Systems	1312
D2010 610 Group Wash Fountain Systems	1313
D2010 710 Shower Systems	1314
D2010 820 Water Cooler Systems	1315
D2010 920 Two Fixture Bathroom, Two Wall Plumbing	1316
D2010 922 Two Fixture Bathroom, One Wall Plumbing	1316
D3030 Cooling Generating Systems	
D3030 110 Chilled Water, Air Cooled Condenser Systems	1317
D3030 115 Chilled Water, Cooling Tower Systems	1318
D3050 Terminal & Package Units	
D3050 150 Rooftop Single Zone Unit Systems	1319
D3050 155 Rooftop Multizone Unit Systems	1320
D3050 160 Self-contained, Water Cooled Unit Systems	1321
D3050 165 Self-contained, Air Cooled Unit Systems	1322
D3050 170 Split Systems With Air Cooled Condensing Units	1323
D3050 190 Computer Room Cooling Units	1324
D4010 Sprinklers	
D4010 310 Dry Pipe Sprinkler Systems	1325
D4010 350 Preaction Sprinkler Systems	1328
D4010 370 Deluge Sprinkler Systems	1331
D4010 390 On-off Multicycle Sprinkler Systems	1334
D4010 410 Wet Pipe Sprinkler Systems	1337
D4020 Standpipes	
D4020 310 Wet Standpipe Risers, Class I	1340
Wet Standpipe Risers, Class II	1340
Wet Standpipe Risers, Class III	1341
D4020 330 Dry Standpipe Risers, Class I	1342
Dry Standpipe Risers, Class II	1342
Dry Standpipe Risers, Class III	1343
D4020 410 Fire Hose Equipment	1344
D4090 Other Fire Protection Systems	
D4090 910 Fire Suppression Unit Components	1346
D4090 920 FM200 Systems	1346
D5010 Electrical Service/Distribution	
D5010 120 Overhead Electric Service, 3 Phase - 4 Wire	1347
D5010 130 Underground Electric Service	1349
D5010 250 Panelboard	1351
D5020 Lighting and Branch Wiring	
D5020 115 Receptacles, Floor	1353
D5020 145 Motor Installation	1354
D5020 208 Fluorescent Fixtures (by Type)	1356
D5020 210 Fluorescent Fixtures (by Wattage)	1357
D5030 Communications and Security	
D5030 310 Telephone Systems	1358
D5030 810 Security & Detection Systems	1359
D5030 910 Communication & Alarm Systems	1360

Table of Contents

Table No.	Page
D5090 Other Electrical Systems	
D5090 480 Energy Monitoring Systems	1362
E EQUIPMENT & FURNISHINGS	
E2020 Movable Furnishings	
E2020 410 Work Station - Manager	1364
G BUILDING SITEWORK	
G1030 Site Earthwork	
G1030 805 Trenching Common Earth	1370
G1030 806 Trenching Loam & Sandy Clay	1371
G1030 807 Trenching Sand & Gravel	1373

Table No.	Page
G2020 Parking Lots	
G2020 220 Parking Lots	1375
G2030 Pedestrian Paving	
G2030 110 Bituminous Sidewalks	1376
G2030 120 Concrete Sidewalks	1376
G2030 150 Brick & Tile Plazas	1376
G4020 Site Lighting	
G4020 210 Light Pole (Installed)	1377

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	1381
Crew Listings	1393
Historical Cost Indexes	1429
City Cost Indexes	1430
Location Factors	1473
Reference Tables	1479
R01 General Requirements.....	1479
R02 Existing Conditions	1497
R03 Concrete.....	1500
R04 Masonry	1504
R05 Metals	1506
R06 Wood, Plastics & Composites	1513
R07 Thermal & Moisture Protection	1513
R08 Openings.....	1514
R09 Finishes	1516
R13 Special Construction	1517
R14 Conveying Equipment.....	1518
R21 Fire Suppression	1519

Reference Tables (cont.)

R22 Plumbing	1523
R23 Heating, Ventilating & Air Conditioning.....	1531
R26 Electrical.....	1541
R27 Communications	1551
R31 Earthwork	1553
R32 Exterior Improvements.....	1554
R33 Utilities.....	1554
R34 Transportation.....	1555
Change Orders	1556
Project Costs	1559
Abbreviations	1564