

Assemblies Section

Table of Contents

<i>Table No.</i>	<i>Page</i>	<i>Table No.</i>	<i>Page</i>	<i>Table No.</i>	<i>Page</i>
A SUBSTRUCTURE	1	B1010 227	Cast in Place Waffle Slab..... 67	B1020 131	Single Span, Steel Deck 121
A1010 Standard Foundations		B1010 229	Precast Plank, No Topping..... 69	B1020 132	Double Span, Steel Deck 121
A1010 110	Strip Footings 2	B1010 230	Precast Plank, 2" Topping..... 70	B1020 134	Cellular Steel Deck, Single Span 122
A1010 210	Spread Footings 3	B1010 234	Precast Double "T" Beams, No Topping..... 71	B1020 135	Cellular Steel Deck, Double Span..... 122
A1010 250	Pile Caps 5	B1010 235	Precast Double "T" Beams, 2" Topping..... 72	B1020 136	Cellular Steel Deck, Triple Span 123
A1010 310	Foundation Underdrain 7	B1010 236	Precast Beam & Plank with No Topping..... 74	B1020 310	Canopies 123
A1010 320	Foundation Dampproofing 8	B1010 238	Precast Beam & Plank with 2" Topping..... 75		
A1020 Special Foundations		B1010 239	Precast Double "T" & 2" Topping on Precast Beams..... 76	B2010 Exterior Walls	
A1020 110	C.I.P. Concrete Piles 9	B1010 241	W Shape Beams & Girders 78	B2010 101	Cast in Place Concrete..... 124
A1020 120	Precast Concrete Piles 11	B1010 244	Lt. Gauge Steel Floor Systems .. 82	B2010 102	Flat Precast Concrete 126
A1020 130	Steel Pipe Piles 13	B1010 246	Deck & Joists on Brng. Walls... 83	B2010 103	Fluted Window/Mullion Precast Concrete 127
A1020 140	Steel H Piles 15	B1010 248	Steel Joists on Beam & Wall..... 84	B2010 104	Ribbed Precast Concrete..... 128
A1020 150	Step-Tapered Steel Piles..... 17	B1010 250	Steel Joists, Beams & Slab on Columns..... 87	B2010 105	Precast Concrete Specialties... 128
A1020 160	Treated Wood Piles 18	B1010 252	Composite Beam & C.I.P. Slab.. 90	B2010 106	Tilt-Up Concrete Panel..... 129
A1020 210	Grade Beams..... 20	B1010 254	W Shape, Composite Deck, & Slab 92	B2010 109	Concrete Block Wall - Reg. Wt. 131
A1020 310	Caissons 22	B1010 256	Composite Beams, Deck & Slab 94	B2010 110	Concrete Block Wall - Lt Wt... 132
A1020 710	Pressure Injected Footings..... 23	B1010 258	Metal Deck/Concrete Fill..... 96	B2010 111	Reinf. Concrete Block Wall- Reg. Wt. 133
A1030 Slab on Grade		B1010 260	Cellular Composite Deck..... 97	B2010 112	Reinf. Concrete Block Wall- Lt. Wt. 134
A1030 120	Plain & Reinforced..... 24	B1010 261	Wood Joist 98	B2010 113	Split Ribbed Block Wall - Reg. Wt. 137
A2010 Basement Excavation		B1010 264	Wood Beam & Joist 99	B2010 114	Split Ribbed Block Wall - Lt. Wt. 138
A2010 110	Building Excav. & Backfill 26	B1010 265	Laminated Wood Floor Beams. 100	B2010 115	Reinf. Split Rib. Block Wall - Reg. Wt. 139
A2020 Basement Walls		B1010 266	Wood Deck 101	B2010 116	Reinf. Split Rib. Block Wall - Lt. Wt. 140
A2020 110	Walls, Cast in Place..... 28	B1010 710	Steel Beam Fireproofing 102	B2010 117	Split Face Block Wall - Reg. Wt. 142
A2020 220	Subdrainage Piping..... 31	B1010 720	Steel Column Fireproofing..... 104	B2010 118	Split Face Blk. Wall - Lt. Wt... 143
B SHELL	33			B2010 119	Reinf. Split Face Block Wall - Reg. Wt. 145
B1010 Floor Construction			B1020 Roof Construction	B2010 120	Reinf. Split Face Block Wall - Lt. Wt. 146
B1010 201	C.I.P. Column, Round Tied 34	B1020 102	Wood/Flat or Pitched..... 106	B2010 121	Ground Face Block Wall 149
B1010 202	C.I.P. Column, Round Tied - Min. Reinf. 36	B1020 108	Steel Joists, Beams & Deck on Columns & Walls 107	B2010 122	Reinf. Ground Face Block Wall 150
B1010 203	C.I.P. Column, Square Tied 37	B1020 112	Steel Joists, Beams & Deck on Columns 109	B2010 123	Misc. Block Wall..... 153
B1010 204	C.I.P. Column, Square Tied - Min. Reinf. 39	B1020 116	Steel Joists & Deck on Bearing Walls 111	B2010 124	Reinf. Misc. Block Walls..... 155
B1010 206	Tied, Concentric Precast Concrete Columns 40	B1020 120	Steel Joists, Joist Girders & Deck on Columns & Walls. 113	B2010 125	Solid Brick Walls - Single Wythe 157
B1010 207	Tied, Eccentric Precast Concrete Columns 41	B1020 124	Steel Joists & Joist Girders on Columns 116	B2010 126	Solid Brick Walls - Double Wythe 158
B1010 208	Steel Columns..... 42	B1020 125	Narrow Rib, Single Span Steel Deck 119	B2010 127	Solid Brick Walls Reinforced... 159
B1010 210	Wood Columns 47	B1020 126	Narrow Rib, Multi Span Steel Deck 119	B2010 128	Stone Veneer 161
B1010 213	Rectangular Precast Beams..... 49	B1020 127	Intermed. Rib, Single Span Steel Deck 119	B2010 129	Brick Veneer/Wood Stud Backup 163
B1010 214	"T" Shaped Precast Beams 51	B1020 128	Intermed. Rib, Multi Span Steel Deck 120	B2010 130	Brick Veneer/Metal Stud Backup 165
B1010 215	"L" Shaped Precast Beams..... 53	B1020 129	Wide Rib, Single Span Steel Deck 120		
B1010 216	Wood Beams 55	B1020 130	Wide Rib, Multi Span Steel Deck 120		
B1010 217	Cast in Place Slabs, One Way ... 56				
B1010 219	C.I.P. Beam & Slab, One Way... 58				
B1010 220	C.I.P. Beam & Slab, Two Way ... 60				
B1010 222	C.I.P. Flat Slab w/Drop Panels... 62				
B1010 223	Cast in Place Flat Plate..... 64				
B1010 226	C.I.P. Multispan Joist Slab 65				

Table of Contents

<i>Table No.</i>	<i>Page</i>	<i>Table No.</i>	<i>Page</i>	<i>Table No.</i>	<i>Page</i>
B2010 132	Brick Face Comp. Wall - Double Wythe.....	168	C INTERIORS	223	C3010 Wall Finishes
B2010 133	Brick Face Comp. Wall - Triple Wythe.....	171	C1010 Partitions		C3010 230 Paint & Covering.....
B2010 134	Brick Face Cavity Wall.....	173	C1010 102 Concrete Block Partitions - Reg. Wt.....	224	C3010 235 Paint Trim.....
B2010 135	Brick Face Cavity Wall - Insul. Backup.....	176	C1010 104 Concrete Block Partitions - Lt. Wt.....	225	C3020 Floor Finishes
B2010 137	Block Face Cavity Wall.....	179	C1010 120 Tile Partitions.....	227	C3020 410 Tile & Covering.....
B2010 138	Block Face Cavity Wall - Insul. Backup.....	181	C1010 124 Drywall Partitions /Wood Stud Framing.....	228	C3030 Ceiling Finishes
B2010 139	Block Face Composite Wall.....	184	C1010 126 Drywall Partitions/Metal Stud Framing.....	229	C3030 105 Plaster Ceilings.....
B2010 140	Glass Block.....	188	C1010 128 Drywall Components.....	231	C3030 110 Drywall Ceilings.....
B2010 144	Concrete Block Lintel.....	189	C1010 140 Plaster Partitions Metal /Studs Framing.....	232	C3030 140 Plaster Ceiling Components... ..
B2010 145	Concrete Block Specialties.....	190	C1010 142 Plaster Partitions/Wood Stud Framing.....	233	C3030 210 Acoustical Ceilings.....
B2010 146	Metal Siding Panel.....	191	C1010 144 Plaster Part. Components.....	235	C3030 240 Acoustical Ceiling Components.....
B2010 148	Panel, Shingle & Lap Siding....	193	C1010 205 Partitions.....	236	D SERVICES
B2010 151	Stucco Wall.....	195	C1010 210 Partitions.....	237	D1010 Elevators & Lifts
B2010 152	E.I.F.S.....	196	C1010 230 Demountable Partitions, L.F..	237	D1010 110 Hydraulic Elevators.....
B2010 154	Metal Siding Support.....	197	C1010 710 Interior Glazed Opening.....	238	D1010 140 Traction Geared Elevators.....
	B2020 Exterior Windows				D1010 150 Traction Gearless Elevators....
B2020 102	Wood Windows.....	199	C1020 Interior Doors		D1020 Escalators/Moving Walks
B2020 104	Steel Windows.....	200	C1020 102 Special Doors.....	241	D1020 110 Moving Stairs.....
B2020 106	Aluminum Windows.....	200	C1020 114 Metal Door/Metal Frame.....	242	D1020 210 Moving Walks.....
B2020 210	Tubular Aluminum Framing... ..	202	C1020 116 Labeled Metal Door/Metal Frames.....	243	D1090 Other Conveying Systems
B2020 220	Curtain Wall Panels.....	203	C1020 120 Wood Door/Wood Frame.....	243	D1090 410 Miscellaneous Types.....
	B2030 Exterior Doors		C1020 122 Wood Door/Metal Frame.....	244	D1090 510 Chutes.....
B2030 110	Glazed Doors, Steel or Alum. .	204	C1020 124 Wood Fire Doors/ Metal Frames.....	245	D2010 Plumbing Fixtures
B2030 210	Wood Doors.....	206	C1020 310 Hardware.....	246	D2010 110 Water Closet Systems.....
B2030 220	Steel Doors.....	207	C1030 Fittings		D2010 120 Water Closets, Group.....
B2030 230	Aluminum Doors.....	208	C1030 110 Toilet Partitions.....	247	D2010 210 Urinal Systems.....
	B3010 Roof Coverings		C1030 210 Fab. Compact Units & Cubicles, Ea.....	248	D2010 310 Lavatory Systems.....
B3010 105	Built-Up.....	209	C1030 310 Storage Specialties, Ea.....	248	D2010 410 Kitchen Sink Systems.....
B3010 120	Single Ply Membrane.....	211	C1030 510 Identifying/Visual Aid Special., Ea.....	248	D2010 420 Laundry Sink Systems.....
B3010 130	Preformed Metal Roofing.....	212	C1030 520 Identifying/Visual Aid Special., S.F.....	248	D2010 430 Laboratory Sink Systems.....
B3010 135	Formed Metal.....	213	C1030 710 Bath & Toilet Access., Ea.....	248	D2010 440 Service Sink Systems.....
B3010 140	Shingle & Tile.....	214	C1030 730 Bath & Toilet Access., L.F.....	249	D2010 510 Bathtub Systems.....
B3010 320	Roof Deck Rigid Insulation....	215	C1030 830 Fab. Cabinets & Counters., L.F.....	249	D2010 610 Group Wash Fountain Systems.....
B3010 410	Base Flashing.....	216	C1030 910 Other Fittings, Ea.....	249	D2010 710 Shower Systems.....
B3010 420	Roof Edges.....	217	C2010 Stair Construction		D2010 810 Drinking Fountain Systems....
B3010 430	Flashing.....	218	C2010 110 Stairs.....	250	D2010 820 Water Cooler Systems.....
B3010 610	Gutters.....	219			D2010 920 Two Fixture Bathroom, Two Wall Plumbing.....
B3010 620	Downspouts.....	219			D2010 922 Two Fixture Bathroom, One Wall Plumbing.....
B3010 630	Gravel Stop.....	220			D2010 924 Three Fixture Bathroom, One Wall Plumbing.....
	B3020 Roof Openings				
B3020 110	Skylights.....	221			
B3020 210	Hatches.....	221			

Table of Contents

<i>Table No.</i>	<i>Page</i>	<i>Table No.</i>	<i>Page</i>	<i>Table No.</i>	<i>Page</i>
D2010 926	Three Fixture Bathroom, Two Wall Plumbing.....	281			
D2010 928	Four Fixture Bathroom, Two Wall Plumbing.....	282			
D2010 930	Four Fixture Bathroom, Three Wall Plumbing	282			
D2010 932	Five Fixture Bathroom, Two Wall Plumbing.....	283			
D2010 934	Five Fixture Bathroom, Three Wall Plumbing	283			
D2010 936	Five Fixture Bathroom, One Wall Plumbing	283			
D2010 951	Sample Estimate	284			
D2020 Domestic Water Dist.					
D2020 240	Electric Water Heaters - Comm. Systems.....	285			
D2020 250	Gas Fired Water Heaters - Comm. Systems.....	286			
D2020 260	Oil Fired Water Heaters - Comm. Systems.....	287			
D2020 265	Closed Loop, External Exchange	288			
D2020 270	Drainback, Immersed Exchange.....	290			
D2020 275	Solar Draindown, Direct Collection	292			
D2020 295	Closed Loop, Immersed Exchange.....	294			
D2040 Rain Water Drainage					
D2040 210	Roof Drain Systems.....	296			
D2090 Other Plumbing Systems					
D2090 810	Piping - Install. - Unit Costs...	398			
D2090 820	Standard Pipe Fittings - Installed - Unit Costs.....	300			
D3010 Energy Supply					
D3010 510	Fin Tube Radiation, Resi.....	305			
D3010 520	Fin Tube Radiation, Comm ...	306			
D3010 530	Terminal Unit Heaters, Comm.	307			
D3010 660	Solar Swimming Pool Heater Systems	308			
D3010 682	Solar Direct Gain Glazing, Door Panels	310			
D3010 684	Solar Direct Gain Glazing, Window Panels.....	311			
D3010 686	Passive Solar Indirect Gain Wall.....	312			
D3010 688	Passive Solar Indirect Gain Panel	313			
D3010 690	Passive Solar Sunspace.....	314			
D3020 Heat Generating Systems					
D3020 102	Small Heating Systems, Hydronic, Electric Boilers	315			
D3020 104	Large Heating Systems, Hydronic, Electric Boilers	316			
D3020 106	Boilers, Hot Water & Steam ...	317			
D3020 108	Hydronic, Fossil Fuel Boilers, Terminal Units.....	318			
D3020 110	Hydronic, Fossil Fuel Boilers, Fin Tube.....	319			
D3020 310	Vent	320			
D3020 315	Chimney	322			
D3030 Cooling Generating Sys.					
D3030 110	Chilled Water, Air Cooled	323			
D3030 115	Chilled Water, Water Cooled..	324			
D3030 214	Heating/Cooling System	325			
D3050 Terminal and Package Units					
D3050 150	Rooftop Single Zone Unit Systems.....	326			
D3050 155	Rooftop Multizone Unit.....	327			
D3050 160	Self-Contained, Water Cooled Unit Systems.....	328			
D3050 165	Self-Contained, Air Cooled Unit Systems.....	329			
D3050 170	Split Systems with Air Cooled Condensing Units.....	330			
D3050 185	Computer Room Cooling Units.....	331			
D4010 Sprinklers					
D4010 310	Dry Pipe Sprinkler Systems....	332			
D4010 350	Preaction Spinkler Systems ...	335			
D4010 370	Deluge Sprinkler Systems.....	338			
D4010 390	Firecycle Sprinkler Systems....	341			
D4010 410	Wet Pipe Sprinkler Systems....	344			
D4020 Standpipes					
D4020 310	Wet Standpipe Risers.....	347			
D4020 330	Dry Standpipe Risers.....	349			
D4020 410	Fire Hose Equipment.....	351			
D4090 Other Fire Protection Sys.					
D4090 910	Unit Components	352			
D4090 920	FM200 Systems.....	352			
D5010 Electrical Service/Dist.					
D5010 110	High Voltage Shielded Conductors	353			
D5010 120	Electric Service, 3 Phase - 4 Wire.....	354			
D5010 230	Feeder Installation	355			
D5010 240	Switchgear	356			
D5020 Lighting & Branch Wiring					
D5020 110	Receptacle (by Wattage).....	357			
D5020 115	Receptacles, Floor	358			
D5020 125	Receptacle & Switches, Ea.....	359			
D5020 130	Wall Switch by Sq. Ft.....	360			
D5020 135	Miscellaneous Power.....	361			
D5020 140	Central A.C. Power (by Watt).	362			
D5020 145	Motor Installation.....	363			
D5020 155	Motor Feeder	365			
D5020 160	Magnetic Starter.....	366			
D5020 165	Safety Switches	367			
D5020 170	Motor Connections.....	368			
D5020 175	Motor & Starter	369			
D5020 208	Fluorescent Fixt. (Type).....	372			
D5020 210	Fluorescent Fixt. (Watt.).....	373			
D5020 214	Incandescent Fixt. (Type).....	374			
D5020 216	Incandescent Fixt. (Watt.).....	375			
D5020 218	Fluorscent Fixt. High Bay, 8'-10' (Watt).....	376			
D5020 220	H.I.D. Fixt., High Bay, 8'-10' (Type).....	377			
D5020 222	H.I.D. Fixt., High Bay, 8'- 10' (Watt.).....	378			
D5020 224	H.I.D. Fixt., High Bay, 16' (Type).....	379			
D5020 226	H.I.D. Fixt., High Bay, 16' (Watt.).....	380			
D5020 228	H.I.D. Fixt., High Bay, 20' (Type).....	381			
D5020 230	H.I.D. Fixt., High Bay 20' (Watt.).....	382			
D5020 232	H.I.D. Fixt., High Bay, 30' (Type).....	383			
D5020 234	H.I.D. Fixt., High Bay, 30' (Watt.).....	384			
D5020 236	H.I.D. Fixt., Low Bay, 8'-10' (Type)	385			
D5020 238	H.I.D. Fixt. Low Bay, 8'-10' (Watt.)	386			
D5020 240	H.I.D. Fixt., Low Bay, 16' (Type).....	387			
D5020 242	H.I.D. Fixt., Low Bay, 16' (Watt.).....	388			
D5030 Comm. & Security					
D5030 310	Telephone Systems	389			
D5030 910	Comm. & Alarm Systems	390			
D5030 920	Data Communications	391			
D5090 Other Electrical Systems					
D5090 210	Generators (by kW).....	392			
D5090 420	Photovoltaic Sys. Ea.	393			

Table of Contents

<i>Table No.</i>	<i>Page</i>	<i>Table No.</i>	<i>Page</i>	<i>Table No.</i>	<i>Page</i>
D5090 430	Photovoltaic Sys. Grid AC/DC.....	394			
D5090 510	Elec. Baseboard Radiation (Low Density).....	395			
D5090 520	Elec. Baseboard Radiation. (Med. Density).....	396			
E EQUIPMENT & FURNISHINGS	397				
	E1010 Commercial Equipment				
E1010 110	Security/Vault, Ea.....	398			
E1010 510	Mercantile Equipment, Ea.....	398			
E1010 610	Laundry/Dry Cleaning, Ea.....	398			
	E1020 Institutional Equipment				
E1020 110	Ecclesiastical Equipment, Ea..	399			
E1020 130	Ecclesiastical Equipment, L.F.	399			
E1020 210	Library Equipment, Ea.....	399			
E1020 230	Library Equipment, L.F.....	399			
E1020 310	Theater & Stage Equip., Ea.....	399			
E1020 320	Theater & Stage Equip., S.F....	399			
E1020 330	Theater & Stage Equip., L.F....	399			
E1020 610	Detention Equipment, Ea.....	400			
E1020 710	Laboratory Equipment, Ea.....	400			
E1020 720	Laboratory Equipment, S.F.....	400			
E1020 730	Laboratory Equipment, L.F.....	400			
E1020 810	Medical Equipment, Ea.....	400			
	E1030 Vehicular Equipment				
E1030 110	Vehicular Service Equip., Ea...	401			
E1030 210	Parking Control Equip., Ea.....	401			
E1030 310	Loading Dock Equip., Ea.....	401			
	E1090 Other Equipment				
E1090 110	Maintenance Equip., Ea.....	402			
E1090 210	Solid Waste Handling Equip., Ea.....	402			
E1090 350	Food Service Equip., Ea.....	402			
E1090 360	Food Service Equip., S.F.....	402			
E1090 410	Residential Equip., Ea.....	402			
E1090 550	Darkroom Equip., Ea.....	402			
E1090 610	School Equipment, Ea.....	403			
E1090 620	School Equipment, S.F.....	403			
E1090 810	Athletic, Recreational & Therapeutic Equip., Ea.....	403			
E1090 820	Athletic, Recreational & Therapeutic Equip., S.F.....	403			
E1090 910	Other Equipment, Ea.....	404			
	E2010 Fixed Furnishings				
E2010 310	Window Treatment, Ea.....	405			
E2010 320	Window Treatment, S.F.....	405			
E2010 420	Fixed Floor Grilles & Mats, S.F.....	405			
E2010 510	Fixed Multiple Seating, Ea.....	405			
	E2020 Moveable Furnishings				
E2020 210	Furnishings, Ea.....	406			
E2020 220	Furniture & Access., L.F.....	406			
F SPECIAL CONSTRUCTION	407				
	F1010 Special Structures				
F1010 120	Air-Supported Struct., S.F.....	408			
F1010 210	Pre-Engineered Struct., Ea.....	408			
F1010 320	Other Special Struct., S.F.....	408			
F1010 330	Special Structures, Ea.....	408			
F1010 340	Special Structures, S.F.....	408			
	F1020 Integrated Construction				
F1020 110	Integrated Const., Ea.....	410			
F1020 120	Integrated Const., S.F.....	410			
F1020 250	Special Purpose Room, Ea.....	410			
F1020 260	Special Purpose Room, S.F.....	410			
F1020 330	Special Construction, L.F.....	410			
	F1030 Special Const. Systems				
F1030 120	Sound, Vibration & Seismic Const, S.F.....	411			
F1030 210	Radiation Protection, Ea.....	411			
F1030 220	Radiation Protection, S.F.....	411			
F1030 910	Other Special Construction Systems, Ea.....	411			
	F1040 Special Facilities				
F1040 210	Ice Rinks, Each.....	412			
F1040 510	Liquid & Gas Storage Tanks, Ea.....	412			
F1040 910	Special Construction, Ea.....	412			
	G BUILDING SITEWORK	413			
	G1030 Site Earthwork				
G1030 805	Trenching Common Earth.....	414			
G1030 806	Trenching Loam & Sandy Clay.....	416			
G1030 807	Trenching Sand & Gravel.....	418			
G1030 815	Pipe Bedding.....	420			
	G2010 Roadways				
G2010 210	Roadway Pavement.....	422			
G2010 305	Curbs & Berms.....	423			
	G2020 Parking Lots				
G2020 210	Parking Lots.....	424			
	G2030 Pedestrian Paving				
G2030 110	Bituminous Sidewalks.....	425			
G2030 120	Concrete Sidewalks.....	425			
G2030 150	Brick & Tile Plazas.....	425			
	G2040 Site Development				
G2040 105	Fence & Guardrails.....	426			
G2040 810	Flag Poles.....	426			
G2040 950	Other Site Development, Ea...	426			
	G3010 Water Supply				
G3010 110	Water Distribution Piping.....	427			
G3020 110	Drainage & Sewage Piping.....	428			
	G3030 Storm Sewer				
G3030 210	Manholes & Catch Basins.....	430			
	G3060 Fuel Distribution				
G3060 110	Gas Service Piping.....	432			
	G4020 Site Lighting				
G4020 110	Site Lighting.....	433			
G4020 210	Light Pole (Installed).....	434			