

# D SERVICES

Facility Services Performance Requirements 01 86 00

NUMBER	TITLE	MF NUMBER	EXPLANATION
<b>D10</b>	<b>CONVEYING</b>	14 00 00	
	Conveying Equipment Performance Requirements	01 85 00	
	See Also:		
	Starting and Adjusting: Z1070.40.		
	Demonstration and Training: Z1070.80.		
<b>D1010</b>	<b>Vertical Conveying Systems</b>		
	See Also:		
	Construction Aids: Z1050.30.		
D1010.10	Elevators	14 20 00	Includes: Passenger and freight elevators of all types, including cars, enclosures, controls, safety equipment, hoistway equipment, and elevator machinery. Includes associated metal fabrications including pit ladders.
	Elevators Performance Requirements	01 85 00	
	Cab Capacity	01 85 00	
	Car Load Capacity	01 85 00	
	Car Speed	01 85 00	
	Door Opening Speed	01 85 00	
	Freight Elevators	14 20 00	
	Electric Traction Freight Elevators	14 21 13	
	Hydraulic Freight Elevators	14 24 13	
	Passenger Elevators	14 20 00	
	Electric Traction Passenger Elevators	14 21 23	
	Hydraulic Passenger Elevators	14 24 23	
	Residential Elevators	14 20 00	
	Electric Traction Residential Elevators	14 21 33	
	Hydraulic Residential Elevators	14 24 33	
	Service Elevators	14 20 00	
	Electric Traction Service Elevators	14 21 43	
	Hydraulic Service Elevators	14 24 43	
	Limited-Use/Limited Application Elevators	14 26 00	
	Custom Elevator Cabs and Doors	14 27 00	
	Elevator Equipment and Controls	14 28 00	
	See Also:		
	Vents and Hatches: B3060.50.		
	Ladders: B1080.80.		
	Elevator Telephones: D6020.20.		
D1010.20	Lifts	14 40 00	Includes: Vertical or inclined lifts and related equipment for a variety of purposes. Sidewalk lifts include doors.
	Lifts Performance Requirements	01 85 00	
	Speed	01 85 00	
	People Lifts	14 41 00	
	Wheelchair Lifts	14 42 00	
	Platform Lifts	14 43 00	
	Orchestra Lifts	14 43 13	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Stage Lifts	14 43 16	
	See Also:		
	Theater and Stage Equipment:		
	E1070.10.		
	Sidewalk Lifts	14 44 00	
	Vehicle Lifts	14 45 00	
	See Also:		
	Mortuary Lifts: E1040.20.		
	Loading Dock Lifts: E1010.50.		
	Recreational Equipment: E1070.60.		
D1010.30	Escalators	14 31 00	Includes: Passenger conveying systems composed of moving treads installed in inclined position including associated components, hardware, controls, safety equipment, and related items.
	Escalators Performance Requirements	01 85 00	
	Speed	01 85 00	
D1010.50	Dumbwaiters	14 10 00	Includes: Packaged and field assembled, motorized and hand- operated dumbwaiters including associated components for book lifts, cart lifts, and other applications. Systems include associated components, hardware, controls, and safety equipment.
	Dumbwaiters Performance Requirements	01 85 00	
D1010.60	Moving Ramps	14 33 00	Includes: Passenger conveying systems composed of moving belts installed in inclined position including associated components, hardware, controls, safety equipment, and related items.
	Moving Ramps Performance Requirements	01 85 00	
	Speed	01 85 00	
<b>D1030</b>	<b>Horizontal Conveying</b>		
	Horizontal Conveying Performance Requirements	01 85 00	
D1030.10	Moving Walks	14 32 00	Includes: Passenger conveying systems composed of moving belts installed in horizontal position including associated components, hardware, controls, safety equipment, and related items.
	Moving Walks Performance Requirements	01 85 00	
	Speed	01 85 00	
D1030.30	Turntables	14 70 00	Includes: Structural turntables for various applications.
	Turntables Performance Requirements	01 85 00	
	Industrial Turntables	14 71 00	
	Vehicle Turntables	14 71 11	
	Hospitality Turntables	14 72 00	
	See Also:		
	Hospitality Equipment: E1030.50.		
	Hospitality Casework: E2010.30.		
	Hospitality Furniture: E2050.30.		
	Restaurant Turntables	14 72 25	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Exhibit Turntables	14 73 00	
	Display Turntables	14 73 59	
	See Also:		
	Display Cases: C1090.20.		
	Display Lighting: D5040.50.		
	Refrigerated Display Equipment:		
	E1030.30.		
	Exhibit Equipment: E1040.10.		
	Entertainment Turntables	14 74 00	
	Stage Turntables	14 74 61	
	See Also:		
	Theater and Stage Equipment:		
	E1070.10.		
D1030.50	Passenger Loading Bridges	34 77 13	Includes: Operating bridges for loading and unloading of passengers to and from aircraft and ships.
	Passenger Loading Bridges Performance Requirements	01 85 00	
	Aircraft Passenger Loading Bridges	34 77 13	
	Ship Passenger Loading Bridges	34 77 13	
D1030.70	People Movers		
	People Mover Performance Requirements	01 85 00	
	Car Capacity		
	Car Speed		
	Monorails	34 12 00	Includes: Single rail vehicles suspended from or straddle the guideway. Includes associated track, equipment, controls, and accessories.
	Funiculars	34 13 00	Includes: Steep cable railways in which ascending cars counterbalance descending cars. Includes associated track, cable, and accessories.
	Cable Transportation	34 14 00	Includes: Steep slope transportation system utilizing moving cable. Includes associated cable, support structures, equipment, controls, and accessories.
<b>D1050</b>	<b>Material Handling</b>		
	Material Handling Performance Requirements	01 85 00	
	Load Capacity	01 85 00	
	See Also:		
	Construction Aids: Z1050.30.		
D1050.10	Cranes	41 22 13	Includes: Hoisting towers, cranes, crane rails, and related accessories.
D1050.20	Hoists	41 22 23	Includes: Manual and motor operated hoists and related accessories.
D1050.30	Derricks	41 22 33	Includes: Manual and motor operated derricks and related accessories.
D1050.40	Conveyors	41 21 00	Includes: Automatic guided vehicles, conveyors, diverters, and chutes. Includes controls and accessories.
D1050.50	Baggage Handling Equipment	34 77 16	Includes: Operating equipment for handling, scanning, and weighing of baggage at terminals. Includes controls and accessories.
D1050.60	Chutes	14 91 00	Includes: Chutes which support the operation of the building or structure.
	Coal Chutes	14 91 13	
	Escape Chutes	14 91 23	
	Laundry and Linen Chutes	14 91 33	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Trash Chutes	14 91 82	
	See Also: Solid Waste Handling Equipment: E1090.10.		
D1050.70	Pneumatic Tube Systems	14 92 00	Includes: Pneumatically operated tube system for the delivery of small items within a facility. Includes controls and accessories.
	See Also: Office Equipment: E1030.75.		
<b>D1080</b>	<b>Operable Access Systems</b>		
	Operable Access Systems Performance Requirements		
	See Also: Maintenance Equipment: E1030.40.		
D1080.10	Suspended Scaffolding	14 81 00	Includes: Suspended scaffolding when part of the completed project.
D1080.20	Rope Climbers	14 82 00	Includes: Powered rope climbers to access exterior façade.
D1080.30	Elevating Platforms	14 83 00	Includes: Fixed elevating platforms to provide a movable elevated working platform for people and materials.
	See Also: Platform Lifts: D1010.20.		
D1080.40	Powered Scaffolding	14 84 00	Includes: Powered scaffolding when part of the completed project.
	Window Washing Scaffolding	14 84 13	
D1080.50	Building Envelope Access		
	Façade Access Equipment	11 24 23	
<b>D20</b>	<b>PLUMBING</b>	22 00 00	
	Plumbing Performance Requirements	01 86 16	
	See Also: Starting and Adjusting: Z1070.40. Demonstration and Training: Z1070.80.		
<b>D2010</b>	<b>Domestic Water Distribution</b>	22 11 00	Includes: Facility domestic water distribution system. Include Domestic Water Distribution Supplementary Components as appropriate.
	Domestic Water Distribution Performance Requirements	01 86 16	
	Sustainable Design Requirements	01 86 16	
	Plumbing Fixture Water Consumption	01 86 16	
	See Also: Swimming Pool Plumbing Systems: F1050.10. Pools and Tubs Plumbing Systems: F1050.10. Interior Fountain Plumbing Systems: F1050.20. Site Domestic Water Distribution: G3010.10		
D2010.10	Facility Potable-Water Storage Tanks	22 12 00	Includes: Tanks for storage of potable water serving a facility and located within, on, under, or closely associated with a structure.

NUMBER	TITLE	MF NUMBER	EXPLANATION
D2010.20	Domestic Water Equipment		Includes: Equipment for domestic water distribution system.
	Domestic Water Pumps	22 11 23	
	Domestic Water Softeners	22 31 00	Includes: Equipment for the softening of domestic water.
	Domestic Water Filtration Equipment	22 32 00	Includes: Equipment for the filtering of domestic water.
	Domestic Water Heaters		Includes: Equipment to heat domestic water. Includes electric and fuel-fired equipment.
	Electric Domestic Water Heaters	22 33 00	
	Fuel-Fired Domestic Water Heaters	22 34 00	
	Domestic Water Heat Exchangers	22 35 00	Includes: Equipment to heat domestic water by means of heat exchange.
D2010.40	Domestic Water Piping	22 11 16	Includes: Piping, valves, and specialties associated with domestic water distribution located within, under, or closely associated with a structure. Includes circulating pumps. May Include: Water service from the structure to the utility water service line.
	Domestic Water Piping Specialties	22 11 19	
D2010.60	Plumbing Fixtures	22 40 00	Includes: Terminal devices on the domestic water plumbing system. Includes rough-in piping, trim, fittings, and connection to vent piping.
	Residential Plumbing Fixtures	22 41 00	
	Residential Water Closets	22 41 13	
	Residential Urinals	22 41 13	
	Residential Bidets	22 41 13	
	Residential Lavatories	22 41 16	
	Residential Sinks	22 41 16	
	Residential Bathtubs	22 41 19	
	Residential Showers	22 41 23	
	Residential Disposers	22 41 26	
	Residential Laundry Trays	22 41 36	
	Residential Plumbing Fixture Trim	22 41 39	
	Commercial Plumbing Fixtures	22 42 00	
	Commercial Water Closets	22 42 13	
	Commercial Urinals	22 42 13	
	Commercial Bidets	22 42 13	
	Commercial Lavatories	22 42 16	
	Commercial Sinks	22 42 16	
	Commercial Bathtubs	22 42 19	
	Commercial Showers	22 42 23	
	Commercial Disposers	22 42 26	
	Shampoo Bowls	22 42 29	
	Wash Fountains	22 42 33	
	Commercial Laundry Trays	22 42 36	
	Commercial Plumbing Fixture Trim	22 42 39	
	Flushometers	22 42 43	
	Healthcare Plumbing Fixtures		
	Healthcare Water Closets	22 43 13	
	Healthcare Sinks	22 43 16	
	Healthcare Bathtubs	22 43 19	
	Healthcare Showers	22 43 23	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Healthcare Faucets	22 43 39	
	Healthcare Flushometers	22 43 43	
	See Also:		
	Process Support Plumbing Systems:		
	D2060.		
	Healthcare Equipment: E1040.20.		
	Healthcare Casework: E2010.30.		
	Healthcare Furniture: E2050.30.		
	Healthcare Special Procedures:		
	Z1020.70.		
	Emergency Plumbing Fixtures	22 45 00	
	Emergency Showers	22 45 13	
	Eyewash Equipment	22 45 16	
	Eye/Face Wash Equipment	22 45 26	
	Hand-Held Emergency Drench Hoses	22 45 29	
	Combination Emergency Fixture Units	22 45 33	
	Emergency Fixture Water-Tempering Equipment	22 45 36	
	Security Plumbing Fixtures	22 46 00	
	Security Water Closets	22 46 13	
	Security Urinals	22 46 13	
	Security Lavatories	22 46 16	
	Security Sinks	22 46 16	
	Security Plumbing Fixture Trim	22 46 39	
	Security Flushometers	22 46 43	
	Security Plumbing Fixture Supports	22 46 53	
	See Also:		
	Electronic Safety and Security: D70.		
	Security Equipment: E1040.60.		
	Security Procedures: Z1020.70.		
	Temporary Security Barriers & Enclosures: Z1050.40.		
	Drinking Fountains and Water Coolers	22 47 00	
	Drinking Fountains	22 47 13	
	Remote Water Coolers	22 47 23	
D2010.90	Domestic Water Distribution Supplementary Components		Includes: Common work results for plumbing, plumbing insulation, and instrumentation and
	Mechanical Metal Supports	05 45 13	
	Common Work Results for Plumbing	22 05 00	
	Expansion Fittings and Loops	22 05 16	
	Meters and Gages	22 05 19	
	Valves	22 05 23	
	Hangers and Supports	22 05 29	
	Heat Tracing	22 05 33	
	Vibration and Seismic Controls	22 05 48	
	Identification	22 05 53	
	Insulation	22 07 00	
	Instrumentation and Controls	22 09 00	
D2020	Sanitary Drainage	22 13 00	Includes: Facility sanitary sewerage system located within, under, or closely associated with a structure. Include Sanitary Drainage Supplementary Components as appropriate.

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Sanitary Drainage Systems Performance Requirements	01 86 16	
	See Also:		
	Swimming Pool Plumbing Systems: F1050.10.		
	Pools and Tubs Plumbing Systems: F1050.10.		
	Interior Fountain Plumbing Systems: F1050.20.		
	Sanitary Sewerage Utilities: G3020.		
D2020.10	Sanitary Sewerage Equipment		Includes: Interceptor, separator, pumps, and septic tanks that are part of facility sanitary sewerage system.
	Sanitary Waste Interceptors	22 13 23	
	Sanitary Waste Separators	22 13 26	
	Sanitary Sewerage Pumps	22 13 29	
	Packaged, Submersible Sewerage Pump Units	22 13 33	
	Packaged, Wastewater Pump Units	22 13 36	
	Facility Packaged, Sewerage Pumping Stations	22 13 43	
	Facility Septic Tanks	22 13 53	
	See Also:		
	Utility Septic Tanks: G3020.40.		
D2020.30	Sanitary Sewerage Piping		Includes: Sanitary waste and vent piping system within and under structures. May Include: Sanitary piping from the structure to the utility sanitary sewer.
	Sanitary Sewers	22 13 13	
	Sanitary Waste and Vent Piping	22 13 16	
	Sanitary Waste Piping Specialties	22 13 19	
	Sanitary Drains	22 13 19.13	
	Fats, Oils, and Grease Disposal Systems	22 13 19.23	
	Grease Removal Devices	22 13 19.26	
	Backwater Valves	22 13 19.33	
	Air-Admittance Valves	22 13 19.36	
	Sanitary Drainage Manholes	22 05 73	
	Sanitary Drainage Piping Cleanouts	22 05 76	
D2020.90	Sanitary Drainage Supplementary Components		Includes: Common work results for plumbing, plumbing insulation, and instrumentation and control for plumbing to be included with sanitary drainage elements above as appropriate.
	Mechanical Metal Supports	05 45 13	
	Common Work Results for Plumbing	22 05 00	
	Expansion Fittings and Loops	22 05 16	
	Meters and Gages	22 05 19	
	Valves	22 05 23	
	Hangers and Supports	22 05 29	
	Heat Tracing	22 05 33	
	Vibration and Seismic Controls	22 05 48	
	Identification	22 05 53	
	Insulation	22 07 00	
	Instrumentation and Controls	22 09 00	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
<b>D2030</b>	<b>Building Support Plumbing Systems</b>	22 14 00	Includes: Facility stormwater drainage and gray water systems. Include Building Support Plumbing System Supplementary Components as appropriate.
	Building Support Plumbing Systems Performance Requirements	01 86 16	
	See Also:		
	Rainwater Management: B3020.70.		
	Storm Drainage Utilities: G3020.		
D2030.10	Stormwater Drainage Equipment		Includes: Drainage pumps, and sump pumps that are part of stormwater drainage system.
	Stormwater Drainage Pumps	22 14 33	
		22 14 36	
	Stormwater Drainage Sump Pumps	22 14 29	
	Rainwater Storage Tanks	22 14 53	
D2030.20	Stormwater Drainage Piping	22 14 13	Includes: Storm drainage piping system within, under, or closely associated with a structure. Includes storm drains for areas closely associated with a structure such as courtyards, plazas, and loading dock areas. May Include: Storm drainage piping from the structure to the utility storm drain.
	Rainwater Leaders	22 14 16	
	Stormwater Drainage Piping Specialties	22 14 23	
	Stormwater Drainage Manholes	22 05 73	
	Stormwater Drainage Piping Cleanouts	22 05 76	
D2030.30	Facility Stormwater Drains	22 14 26	Includes: Various types of drains to collect storm water.
	Area Drains	22 14 26.13	
	Roof Drains	22 14 26.16	
	Trench Drains	22 14 26.19	
	See Also:		
	Site Stormwater Drains: G3030.40.		
D2030.60	Gray Water Systems		Includes: Systems to collect, treat, and distribute gray water for other uses such as irrigation.
	Gray Water Tanks	22 13 63	
	Gray Water Equipment		
	Gray Water Treatment Equipment		
	Gray Water Piping System		
	Gray Water Specialties		
D2030.90	Building Support Plumbing System Supplementary Components		Includes: Common work results for plumbing, plumbing insulation, and instrumentation and control for plumbing to be included with building support plumbing system elements above as appropriate.
	Mechanical Metal Supports	05 45 13	
	Common Work Results for Plumbing	22 05 00	
	Expansion Fittings and Loops	22 05 16	
	Meters and Gages	22 05 19	
	Valves	22 05 23	
	Hangers and Supports	22 05 29	
	Heat Tracing	22 05 33	
	Vibration and Seismic Controls	22 05 48	
	Identification	22 05 53	
	Insulation	22 07 00	
	Instrumentation and Controls	22 09 00	



NUMBER	TITLE	MF NUMBER	EXPLANATION
<b>D2050</b>	<b>General Service Compressed-Air</b>	22 15 00	Includes: Compressed air system serving general service requirements
	General Service Compressed-Air Performance Requirements	01 86 16	
	General Service Compressed-Air Piping	22 15 13	
	General Service Compressed-Air Valves	22 15 16	
	General Service Packaged Air Compressors and Receivers	22 15 19	
	<i>See Also:</i> <i>Laboratory and Healthcare Compressed-Air: D2060.10.</i>		
<b>D2060</b>	<b>Process Support Plumbing Systems</b>		Includes: Process Support Plumbing System Supplementary Components as appropriate.
D2060.10	Compressed-Air Systems	22 61 00	Includes: Compressed-air systems for laboratory and healthcare purposes.
	Compressed-Air Systems Performance Requirements	01 86 16	
	Laboratory Air Operating Pressure	01 86 16	
	Medical Air Operating Pressure	01 86 16	
	Dental Air Operating Pressure	01 86 16	
	Instrument Air Operating Pressure	01 86 16	
	Medical Laboratory Air Operating Pressure	01 86 16	
	Air Capacity	01 86 16	
	Compressed-Air Piping	22 61 13	
	Compressed-Air Equipment	22 61 19	
	<i>See Also:</i> <i>General Service Compressed-Air: D2050.</i>		
D2060.20	Vacuum Systems	22 62 00	Includes: Vacuum systems for laboratory and healthcare purposes.
	Vacuum Systems Performance Requirements	01 86 16	
	Laboratory Vacuum Operation Level	01 86 16	
	Medical Surgical Vacuum Operation Level	01 86 16	
	Waste Anesthetic Gas Disposal Vacuum Operation Level	01 86 16	
	Dental Vacuum Operation Level	01 86 16	
	Oral-Evacuation Vacuum Operation Level	01 86 16	
	Healthcare Laboratory Vacuum Operation Level	01 86 16	
	Vacuum Piping	22 62 13	
	Vacuum Equipment	22 62 19	
	Waste Anesthesia-Gas Piping	22 62 23	
D2060.30	Gas Systems	22 63 00	Includes: Gas systems for laboratory and healthcare purposes.
	Gas Systems Performance Requirements	01 86 16	
	Medical Carbon Dioxide Operating Pressure	01 86 16	
	Medical Helium Operating Pressure	01 86 16	
	Medical Nitrogen Operating Pressure	01 86 16	
	Medical Nitrous Oxide Operating Pressure	01 86 16	
	Medical Oxygen Operating Pressure	01 86 16	
	Gas Piping	22 63 13	
	Gas Storage Tanks	22 63 19	
	Gas Equipment		
D2060.40	Chemical-Waste Systems	22 66 00	Includes: Chemical-waste systems for laboratory and healthcare purposes.
	Chemical-Waste Systems Performance Requirements	01 86 16	
	Single-Wall Piping Pressure Rating	01 86 16	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Double-Containment Piping Pressure Rating	01 86 16	
	Field-Fabrication Containment-Piping Pressure Rating	01 86 16	
	Laboratory Chemical-Waste Piping	22 66 53	
	Healthcare Chemical-Waste Piping	22 66 70	
	Chemical-Waste Tanks	22 66 83	
D2060.50	Processed Water Systems	22 67 00	Includes: Processed water systems for laboratory and healthcare purposes.
	Processed Water Systems Performance	01 86 16	
	Reagent-Water Piping Operating Pressure	01 86 16	
	Deionized-Water Piping Operating Pressure	01 86 16	
	Distilled-Water Piping Operating Pressure	01 86 16	
	Reverse-Osmosis-Water Piping Operating Pressure	01 86 16	
	Processed Water Piping	22 67 13	
	Processed Water Equipment	22 67 19	
	See Also:		
	Healthcare Plumbing Fixtures:		
	D2010.60.		
	Healthcare Equipment: E1040.20.		
	Laboratory Equipment: E1040.10.		
	Healthcare Special Procedures:		
	Z1020.70.		
D2060.90	Process Support Plumbing System Supplementary Components		Includes: Common work results for plumbing, plumbing insulation, and instrumentation and controls to be included with process support plumbing systems elements above as appropriate.
	Mechanical Metal Supports	05 45 13	
	Healthcare Metal Supports	05 45 23	
	Common Work Results for Plumbing	22 05 00	
	Valves	22 05 23	
	Hangers and Supports	22 05 29	
	Heat Tracing	22 05 33	
	Vibration and Seismic Controls	22 05 48	
	Identification	22 05 53	
	Insulation	22 07 00	
	Instrumentation and Controls	22 09 00	
<b>D30</b>	<b>HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)</b>	23 00 00	
	HVAC Performance Requirements	01 86 19	
	See Also:		
	Starting and Adjusting: Z1070.40.		
	Demonstration and Training:		
	Z1070.80.		
<b>D3010</b>	<b>Facility Fuel Systems</b>	23 10 00	Includes: Fuel-oil, gasoline, natural-gas, and liquefied-petroleum fuel systems associated with a structure.
	Facility Fuel Systems Performance Requirements	01 86 19	
	Fuel System Operating Pressure	01 86 19	
	Fuel Storage Tank Capacity	01 86 19	
	Fuel Pump Capacity	01 86 19	
	See Also:		
	Site Fuel Distribution: G3060.		

NUMBER	TITLE	MF NUMBER	EXPLANATION
D3010.10	Fuel Piping	23 11 00	Includes: Fuel piping, valves, piping specialties, and other components within, under, or closely associated with a structure.
D3010.30	Fuel Pumps	23 12 00	Includes: Fuel pumps within or closely associated with a structure.
	Facility Fuel-Oil Pumps	23 12 13	
	Facility Gasoline Dispensing Pumps	23 12 16	
D3010.50	Fuel Storage Tanks	23 13 00	Includes: Fuel tanks under or closely associated with a structure.
<b>D3020</b>	<b>Heating Systems</b>		Includes: Associated ductwork, piping, valves, and specialties. Includes: Heating System Supplementary Components as appropriate.
	Heating Systems Performance Requirements	01 86 19	
	Sustainable Design Requirements	01 86 19	
D3020.10	Heat Generation		Includes: Boilers, furnaces, solar, geothermal, and biomass heat generation, fuel fired heaters, and heat exchangers.
	Fuel Heat Generation		Includes: Fuel-fired boilers and generators for hot water and steam systems. Includes breechings, chimneys, and stacks.
	Breechings, Chimneys, and Stacks	23 51 00	
	Fuel-Fired Heating Boilers	23 52 00	
	Electric Heating Boilers	23 52 13	Includes: Electric boilers and generators for hot water and steam systems.
	Heating Boiler Feedwater Equipment	23 53 00	Includes: Equipment to remove oxygen and other dissolved gases in boiler feed.
	Boiler Feedwater Pumps	23 53 13	
	Deaerators	23 53 16	
	Furnaces	23 54 00	Includes: Fuel-fired and electric furnaces.
	Solar Heat Generation	23 56 00	Includes: Equipment powered by solar energy.
	Heating Solar Collectors	23 56 13	
	Packaged Solar Heating Equipment	23 56 16	
	Geothermal Heat Generation		
	Biomass Heat Generation		
	Fuel-Fired Heaters	23 55 00	Includes: Fuel-fired radiant and unit heaters.
	Heat Exchangers for HVAC	23 57 00	Includes: Equipment used to transfer heat from one medium to another.
	See Also: Facility Fuel Systems: D3010. Facility Distribution: D3050.10. Facility Steam Distribution: D3050.30. HVAC Air Distribution: D3050.50.		
D3020.30	Thermal Heat Storage	23 71 13	Includes: Equipment to store thermal energy for use in heating and with charging or discharging this energy at a controllable rate.
D3020.70	Decentralized Heating Equipment	23 80 00	Includes: Heating equipment that serves a portion of a HVAC system.
	Convection Heating Units	23 82 00	Includes: Convection units may provide heating and cooling.
	Valance Heating Units	23 82 13	
	Chilled Beams	23 82 14	
	Air Coils	23 82 16	
	Fan Coil Units	23 82 19	
	Unit Ventilators	23 82 23	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Induction Units	23 82 26	
	Radiators	23 82 29	
	Convectors	23 82 33	
	Finned-Tube Radiation Heaters	23 82 36	
	Unit Heaters	23 82 39	
	Radiant Heating Units	23 83 00	Includes: Electric cables or panels and hydronic piping used for radiant heating for space heating.
D3020.90	Heating System Supplementary Components		Includes: Common work results for HVAC, insulation, and instrumentation and control to be included in heating system elements above as appropriate.
	Mechanical Metal Supports	05 45 13	
	Common Work Results for HVAC	23 05 00	
	Meters and Gages	23 05 19	
	General-Duty Valves	23 05 23	
	Hangers and Supports	23 05 29	
	Vibration and Seismic Controls	23 05 48	
	Identification	23 05 53	
	Anti-Microbial Coatings	23 05 63	
	Anti-Microbial Ultraviolet Emitters	23 05 66	
	Testing, Adjusting, and Balancing	23 05 93	
	Insulation	23 07 00	
	Instrumentation and Control	23 09 00	
<b>D3030</b>	<b>Cooling Systems</b>		Includes: Associated ductwork, piping, valves, and specialties. Includes: Cooling System Supplementary Components as appropriate.
	Cooling Systems Performance Requirements	01 86 19	
	Sustainable Design Requirements	01 86 19	
D3030.10	Central Cooling	23 60 00	Includes: Refrigerant compressors, condensers, packaged compressor and condenser units, water chillers, and cooling towers.
	Refrigerant Compressors	23 61 00	Includes: Various type of compressors used in refrigeration process.
	Refrigerant Condensers	23 63 00	Includes: Condensing units used to reject heat from the refrigeration process.
	Packaged Compressor and Condenser Units	23 62 00	Includes: Compressor in combination with condensing units used to reject heat from the refrigeration process.
	Water Chillers	23 64 00	Includes: Various types of chillers used for building space cooling.
	Cooling Towers	23 65 00	Includes: Factory- and field-fabricated cooling towers and liquid coolers. Includes piping and specialties; chemical water treatment; vibration and seismic controls; and integral controls not a part of the condenser water distribution systems.
	<p><i>See Also:</i>  <i>Facility Hydronic Distribution Systems: D3050.</i>  <i>Refrigeration Detection and Alarm: D7050.50.</i>  <i>Site Hydronic Cooling Distribution: G3050.40.</i></p>		

NUMBER	TITLE	MF NUMBER	EXPLANATION
D3030.30	Evaporative Air-Cooling	23 76 00	Includes: Equipment used to reject heat from the refrigeration process by evaporation.
D3030.50	Thermal Cooling Storage	23 71 00	Includes: Equipment to store thermal energy for use in cooling and with charging or discharging this energy at a controllable rate.
	Chilled-Water Thermal Storage	23 71 16	
	Ice Storage	23 71 19	
D3030.70	Decentralized Cooling	23 80 00	Includes: Cooling equipment that serves a portion of a HVAC system.
	Air-Conditioners		
	Packaged Terminal Air-Conditioners	23 81 13	
	Room Air-Conditioners	23 81 16	
	Self-Contained Air-conditioners	23 81 19	
	Computer-Room Air-Conditioners	23 81 23	
	Split-System Air-Conditioners	23 81 26	
	Unitary Heat Pumps		
	Air-Source Heat Pumps	23 81 43	
	Water-Source Heat Pumps	23 81 46	
	Convection Cooling Units	23 82 00	Note: Convection units may provide heating and cooling.
	Valance Cooling Units	23 82 13	
	Chilled Beams	23 82 14	
	Air Coils	23 82 16	
	Fan Coil Units	23 82 19	
	Unit Ventilators	23 82 23	
	Induction Units	23 82 26	
	Convectors	23 82 33	
D3030.90	Cooling System Supplementary Components		Includes: Common work results for HVAC, insulation, and instrumentation and control to be included in cooling system elements above as appropriate.
	Mechanical Metal Supports	05 45 13	
	Common Work Results for HVAC	23 05 00	
	Meters and Gages	23 05 19	
	General-Duty Valves	23 05 23	
	Hangers and Supports	23 05 29	
	Vibration and Seismic Controls	23 05 48	
	Identification	23 05 53	
	Anti-Microbial Coatings	23 05 63	
	Anti-Microbial Ultraviolet Emitters	23 05 66	
	Testing, Adjusting, and Balancing	23 05 93	
	Insulation	23 07 00	
	Instrumentation and Control	23 09 00	
<b>D3050</b>	<b>Facility HVAC Distribution Systems</b>		Includes: Facility Distribution Systems Supplementary Components as appropriate.
	<i>See Also:</i>		
	<i>Exterior Louvers: B2070.10.</i>		
	<i>Interior Louvers: C1090.15.</i>		
	<i>Heat Generation: D3020.</i>		
	<i>Integrated Construction: F1010.</i>		
	<i>Site Energy Distribution: G3050.</i>		
D3050.10	Facility Hydronic Distribution		Includes: Piping systems and equipment for distribution of heating hot water and cooling chilled water. Includes piping systems, pumps, tanks, supports and anchors, vibration and seismic controls, identification, and piping and equipment insulation.

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Hydronic Distribution Performance Requirements	01 86 19	
	Hot-Water Heating Piping Working Pressure and Temperature	01 86 19	
	Chilled-Water Piping Working Pressure and Temperature	01 86 19	
	Dual-Temperature Heating and Cooling Water Piping Working Pressure and Temperature	01 86 19	
	Condenser-Water Piping Working Pressure and Temperature	01 86 19	
	Glycol Cooling-Water Piping Working Pressure and Temperature	01 86 19	
	Makeup-Water Piping Working Pressure and Temperature	01 86 19	
	Condensate-Drain Piping Working Temperature	01 86 19	
	Blowdown-Drain Piping Working Temperature	01 86 19	
	Air-Vent Piping Temperature	01 86 19	
	Hydronic Pumps Capacities	01 86 19	
	See Also:		
	Boilers: D3020.10		
	Chillers: D3030.10		
	Cooling Towers: D3030.10		
	Hydronic Piping System		
	Hydronic Pumps	23 21 23	
	Hydronic Piping	23 21 13	
	Water Treatment for Hydronic Systems	23 25 00	
D3050.30	Facility Steam Distribution		Includes: Piping systems and equipment for distribution of steam and condensate return. Includes piping systems, pumps, tanks, supports and anchors, vibration and seismic controls, identification, and piping and equipment insulation.
	Steam Distribution Performance Requirements	01 86 19	
	High Pressure Steam Piping Working Pressure	01 86 19	
	Low Pressure Steam Piping Working Pressure	01 86 19	
	Condensate Piping Working Pressure and Temperature	01 86 19	
	Makeup-Water Piping Working Pressure and Temperature	01 86 19	
	Steam Condensate Pump Capacity	01 86 19	
	See Also:		
	Boilers: D3020.10		
	Steam Piping System		
	Steam Condensate Pumps	23 22 23	
	Steam Piping	23 22 13	
	Water Treatment for Steam Systems	23 25 19	
D3050.50	HVAC Air Distribution		Includes: Systems for distribution of air including supply systems, return systems, and general exhaust systems. Does not include special exhaust systems such as kitchen hood, paint booth, and fume hood exhaust systems.

NUMBER	TITLE	MF NUMBER	EXPLANATION
	HVAC Air Distribution Performance Requirements	01 86 19	
	Sustainable Design Requirements	01 86 19	
	Fan Total Airflow and External Static Pressure	01 86 19	
	Pressure Class, Seal Class, and Leakage Class for Supply Ducts	01 86 19	
	Pressure Class, Seal Class, and Leakage Class for Return Ducts	01 86 19	
	Filtration Efficiency	01 86 19	
	Air-Handling Units		Includes: Air-handling units consisting of fans, coils, dampers, control devices, and other accessories.
	Indoor Central-Station Air-Handling Units	23 73 00	
	Packaged Outdoor HVAC Equipment	23 74 00	
	Custom-Packaged Outdoor HVAC Equipment	23 75 00	
	HVAC Air Distribution Components	23 30 00	Includes: Ducts, duct accessories, fans, terminal units, and air inlets and outlets.
	HVAC Fans	23 34 00	
	HVAC Ducts and Casings	23 31 00	
	Air Plenums and Chases	23 32 00	
	Air Duct Accessories	23 33 00	
	Air Terminal Units	23 36 00	
	Air Outlets and Inlets	23 37 00	
	HVAC Air Cleaning Devices	23 40 00	Includes: Devices of a variety of types to clean distribution air.
	Particulate Air Filtration	23 41 00	
	Gas-Phase Air Filtration	23 42 00	
	Electronic Air Cleaners	23 43 00	
	Humidity Control	23 84 00	Includes: Equipment that adds or removes moisture from a medium in order to control the humidity.
	<i>See Also: Integrated Ceiling Assemblies: C1070.70.</i>		
D3050.90	Facility Distribution Systems Supplementary Components		Includes: Common work results for HVAC, insulation, and instrumentation and control to be included in distribution system elements above as appropriate.
	Mechanical Metal Supports	05 45 13	
	Common Work Results for HVAC	23 05 00	
	Expansion Fittings and Loops	23 05 16	
	Meters and Gages	23 05 19	
	General-Duty Valves	23 05 23	
	Hangers and Supports	23 05 29	
	Heat Tracing	23 05 33	
	Vibration and Seismic Controls	23 05 48	
	Identification	23 05 53	
	Anti-Microbial Coatings	23 05 63	
	Anti-Microbial Ultraviolet Emitters	23 05 66	
	Testing, Adjusting, and Balancing	23 05 93	
	Insulation	23 07 00	
	Instrumentation and Control	23 09 00	
D3060	Ventilation		Includes: Supply air, return air, exhaust air, outside air, and air cleaning systems. Includes Ventilation Supplementary Components as appropriate.

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Ventilation Performance Requirements	01 86 19	
	Sustainable Design Requirements	01 86 19	
	Fan Total Airflow and External Static Pressure	01 86 19	
	Pressure Class, Seal Class, and Leakage Class for Exhaust Ducts	01 86 19	
D3060.10	Supply Air		
	Supply Air HVAC Fans	23 34 00	
	Supply Air Ducts and Casings	23 31 00	
	Supply Air Plenums and Chases	23 32 00	
	Supply Air Duct Accessories	23 33 00	
	Supply Air Terminal Units	23 36 00	
	Supply Air Outlets	23 37 00	
D3060.20	Return Air		
	Return Air HVAC Fans	23 34 00	
	Return Air Ducts and Casings	23 31 00	
	Return Air Plenums and Chases	23 32 00	
	Return Air Duct Accessories	23 33 00	
	Return Air Outlets and Inlets	23 37 00	
D3060.30	Exhaust Air		
	Special Exhaust Systems	23 35 00	Includes: Special systems for exhausting air such as kitchen hood, paint booth, and fume hood exhaust systems.
	<i>See Also:</i> <i>Exterior Louvers: B2070.</i> <i>Interior Louvers: C1090.15.</i> <i>Laboratory Equipment: E1040.10.</i> <i>Food Service Equipment:</i> <i>E1030.80.</i>		
	Air-Borne Particulate Collection Systems		
	Sawdust Collection Systems	23 35 13.13	
	Engine Exhaust Systems	23 35 16	
	Ventilation Hoods	23 38 00	
	Commercial Kitchen Hoods	23 38 13	
	Fume Hood Exhaust	23 38 16	
	Exhaust Air HVAC Fans	23 34 00	
	Exhaust Air Ducts and Casings	23 31 00	
	Exhaust Air Plenums and Chases	23 32 00	
	Exhaust Air Duct Accessories	23 33 00	
	Exhaust Air Inlets	23 37 00	
D3060.40	Outside Air		
	Outside Air HVAC Fans	23 34 00	
	Outside Air Ducts and Casings	23 31 00	
	Outside Air Plenums and Chases	23 32 00	
	Outside Air Duct Accessories	23 33 00	
	Outside Air Terminal Units	23 36 00	
	Outside Air Outlets and Inlets	23 37 00	
D3060.60	Air-to-Air Energy Recovery	23 72 00	Includes: Air-to-air energy recovery units.
D3060.70	HVAC Air Cleaning	23 40 00	
D3060.90	Ventilation Supplementary Components		Includes: Common work results for HVAC, insulation, and instrumentation and control to be included in ventilation elements above as appropriate.
	Mechanical Metal Supports	05 45 13	
	Common Work Results for HVAC	23 05 00	
	Hangers and Supports	23 05 29	
	Vibration and Seismic Controls	23 05 48	
	Identification	23 05 53	



NUMBER	TITLE	MF NUMBER	EXPLANATION
	Anti-Microbial Coatings	23 05 63	
	Anti-Microbial Ultraviolet Emitters	23 05 66	
	Testing, Adjusting, and Balancing	23 05 93	
	Insulation	23 07 00	
	Instrumentation and Control	23 09 00	
<b>D3070</b>	<b>Special Purpose HVAC Systems</b>		
D3070.10	Snow Melting		Includes: Electric cables and hydronic piping used for snow and ice control.
	Radiant-Heating Electric Cables	23 83 13	
	Radiant-Heating Hydronic Piping	23 83 16	
<b>D40</b>	<b>FIRE PROTECTION</b>		
	<i>See Also:</i>		
	<i>Starting and Adjusting: Z1070.40.</i>		
	<i>Demonstration and Training:</i>		
	<i>Z1070.80.</i>		
	<i>Site Fire Protection Water</i>		
	<i>Distribution: G3010.30.</i>		
<b>D4010</b>	<b>Fire Suppression</b>	21 00 00	Includes: Fire Suppression Supplementary Components as appropriate.
	Fire Suppression Performance Requirements	01 86 13	
D4010.10	Water-Based Fire-Suppression	21 10 00	Includes: Systems that use water for fire extinguishing and suppression. Includes piping, fittings, and specialties; hoses, valves, cabinets; fire pumps, accessories, and controls.
	Water-Based Fire Suppression Performance Requirements	01 86 13	
	Sprinkler Occupancy Hazard Classifications	01 86 13	
	Standard-Pressure Piping Working Pressure	01 86 13	
	High-Pressure Piping Working Pressure	01 86 13	
	<i>See Also:</i>		
	<i>Fire Protection Specialties: D4030.</i>		
	<i>Detection and Alarm: D7050.</i>		
	<i>Integrated Automation: D8010.</i>		
	<i>Site Fire Protection Water</i>		
	<i>Distribution: G3010.30.</i>		
	Fire-Suppression Water Storage	21 40 00	
	Fire Pumps	21 30 00	
	Fire-Suppression Piping	21 11 00	
	Fire-Suppression Standpipes	21 12 00	
	Fire-Suppression Sprinkler Systems	21 13 00	Includes: Piping, fittings, valves, hangers, supports, other specialties, and sprinklers for fire protection systems. Includes limited area sprinkler systems, fire pumps, accessories, and controls.
	Wet-Pipe Sprinkler Systems	21 13 13	
	Dry-Pipe Sprinkler Systems	21 13 16	
	Preaction Sprinkler Systems	21 13 19	
	Combined Dry-Pipe and Preaction Sprinkler Systems	21 13 23	
	Deluge Fire-Suppression Sprinkler Systems	21 13 26	
	Water Spray Fixed Systems	21 13 29	
	Antifreeze Sprinkler Systems	21 13 36	
	Foam-Water Systems	21 13 39	
D4010.50	Fire-Extinguishing	21 20 00	Includes: Systems that use other than water for fire extinguishing and suppression. Includes piping, fittings, and specialties; valves, accessories, and controls.

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Carbon-Dioxide Fire-Extinguishing Systems	21 21 00	
	Clean-Agent Fire-Extinguishing Systems	21 22 00	
	Wet-Chemical Fire-Extinguishing Systems	21 23 00	
	Dry-Chemical Fire-Extinguishing Systems	21 24 00	
D4010.90	Fire Suppression Supplementary Components		Includes: Expansion fittings and loops, meters and gages, general-duty valves, hanger and supports, heat tracing, vibration and seismic controls, identification, insulation, and instrumentation and control to be included in fire protection elements above as appropriate.
	Mechanical Metal Supports	05 45 13	
	Common Work Results for Fire Suppression	21 05 00	
	Expansion Fittings and Loops	21 05 16	
	Meters and Gages	21 05 19	
	General-Duty Valves	21 05 23	
	Hangers and Supports	21 05 29	
	Heat Tracing	21 05 33	
	Vibration and Seismic Controls	21 05 48	
	Identification	21 05 53	
	Insulation	21 07 00	
	Instrumentation and Control	21 09 00	
<b>D4030</b>	<b>Fire Protection Specialties</b>	10 44 00	Includes: Fire fighting devices and storage cabinets except devices connected to a fire suppression system.
D4030.10	Fire Protection Cabinets	10 44 13	
D4030.30	Fire Extinguishers	10 44 16	
D4030.50	Breathing Air Replenishment Systems	10 44 33	
D4030.70	Fire Extinguisher Accessories	10 44 43	
<b>D50</b>	<b>ELECTRICAL</b>	26 00 00	
	Electrical Performance Requirements	01 86 26	
	<i>See Also:</i>		
	<i>Starting and Adjusting: Z1070.40.</i>		
	<i>Demonstration and Training:</i>		
	<i>Z1070.80.</i>		
<b>D5010</b>	<b>Facility Power Generation</b>		
	Facility Power Generation Performance Requirements	01 86 26	Includes: Power Generation Supplementary Components as appropriate.
	Voltage	01 86 26	
	Power Output Ratings	01 86 26	
D5010.10	Packaged Generator Assemblies	26 32 00	Includes: Generator, frequency changers, and rotary converters and uninterruptible power units.
	Engine Generators	26 32 13	
	Steam-Turbine Generators	26 32 16	
	Hydro-Turbine Generators	26 32 19	
	Wind Energy Equipment	26 32 23	
	Frequency Converters	26 32 26	
	Rotary Converters	26 32 29	
	Uninterruptible Power Systems	26 32 33	
D5010.20	Battery Equipment	26 33 00	Includes: Batteries, battery racks, battery chargers, static power converters, uninterruptible power supplies, and accessories.
	Batteries	26 33 13	
	Battery Racks	26 33 16	
	Battery Units	26 33 19	
	Central Battery Equipment	26 33 23	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Static Power Converters	26 33 33	
	Battery Chargers	26 33 43	
	Battery Monitoring	26 33 46	
	Static Uninterruptible Power Supply	26 33 53	
D5010.30	Photovoltaic Collectors	26 31 00	Includes: Solar cells to convert sunlight to electricity.
D5010.40	Fuel Cells	48 18 00	Includes: Fuel cell electricity generating equipment.
D5010.60	Power Filtering and Conditioning	26 35 00	Includes: Capacitors, chokes and inductors, filters, power factor controllers, and voltage regulators.
	Capacitors	26 35 13	
	Chokes and Inductors	26 35 16	
	Electromagnetic-Interference Filters	26 35 23	
	Harmonic Filters	26 35 26	
	Power Factor Correction Equipment	26 35 33	
	Slip Controllers	26 35 36	
	Static-Frequency Converters	26 35 43	
	Radio-Frequency-Interference Filters	26 35 46	
	Voltage Regulators	26 35 53	
D5010.70	Transfer Switches	26 36 00	Includes: Switches that transfer from one source of electricity to another.
D5010.90	Facility Power Generation Supplementary Components		Includes: Grounding and bonding, hanger and supports, raceway and boxes, vibration and seismic controls, identification, wiring connectors, and instrumentation and control to be included in power generation system elements above as appropriate.
	Electrical Metal Supports	05 45 16	
	Common Work Results for Electrical	26 05 00	
	Grounding and Bonding	26 05 26	
	Hangers and Supports	26 05 29	
	Raceways and Boxes	26 05 33	
	Vibration and Seismic Controls	26 05 48	
	Identification	26 05 53	
	Wiring Connectors	26 05 83	
	Instrumentation and Control	26 09 00	
<b>D5020</b>	<b>Electrical Service and Distribution</b>		Includes: Electrical Service and Distribution Supplementary Components as appropriate.
	Electrical Service and Distribution Performance Requirements	01 86 26	
D5020.10	Electrical Service	26 21 00	Includes: Includes meters, substations, transformers, switchgear, switchboards, and protective devices where electrical power enters structure.
	Electricity Metering	26 16 00	
	Substations	26 11 00	
	Transformers	26 12 00	
		26 22 00	
	Switchgear and Switchboards	26 13 00	
		26 23 00	
	Protection Devices	26 18 00	
		26 28 00	
	See Also: Site Electrical Distribution Systems: G4010.		

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NUMBER	TITLE	MF NUMBER	EXPLANATION
D5020.30	Power Distribution	26 20 00	Includes: Bus assemblies, distribution equipment, and electrical wiring system to distribute electrical power to switchboards, panelboards, and motor control centers.
	Switchboards and Panelboards	26 24 00	
	Switchboards	26 24 13	
	Panelboards	26 24 16	
	Motor-Control Centers	26 24 19	
	Bus Assemblies	26 25 00	
	Distribution Equipment	26 27 00	
	Electrical Cabinets and Enclosures	26 27 16	
	Electrical Wiring System		
	Raceways and Enclosures	26 05 33	
	Ducts	26 05 43	
	Cable Trays	26 05 36	
	Wiring	26 05 13	
	See Also:		
	Site Electrical Distribution Systems:		
	G4010.		
D5020.70	Facility Grounding	26 05 26	Includes: Raceways and wiring to ground and bond electrical distribution system.
	Raceways	26 05 33	
	Wiring	26 05 13	
	See Also:		
	Site Grounding: G4010.70		
D5020.90	Electrical Service and Distribution Supplementary Components		Includes: Grounding and bonding, hanger and supports, raceways and boxes, cable trays, utility poles, vibration and seismic controls, identification, wiring connectors, and instrumentation and control to be included in electrical service and distribution system elements above as appropriate.
	Electrical Metal Supports	05 45 16	
	Common Work Results for Electrical	26 05 00	
	Grounding and Bonding	26 05 26	
	Hangers and Supports	26 05 29	
	Raceways and Boxes	26 05 33	
	Cable Trays	26 05 36	
	Utility Poles	26 05 46	
	Vibration and Seismic Controls	26 05 48	
	Identification	26 05 53	
	Wiring Connectors	26 05 83	
	Instrumentation and Control	26 09 00	
<b>D5030</b>	<b>General Purpose Electrical Power</b>		Includes: General Purpose Electrical Power Supplementary Components as appropriate.
	General Purpose Electrical Power Performance Requirements	01 86 26	
D5030.10	Branch Wiring System		Includes: Raceways, ducts, cable trays, and wiring to deliver power from branch panelboards to point of use.
	Raceways and Enclosures	26 05 33	
	Ducts	26 05 43	
	Cable Trays	26 05 36	
	Wiring	26 05 19	

NUMBER	TITLE	MF NUMBER	EXPLANATION
D5030.50	Wiring Devices	26 27 26	Includes: Electrical devices at point of use including electrical outlets and switches.
D5030.90	General Purpose Electrical Power Supplementary Components		Includes: Grounding and bonding, hanger and supports, raceways and boxes, cable trays, vibration and seismic controls, identification, wiring connectors, and instrumentation and control to be included in general purpose electrical power elements above as appropriate.
	Electrical Metal Supports	05 45 16	
	Common Work Results for Electrical	26 05 00	
	Grounding and Bonding	26 05 26	
	Hangers and Supports	26 05 29	
	Raceways and Boxes	26 05 33	
	Cable Trays	26 05 36	
	Vibration and Seismic Controls	26 05 48	
	Identification	26 05 53	
	Wiring Connectors	26 05 83	
	Instrumentation and Control	26 09 00	
<b>D5040</b>	<b>Lighting</b>	26 50 00	Includes: Lighting Supplementary Components as appropriate.
	Lighting Performance Requirements	01 86 26	
	Sustainable Design Requirements	01 86 26	
	Lighting Levels for Various Areas of Facility	01 86 26	
	See Also:		
	Site Lighting: G4050.		
	Roadway Lighting: G2010.70		
	Parking Lot Lighting: G2020.70.		
	Pedestrian Plaza and Walkway Lighting: G2030.70.		
	Airfield Lighting: G2040.70.		
	Athletic, Recreation, and Playfield Area Lighting: G2050.		
	Landscape Lighting: G2080.70.		
D5040.10	Lighting Control	26 09 23	Includes: Clock and calendar, photoelectric switches, occupancy sensors, and light-leveling control devices.
	Lighting Control Devices	26 09 23	
	Lighting Control Panels	26 09 26	
	Central Dimming Control	26 09 33	
	Modular Dimming Control	26 09 36	
	Network Lighting Control	26 09 43	
	Theatrical Lighting Control	26 09 61	
D5040.20	Branch Wiring for Lighting		Includes: Raceways, ducts, cable trays, and wiring beyond branch circuit panelboards to lighting fixtures.
	Raceways and Enclosures	26 05 33	
	Ducts	26 05 43	
	Cable Trays	26 05 36	
	Wiring	26 05 19	
	Wiring Devices	26 27 26	
D5040.50	Lighting Fixtures	26 50 00	Includes: Luminaries, lighting equipment, ballasts, and accessories. Includes fluorescent, high intensity discharge, incandescent, mercury vapor, neon, and sodium vapor lighting.
	Interior Lighting	26 51 00	
	Emergency Lighting	26 52 00	
	Exit Signs	26 53 00	
	Classified Location Lighting	26 54 00	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Special Purpose Lighting	26 55 00	
	Outline Lighting	26 55 23	
	Underwater Lighting	26 55 29	
	Hazard Warning Lighting	26 55 33	
	Obstruction Lighting	26 55 36	
	Helipad Lighting	26 55 39	
	Security Lighting	26 55 53	
	Display Lighting	26 55 59	
	Theatrical Lighting	26 55 61	
	Detention Lighting	26 55 63	
	Healthcare Lighting	26 55 70	
	See Also:		
	Integrated Ceiling Assemblies:		
	C1070.70.		
D5040.90	Lighting Supplementary Components		Includes: Grounding and bonding, hanger and supports, raceways and boxes, cable trays, vibration and seismic controls, identification, wiring connectors, and instrumentation and control to be included in lighting system elements above as appropriate.
	Electrical Metal Supports	05 45 16	
	Common Work Results for Electrical	26 05 00	
	Grounding and Bonding	26 05 26	
	Hangers and Supports	26 05 29	
	Raceways and Boxes	26 05 33	
	Cable Trays	26 05 36	
	Vibration and Seismic Controls	26 05 48	
	Identification	26 05 53	
	Wiring Connectors	26 05 83	
	Instrumentation and Control	26 09 00	
<b>D5080</b>	<b>Miscellaneous Electrical Systems</b>		Includes: Miscellaneous Electrical Systems Supplementary Components as appropriate.
D5080.10	Lightning Protection	26 41 00	Includes: Wiring and equipment for lightning protection.
	Lightning Protection Performance Requirements	01 86 26	
	Lightning Protection for Structures	26 41 13	
	Lightning Protection and Dissipation	26 41 16	
	Early Streamer Emission Lightning Protection	26 41 19	
	Lightning Protection Surge Arresters and Suppressors	26 41 23	
	See Also:		
	Site Lightning Protection:		
	G4010.70.		
D5080.40	Cathodic Protection	26 42 00	Includes: Equipment and controls for cathodic protection of structures and underground metal construction and piping.
	Cathodic Protection Performance Requirements	01 86 26	
	Passive Cathodic Protection for Underground and Submerged Piping	26 42 13	
	Passive Cathodic Protection for Underground Storage Tanks	26 42 16	
D5080.70	Transient Voltage Suppression	26 43 00	Includes: Devices to protect against voltage surges on electrical distribution systems.

NUMBER	TITLE	MF NUMBER	EXPLANATION
D5080.90	Miscellaneous Electrical Systems Supplementary Components		Includes: Grounding and bonding, hanger and supports, raceways and boxes, cable trays, vibration and seismic controls, identification, wiring connectors, and instrumentation and control to be included in miscellaneous electrical system elements above as appropriate.
	Common Work Results for Electrical	26 05 00	
	Grounding and Bonding	26 05 26	
	Hangers and Supports	26 05 29	
	Raceways and Boxes	26 05 33	
	Cable Trays	26 05 36	
	Vibration and Seismic Controls	26 05 48	
	Identification	26 05 53	
	Wiring Connectors	26 05 83	
	Instrumentation and Control	26 09 00	
<b>D60</b>	<b>COMMUNICATIONS</b>	27 00 00	
	Communications Performance Requirements	01 86 29	
	<i>See Also:</i>		
	<i>Site Communications Systems:</i>		
	<i>G5010.</i>		
<b>D6010</b>	<b>Data Communications</b>	27 20 00	Includes: Communications Supplementary Components as appropriate.
	Data Communication Performance Requirements	01 86 29	
D6010.10	Data Communications Network Equipment	27 21 00	Includes: Switching and routing equipment for data communications.
	Data Communications Firewalls	27 21 13	
	Data Communications Routers, CSU/DSU, Multiplexers, Codecs, and Modems	27 21 16	
	Data Communications Network Management	27 21 26	
	Data Communications Switches and Hubs	27 21 29	
	Data Communications Wireless Access Points	27 21 33	
D6010.20	Data Communications Hardware	27 22 00	Includes: Computer equipment for data communications.
	Data Communications Mainframes	27 22 13	
	Data Communications Storage and Backup	27 22 16	
	Data Communications Servers	27 22 19	
	Data Communications Desktops	27 22 23	
	Data Communications Laptops	27 22 26	
	Data Communications Handhelds	27 22 29	
D6010.30	Data Communications Peripheral Data Equipment	27 24 00	Includes: Additional equipment for data communications.
	Printers	27 24 13	
	Scanners	27 24 16	
	External Devices	27 24 19	
	Audio-Video Devices	27 24 23	
	Virtual Reality Equipment	27 24 26	
	Disaster Recovery Equipment	27 24 29	
D6010.50	Data Communications Software	27 25 00	Includes: Software for data communications.
	Virus Protection Software	27 25 13	
	Application Suites	27 25 16	
	Email Software	27 25 19	
	Graphics/Multimedia Software	27 25 23	
	Customer Relationship Management Software	27 25 26	
	Operating System Software	27 25 29	
	Database Software	27 25 33	

## D SERVICES

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Virtual Private Network Software	27 25 37	
	Internet Conferencing Software	27 25 39	
D6010.60	Data Communication Program and Integration Services	27 26 00	Includes: Custom programming and integration requirements.
	Web Development	27 26 13	
	Database Development	27 26 16	
	Application Development	27 26 19	
	Network Integration Requirements	27 26 23	
	Data Communications Integration Requirements	27 26 26	
<b>D6020</b>	<b>Voice Communications</b>	27 30 00	Includes: Communications Supplementary Components as appropriate.
	Voice Communication Performance Requirements	01 86 29	
D6020.10	Voice Communications Switching and Routing Equipment	27 31 00	Includes: Switching and routing equipment for voice communications.
	PDX/Key Systems	27 31 13	
	Internet Protocol Voice Switches	27 31 23	
D6020.20	Voice Communications Terminal Equipment	27 32 00	Includes: Telephones and other equipment associated with use of telephone lines.
	Telephone Sets	27 32 13	
	Wireless Transceivers	27 32 16	
	Elevator Telephones	27 32 23	
	Ring-Down Emergency Telephones	27 32 26	
	Facsimiles and Modems	27 32 29	
	TTY equipment	27 32 36	
	Radio Communications Equipment	27 32 43	
	See Also:		
	Telephone Specialties: C1090.20.		
D6020.30	Voice Communications Messaging	27 33 00	Includes: Voice mail, fax servers and other automated response systems.
	Voice Mail and Auto Attendant	27 33 16	
	Interactive Voice Response	27 33 23	
	Facsimile Servers	27 33 26	
D6020.40	Call Accounting	27 34 00	Includes: Hardware and software that facilitates call accounting.
	Toll Fraud Equipment and Software	27 34 13	
	Telemanagement Software	27 34 16	
D6020.50	Call Management	27 35 00	Includes: Call center equipment and systems.
	Digital Voice Announcers	27 35 13	
	Automatic Call Distributors	27 35 16	
	Call Status and Management Displays	27 35 19	
	Dedicated 911 Systems	27 35 23	
<b>D6030</b>	<b>Audio-Video Communication</b>	27 40 00	Includes: Communications Supplementary Components as appropriate.
	Audio-Video Communication Performance Requirements	01 86 29	
D6030.10	Audio-Video Systems	27 41 00	Includes: Stand alone and integrated audio-video systems and equipment that generally support a single room or space in a facility with many components that function as one system.
	Architecturally Integrated Audio-Video Equipment	27 41 13	
	Integrated Audio-Video Systems and Equipment	27 41 16	
	Portable Audio-Video Equipment	27 41 19	
	Audio-Video Accessories	27 41 23	
	Master Antenna Television Systems	27 41 33	
	Audio-Video Conferencing	27 41 43	



NUMBER	TITLE	MF NUMBER	EXPLANATION
D6030.50	Electronic Digital Systems	27 42 00	Includes: Hardware, software, and equipment for digital signage systems.
	Point of Sale Systems	27 42 13	
	Transportation Information Display Systems	27 42 16	
	Public Information Systems	27 42 19	
<b>D6060</b>	<b>Distributed Communications and Monitoring</b>	27 50 00	Includes: Communications Supplementary Components as appropriate.
	Distributed Communications and Monitoring Performance Requirements	01 86 29	
D6060.10	Distributed Audio-Video Communications Systems	27 51 00	Includes: Paging, public address, sound masking, and intercommunication systems what service all or part of a facility.
	Paging Systems	27 51 13	
	Public Address and Mass Notification Systems	27 51 16	
	Sound Masking Systems	27 51 19	
	Intercommunications and Program Systems	27 51 23	
	Assistive Listening Systems	27 51 26	
D6060.30	Healthcare Communications and Monitoring	27 52 00	Includes: Communications and monitoring systems for healthcare applications.
	Patient Monitoring and Telemetry Systems	27 52 13	
	Telemedicine Systems	27 52 16	
	Healthcare Imaging Systems	27 52 19	
	Nurse Call/Code Blue Systems	27 52 23	
	See Also:		
	Healthcare Equipment: E1040.20.		
	Healthcare Special Procedures: Z1020.70.		
D6060.50	Distributed Systems	27 53 00	Includes: Clocks, interior antenna systems, and tracking systems.
	Clock Systems	27 53 13	
	Infrared and Radio Frequency Tracking Systems	27 53 16	
	Internal Cellular, Paging, and Antenna Systems	27 53 19	
<b>D6090</b>	<b>Communications Supplementary Components</b>		
D6090.10	Supplementary Components		Includes: Grounding and bonding, pathways, hanger and supports, conduits and back boxes, cable trays, utility poles, vibration and seismic controls, and identification, to be included in communications system elements above as appropriate.
	Communications Metal Supports	05 45 19	
	Common Work Results for Communications	27 05 00	
	Grounding and Bonding	27 05 26	
	Pathways	27 05 28	
	Hangers and Supports	27 05 29	
	Conduits and Back Boxes	27 05 33	
	Cable Trays	27 05 36	
	Utility Poles	27 05 46	
	Vibration and Seismic Controls	27 05 48	
	Identification	27 05 53	

## D SERVICES

NUMBER	TITLE	MF NUMBER	EXPLANATION
<b>D70</b>	<b>ELECTRONIC SAFETY AND SECURITY</b>	28 00 00	
	Electronic Safety and Security Performance Requirements	01 86 33	
	See Also:		
	Exterior Security Windows:		
	B2020.50,		
	Exterior Security Doors: B2050.40.		
	Exterior Security Gates: B2050.70.		
	Interior Security Windows:		
	C1020.50.		
	Interior Security Doors: C1030.70.		
	Interior Security Gates: C1040.50.		
	Security Ceiling Systems:		
	C1070.70.		
	Security Mirrors and Domes:		
	C1090.90.		
	Security Plumbing Fixtures:		
	D2010.60.		
	Security Lighting: D5040.50.		
	Interior Pedestrian Security Equipment: E1010.70.		
	Security Equipment: E1040.60.		
	Exterior Pedestrian Security Equipment: G2030.80.		
	Security Procedures: Z1020.70.		
	Temporary Security Barriers & Enclosures: Z1050.40.		
	Starting and Adjusting: Z1070.40.		
	Demonstration and Training:		
	Z1070.80.		
<b>D7010</b>	<b>Access Control and Intrusion Detection</b>	28 10 00	Includes: Electronic Safety and Security Supplementary Components as appropriate.
	Access Control and Intrusion Detection Performance Requirements	01 86 33	
D7010.10	Access Control	28 13 00	Includes: Control and monitoring equipment and systems for controlling access to a facility.
	Access Control Hardware	08 74 00	
	Access Control Global Applications	28 13 13	
	Access Control Systems and Database Management	28 13 16	
	Access Control Systems Infrastructure	28 13 19	
	Access Control Remote Devices	28 13 26	
	Access Control Interfaces	28 13 33	
	Access Control Identification Management Systems	28 13 43	
	Security Access Detection	28 13 53	
	Access Control Vehicle Identification System	28 13 63	
D7010.50	Intrusion Detection	28 16 00	Includes: Hardware, software, and equipment for burglary systems and perimeter protection systems.
	Intrusion Detection Control, GUI and Logic Systems	28 16 13	
	Intrusion Detection Systems Infrastructure	28 16 16	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Intrusion Detection Remote Devices and Sensors	28 16 19	
	Intrusion Detection Interfaces	28 16 33	
	Perimeter Security Systems	28 16 43	
<b>D7030</b>	<b>Electronic Surveillance</b>	28 20 00	Includes: Equipment for detecting and controlling access by persons to a facility site, building, or within a building. Includes Electronic Safety and Security Supplementary Components as appropriate.
	Electronic Surveillance Performance Requirements	01 86 33	
D7030.10	Video Surveillance	28 23 00	Includes: Closed circuit television equipment and systems including cameras and recording equipment.
	Video Surveillance Control and Management Systems	28 23 13	
	Video Surveillance Monitoring and Supervisory Interfaces	28 23 16	
	Digital Video Recorders and Analog Recording Devices	28 23 19	
	Video Surveillance Systems Infrastructure	28 23 23	
	Video Surveillance Remote Positioning Equipment	28 23 26	
	Video Surveillance Remote Devices and Sensors	28 23 29	
D7030.50	Electronic Personal Protection	28 26 00	Includes: Systems and equipment that monitor and annunciate the need for assistance.
	Electronic Personal Safety Detection Systems	28 26 13	
	Electronic Personal Safety Alarm Annunciation and Control Systems	28 26 16	
	Electronic Personal Safety Interfaces to Remote Monitoring	28 26 19	
	Electronic Personal Safety Emergency Aid Devices	28 26 23	
<b>D7050</b>	<b>Detection and Alarm</b>	28 30 00	Includes: Equipment for detecting hazardous conditions in a building or on a facility site and communicating an alarm signal. Includes alarm devices, detection devices, safety switches, and associated items. Includes Electronic Safety and Security Supplementary Components as appropriate.
	Detection and Alarm Performance Requirements	01 86 33	
	See Also:		
	Fire Protection Systems: D4010.		
	Integrated Automation Systems: D8010.		
D7050.10	Fire Detection and Alarm	28 31 00	Includes: Monitoring and recording of fire protection devices and fire suppression systems; audio and/or visual warning systems for inhabitants of structures and for fire fighting authorities; activation of elevators and air handling systems to a predetermine fire mode; and other fire protection functions.

## D SERVICES

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Fire Detection and Alarm Performance Requirements	01 86 33	
	Digital, Addressable Fire-Alarm Systems	28 31 11	
	Zoned Fire-Alarm Systems	28 31 12	
	Fire Detection and Alarm Control, GUI and Logic Systems	28 31 13	
	Fire Detection and Alarm Annunciation Panels and Fire Stations	28 31 23	
	Fire Detection and Alarm Interfaces	28 31 33	
	Fire Detection Sensors	28 31 43	
	Smoke Detection Sensors	28 31 46	
	Carbon-Monoxide Detection Sensors	28 31 49	
	Fire Alarm Initiating Devices	28 31 53	
	Fire Alarm Integrated Audio Visual Evacuation	28 31 63	
	<i>See Also:</i> <i>Fire Protection Systems: D4010.</i> <i>Integrated Automation Systems: D8010.</i>		
D7050.20	Radiation Detection and Alarm	28 32 00	Includes: Systems and equipment for the detection and notification of radioactive presence.
	Radiation Detection and Alarm Performance Requirements	01 86 33	
	Radiation Detection and Alarm Control, GUI and Logic Systems	28 32 13	
	Radiation Detection and Alarm Integrated Audio Evacuation Systems	28 32 23	
	Radiation Detection Sensors	28 32 33	
	Radiation Dosimeters	28 32 43	
	<i>See Also:</i> <i>Exterior Radiation Shielding Windows: B2020.50.</i> <i>Exterior Radiation Shielding Doors: B2050.40.</i> <i>Interior Radiation Shielding Windows: C1020.50.</i> <i>Interior Radiation Shielding Doors: C1030.70.</i> <i>Radiation Protection: F1030.50.</i>		
D7050.30	Fuel-Gas Detection and Alarm	28 33 00	Includes: Systems and equipment for the detection and notification of fuel gas presence.
	Fuel-Gas Detection and Alarm Performance Requirements	01 86 33	
	Fuel-Gas Detection and Alarm Control, GUI and Logic Systems	28 33 13	
	Fuel-Gas Detection and Alarm Integrated Audio Evacuation Systems	28 33 23	
	Fuel-Gas Detection Sensors	28 33 33	
	<i>See Also:</i> <i>Site Gas Distribution: G3060.10.</i>		
D7050.40	Fuel-Oil Detection and Alarm	28 34 00	Includes: Systems and equipment for the detection and notification of fuel oil presence.
	Fuel-Oil Detection and Alarm Performance Requirements	01 86 33	
	Fuel-Oil Detection and Alarm Control, GUI and Logic Systems	28 34 13	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Fuel-Oil Detection and Alarm Integrated Audio Evacuation Systems	28 34 23	
	Fuel-Oil Detection Sensors	28 34 33	
	See Also:		
	Site Fuel-Oil Distribution: G3060.20.		
D7050.50	Refrigeration Detection and Alarm	28 35 00	Includes: Systems and equipment for the detection and notification of refrigerant presence.
	Refrigeration Detection and Alarm Performance Requirements	01 86 33	
	Refrigeration Detection and Alarm Control, GUI and Logic Systems	28 35 13	
	Refrigeration Detection and Alarm Integrated Audio Evacuation Systems	28 35 23	
	Refrigeration Detection Sensors	28 35 33	
	See Also:		
	Cooling Systems: D3030.		
D7050.60	Water Intrusion Detection and Alarm	28 36 00	Includes: Systems and equipment for the detection and notification of water presence.
	Water Intrusion Detection and Alarm Performance Requirements	01 86 33	
	Water Detection and Alarm Control, GUI and Logic Systems	28 36 13	
	Water Detection Sensors	28 36 33	
<b>D7070</b>	<b>Electronic Monitoring and Control</b>	28 46 00	Includes: Electronic Safety and Security Supplementary Components as appropriate.
	Electronic Monitoring and Control Performance Requirements	01 86 33	
D7070.10	Electronic Detention Monitoring and Control	23 46 00	Includes: Electronic equipment and systems for detention applications.
	Hard-Wired Detention Monitoring and Control Systems	28 46 13	
	Relay-Logic Detention Monitoring and Control Systems	28 46 16	
	PLC Electronic Detention Monitoring and Control Systems	28 46 19	
	Computer-Based Detention Monitoring and Control Systems	28 46 23	
	Discreet-Logic Detention Monitoring and Control Systems	28 46 26	
	Discreet-Distributed Intelligence Detention Monitoring and Control Systems	28 46 29	
	See Also:		
	Exterior Detention Windows: B2020.50.		
	Exterior Detention Doors: B2050.40.		
	Interior Detention Windows: C1020.50.		
	Interior Detention Doors: C1030.70.		
	Detention Equipment: E1040.70.		
	Detention Furniture: E2050.30.		
	Detention Cell Modules: F1010.10.		
	Metal Detention Enclosures: F1010.50.		
	Detention Project Procedures: Z1020.70.		

## D SERVICES

NUMBER	TITLE	MF NUMBER	EXPLANATION
<b>D7090</b>	<b>Electronic Safety and Security Supplementary Components</b>		
D7090.10	Supplementary Components		Includes: Conductors and cables, grounding and bonding, pathways, vibration and seismic controls, and identification, to be included in electronic safety and security system elements above as appropriate.
	Common Work Results for Electronic Safety and Security	28 05 00	
	Conductors and Cables	28 05 13	
	Grounding and Bonding	28 05 26	
	Pathways	28 05 28	
	Vibration and Seismic Controls	28 05 48	
	Identification	28 05 53	
<b>D80</b>	<b>INTEGRATED AUTOMATION</b>	25 00 00	
	Integrated Automation Performance Requirements	01 86 23	
	<i>See Also:</i>		
	<i>Starting and Adjusting: Z1070.40.</i>		
	<i>Demonstration and Training: Z1070.80.</i>		
<b>D8010</b>	<b>Integrated Automation Facility Controls</b>	25 50 00	Includes: Hardware and/or software that allows the building automation system to monitor and control other facility equipment and systems. Includes Integrated Automation Supplementary Components as appropriate.
	Integrated Automation Facility Controls Performance Requirements	01 86 23	
D8010.10	Integrated Automation Control of Equipment	25 51 00	
D8010.20	Integrated Automation Control of Conveying Equipment	25 52 00	
D8010.30	Integrated Automation Control of Fire-Suppression Systems	25 53 00	
D8010.40	Integrated Automation Control of Plumbing Systems	25 54 00	
D8010.50	Integrated Automation Control of HVAC Systems	25 55 00	
D8010.60	Integrated Automation Control of Electrical Systems	25 56 00	
D8010.70	Integrated Automation Control of Communication Systems	25 57 00	
D8010.80	Integrated Automation Control of Electronic Safety and Security Systems	25 58 00	
D8010.90	Integrated Automation Supplementary Components		Includes: Conductors and cables, grounding and bonding, pathways, vibration and seismic controls, and identification, to be included in integrated automation system elements above as appropriate.
	Common Work Results for Integrated Automation	25 05 00	
	Conductors and Cables	25 05 13	
	Grounding and Bonding	25 05 26	
	Pathways	25 05 28	
	Vibration and Seismic Controls	25 05 48	
	Identification	25 05 53	

# E EQUIPMENT AND FURNISHINGS

Equipment and Furnishings Performance  
Requirements 01 87 00

NUMBER	TITLE	MF NUMBER	EXPLANATION
<b>E10</b>	<b>EQUIPMENT</b>	11 00 00	
	Equipment Performance Requirements	01 87 13	
	See Also:		
	Starting and Adjusting: Z1070.40.		
	Demonstration and Training:		
	Z1070.80.		
<b>E1010</b>	<b>Vehicle and Pedestrian Equipment</b>	11 10 00	
E1010.10	Vehicle Servicing Equipment	11 11 00	Includes: Equipment associated with vehicle service facilities.
	Vehicle Lubrication Equipment	11 11 19	
	Tire-Changing Equipment	11 11 23	
	Vehicle Washing Equipment	11 11 26	
	See Also:		
	Vehicle Lifts: D1010.20.		
	Vehicle Turntables: D1030.30.		
E1010.30	Interior Parking Control Equipment	11 12 00	Includes: Equipment associated with the control of movement of vehicle parking.
	Interior Parking Key and Card Control Units	11 12 13	
	Interior Parking Ticket Dispensers	11 12 16	
	Interior Parking Meters	11 12 23	
	Interior Parking Fee Collection Equipment	11 12 26	
	Interior Parking Gates	11 12 33	
	See Also:		
	Exterior Parking Control Equipment:		
	G2020.80.		
E1010.50	Loading Dock Equipment	11 13 00	Includes: Equipment for the protection of service docks and for the loading and unloading of service vehicles.
	Loading Dock Bumpers	11 13 13	
	Loading Dock Seals and Shelters	11 13 16	
	Loading Dock Levelers	11 13 19.13	
	Loading Dock Lifts	11 13 19.23	
	Loading Dock Lights	11 13 26	
	See Also:		
	Vehicle Lifts: D1010.20.		
E1010.70	Interior Pedestrian Control Equipment	11 14 00	Includes: Equipment associated with the control of movement of pedestrians.
	Interior Pedestrian Gates	11 14 13	
	Interior Money-Changing Equipment	11 14 16	
	Interior Pedestrian Fare Collection Equipment	11 14 26	
	Interior Pedestrian Detection Equipment	11 14 43	
	Interior Pedestrian Security Equipment	11 14 53	
	See Also:		
	Interior Security Windows:		
	C1020.50.		
	Interior Security Doors: C1030.70.		
	Interior Security Gates: C1040.50.		
	Security Mirrors and Domes:		
	C1090.90.		

## E EQUIPMENT AND FURNISHINGS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	<i>Electronic Safety and Security: D70.</i>		
	<i>Security Equipment: E1040.60.</i>		
	<i>Exterior Pedestrian Security Equipment: G2030.80.</i>		
	<i>Security Procedures: Z1020.70.</i>		
	<i>Temporary Security Barriers &amp; Enclosures: Z1050.40.</i>		
<b>E1030</b>	<b>Commercial Equipment</b>	11 20 00	
E1030.10	Mercantile and Service Equipment	11 21 00	Includes: Equipment used in retail and service stores.
	Cash Registers and Checking Equipment	11 21 13	
	Vending Equipment	11 21 23	
	Checkroom Equipment	11 21 33	
	Weighing and Wrapping Equipment	11 21 43	
	Barber and Beauty Shop Equipment	11 21 53	
E1030.20	Vault Equipment	11 16 00	Includes: Equipment specifically designed for money or valuable material storage, including vault ventilators and specialized security equipment.
	Safe Deposit Boxes	11 16 13	
	Safes	11 16 16	
	Vault Ventilators	11 16 23	
	<i>See Also:</i>		
	<i>Interior Vault Doors: C1030.70.</i>		
	<i>Vaults: F1010.50.</i>		
E1030.25	Teller and Service Equipment	11 17 00	Includes: Equipment specifically designed for handling and transfer of money and other high-security items.
	Teller Equipment Systems	11 17 13	
	Automatic Banking Systems	11 17 16	
	Money Handling Equipment	11 17 23	
	Money Cart Pass-Through	11 17 33	
	Package Transfer Units	11 17 36	
E1030.30	Refrigerated Display Equipment	11 22 00	Includes: Display cases that include refrigeration.
	<i>See Also:</i>		
	<i>Display Cases: C1090.20.</i>		
	<i>Display Turntables: D1030.30.</i>		
	<i>Display Lighting: D5040.50.</i>		
E1030.35	Commercial Laundry and Dry Cleaning Equipment	11 23 00	Includes: Equipment for commercial laundry and dry cleaning operations including coin-operated equipment.
	Dry Cleaning Equipment	11 23 13	
	Drying and Conditioning Equipment	11 23 16	
	Finishing Equipment	11 23 19	
	Commercial Ironing Equipment	11 23 23	
	Commercial Washers and Extractors	11 23 26	
	Coin-Operated Laundry Equipment	11 23 33	
	Hanging Garment Conveyors	11 23 43	
	<i>See Also:</i>		
	<i>Residential Laundry Appliances: E1060.10.</i>		
E1030.40	Maintenance Equipment	11 24 00	Includes: Built-in and free-standing equipment for building maintenance.
	Floor and Wall Cleaning Equipment	11 24 13	
	Housekeeping Carts	11 24 16	
	Vacuum Cleaning Systems	11 24 19	



## E EQUIPMENT AND FURNISHINGS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Window Washing Systems <i>See Also:</i> <i>Operable Access Systems: D1080.</i>	11 24 23.13	
E1030.50	Hospitality Equipment	11 25 00	Includes: Specialized equipment for the purpose of registering, admitting, and controlling rooms and other information at hotels, motels, hospitals, and other similar facilities.
	Registration Equipment <i>See Also:</i> <i>Hospitality Turntables: D1030.30.</i> <i>Hospitality Casework: E2010.30.</i> <i>Hospitality Furniture: E2050.30.</i>	11 25 13	
E1030.55	Unit Kitchens	11 26 00	Includes: Manufactured units incorporating plumbing fixtures, appliances, casework and countertops.
	<i>See Also:</i> <i>Residential Appliances: E1060.10.</i> <i>Residential Casework: E2010.30.</i>		
E1030.60	Photographic Processing Equipment	11 27 00	Includes: Photographic film processing equipment and other products for darkroom use.
	Darkroom Processing Equipment	11 27 13	
	Film Transfer Cabinets <i>See Also:</i> <i>Darkroom Doors: C1030.70</i> <i>Laboratory Casework: E2010.30.</i>	11 27 16	
E1030.70	Postal, Packaging, and Shipping Equipment	11 29 00	Includes: Equipment for normal mailing, packaging, shipping, and delivery operations for professional, commercial, and institutional applications.
	Packaging Equipment	11 29 23	
	Shipping Equipment	11 29 33	
	Postal Equipment	11 29 55	
	Copiers <i>See Also:</i> <i>Postal Specialties: C1070.90.</i>	11 28 23	
E1030.75	Office Equipment	11 28 00	Includes: Computers, printers, copiers, drafting equipment, plotters, carto-stereographs, and other equipment used in offices.
	Computers	11 28 13	
	Printers	11 28 16	
	Facsimile Machines	11 28 19	
	Copiers <i>See Also:</i> <i>Pneumatic Tube Systems: D1050.70.</i> <i>Office Furniture: E2050.30.</i> <i>Office Shelters and Booths: F1010.50.</i>	11 28 23	
E1030.80	Foodservice Equipment	11 40 00	Includes: Equipment used for liquid and solid food storage, preparation, display, serving, and clean-up in commercial and institutional kitchens and bars.

## E EQUIPMENT AND FURNISHINGS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Food Storage Equipment	11 41 00	
	Refrigerated Food Storage Cases	11 41 13	
	Walk-In Coolers	11 41 23	
	Walk-In Freezers	11 41 26	
	Food Service Shelving	11 41 33	
	Food Preparation Equipment	11 42 00	
	Food Delivery Carts and Conveyors	11 43 00	
	Food Delivery Carts	11 43 13	
	Food Delivery Conveyors	11 43 16	
	Food Cooking Equipment	11 44 00	
	Commercial Ranges	11 44 13	
	Commercial Ovens	11 44 16	
	Food Dispensing Equipment	11 46 00	
	Bar Equipment	11 46 13	
	Service Line Equipment	11 46 16	
	Soda Fountain Equipment	11 46 19	
	Ice Machines	11 47 00	
	Cleaning and Disposal Equipment	11 48 00	
	Commercial Dishwashers	11 48 13	
	<i>See Also:</i>		
	<i>Ventilation Hoods: D3060.30.</i>		
	<i>Disposers: D2010.60.</i>		
<b>E1040</b>	<b>Institutional Equipment</b>	11 50 00	
E1040.10	Educational and Scientific Equipment	11 50 00	Includes: Equipment associated with libraries, education facilities, laboratories, planetariums, observatories, and museums.
	Library Equipment	11 51 00	
	Automatic Book Storage and Retrieval Systems	11 51 13	
	Book Depositories	11 51 16	
	Book Theft Protection Equipment	11 51 19	
	Library Stack Systems	11 51 23	
	<i>See Also:</i>		
	<i>Library Casework: E2010.30.</i>		
	<i>Library Furniture: E2050.30.</i>		
	Audio-Visual Equipment	11 52 00	
	Projection Screens	11 52 13	
	Projectors	11 52 16	
	Players and Recorders	11 52 19	
	Laboratory Equipment	11 53 00	
	Laboratory Fume Hoods	11 53 13	
	Laboratory Incubators	11 53 16	
	Laboratory Sterilizers	11 53 19	
	Laboratory Refrigerators	11 53 23	
	Emergency Safety Appliances	11 53 33	
	Service Fittings and Accessories	11 53 43	
	Biological Safety Cabinets	11 53 53	
	<i>See Also:</i>		
	<i>Process Support Plumbing Systems: D2060.</i>		
	<i>Special Exhaust: D3060.30.</i>		
	<i>Laboratory Casework: E2010.30.</i>		
	<i>Laboratory Furniture: E2050.30.</i>		
	Planetarium Equipment	11 55 00	
	Planetarium Projectors	11 55 13	

## E EQUIPMENT AND FURNISHINGS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Planetarium Pendulums	11 55 16	
	<i>See Also:</i>		
	<i>Planetariums: F1010.50.</i>		
	Observatory Equipment	11 56 00	
	Telescopes	11 56 13	
	<i>See Also:</i>		
	<i>Observatories: F1020.40.</i>		
	Vocational Shop Equipment	11 57 00	
	Exhibit Equipment	11 59 00	
	<i>See Also:</i>		
	<i>Exhibit Turntables: D1030.30.</i>		
	Arts and Crafts Equipment	11 95 00	
	Kilns	11 95 13	
E1040.20	Healthcare Equipment	11 70 00	Includes: Specialized equipment for healthcare facilities for humans and animals. Includes film illuminators, fluoroscopes, hubbard tubs, radioisotopic equipment, and surgical equipment.
	Healthcare Metal Supports	05 45 23	
	Medical Sterilizing Equipment	11 71 00	
	Examination and Treatment Equipment	11 72 00	
	Patient Care Equipment	11 73 00	
	Dental Equipment	11 74 00	
	Optometry Equipment	11 75 00	
	Operating Room Equipment	11 76 00	
	Radiology Equipment	11 77 00	
	Mortuary Equipment	11 78 00	
	Mortuary Refrigerators	11 78 13	
	Crematorium Equipment	11 78 16	
	Mortuary Lifts	11 78 19	
	Therapy Equipment	11 79 00	
	<i>See Also:</i>		
	<i>Healthcare Plumbing Fixtures:</i>		
	<i>D2010.60.</i>		
	<i>Process Support Plumbing Systems:</i>		
	<i>D2060.</i>		
	<i>Healthcare Lighting: D5040.50.</i>		
	<i>Healthcare Communications &amp;</i>		
	<i>Monitoring: D6060.30.</i>		
	<i>Healthcare Casework: E2010.30.</i>		
	<i>Healthcare Furniture: E2050.30.</i>		
	<i>Healthcare Special Procedures:</i>		
	<i>Z1020.70.</i>		
E1040.40	Religious Equipment	11 91 00	Includes: Built-in and free-standing religious equipment, including baptistery and chancel fittings.
	Baptisteries	11 91 13	
	<i>See Also:</i>		
	<i>Musical Equipment: E1070.20.</i>		
	<i>Fixed Religious Art: E2010.10.</i>		
	<i>Religious Casework: E2010.30.</i>		
	<i>Fixed Pews: E2010.70.</i>		
	<i>Movable Religious Art: E2050.10.</i>		
E1040.60	Security Equipment	11 18 00	Includes: Equipment specifically designed for secure operations.
	Security Equipment Performance Requirements		
	Deal Drawers	11 18 13	
	Gun Ports	11 18 16	

## E EQUIPMENT AND FURNISHINGS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Valuable Material Storage	11 18 23	
	See Also:		
	Exterior Security Windows:		
	B2020.50.		
	Exterior Security Doors: B2050.40.		
	Exterior Security Gates: B2050.70.		
	Interior Security Windows:		
	C1020.50.		
	Interior Security Doors: C1030.70.		
	Interior Security Gates: C1040.50.		
	Security Ceiling Systems:		
	C1070.70.		
	Security Mirrors and Domes:		
	C1090.90.		
	Security Plumbing Fixtures:		
	D2010.60.		
	Security Lighting: D5040.50.		
	Electronic Safety and Security: D70.		
	Interior Pedestrian Security		
	Equipment: E1010.70.		
	Exterior Pedestrian Security		
	Equipment: G2030.80.		
	Security Procedures: Z1020.70.		
	Temporary Security Barriers &		
	Enclosures: Z1050.40.		
E1040.70	Detention Equipment	11 19 00	Includes: Equipment specifically designed for detention facilities.
	Detention Equipment Performance	01 87 13	
	Requirements		
	Levels of Security	01 87 13	
	Detention Pass-Through Doors	11 19 13	
	Detention Gun Lockers	11 19 16	
	See Also:		
	Exterior Detention Windows:		
	B2020.50.		
	Exterior Detention Doors:		
	B2050.40.		
	Interior Detention Windows:		
	C1020.50.		
	Interior Detention Doors: C1030.70.		
	Detention Lighting: D5040.50.		
	Detention Monitoring and Control:		
	D7070.		
	Detention Furniture: E2050.30.		
	Detention Cell Modules: F1010.10.		
	Metal Detention Enclosures:		
	F1010.50.		
	Detention Project Procedures:		
	Z1020.70.		
E1060	Residential Equipment	11 30 00	Includes: Built-in and free-standing appliances and other components specifically for residential use.
	See Also:		
	Fireplaces and Stoves: C1090.50.		
	Residential Furniture: E2050.30.		

NUMBER	TITLE	MF NUMBER	EXPLANATION
E1060.10	Residential Appliances	11 31 00	
	Residential Kitchen Appliances	11 31 13	
	Residential Laundry Appliances	11 31 23	
	See Also:		
	Unit Kitchens: E1030.55.		
	Residential Casework: E2010.30.		
E1060.50	Retractable Stairs	11 33 00	
E1060.70	Residential Ceiling Fans	11 34 00	
<b>E1070</b>	<b>Entertainment and Recreational Equipment</b>		Includes: Equipment for use in athletic, recreational, and therapeutic activities.
E1070.10	Theater and Stage Equipment	11 61 00	Includes: Equipment for support of theatrical, instrumental, and voice programs. Includes cycloramas, entertainment ticket dispensers, scenery and flats, and tormentors.
	Acoustical Shells	11 61 13	
	Folding and Portable Stages	11 61 23	
	Rigging Systems and Controls	11 61 33	
	Stage Curtains	11 61 43	
	See Also:		
	Platform/Stage Floors: C1060.30.		
	Stage and Orchestra Lifts:		
	D1010.20.		
	Stage Turntables: D1030.30.		
	Theatrical Lighting Control:		
	D5040.10.		
	Voice Communication Systems:		
	D6020.		
	Fixed Multiple Seating: E2010.70.		
E1070.20	Musical Equipment	11 62 00	Includes: Musical instruments, including prefabricated and field assembled instruments.
	Bells	11 62 13	
	Carillons	11 62 16	
	Organs	11 62 19	
E1070.50	Athletic Equipment	11 66 00	Includes: Equipment for use in interior athletic and exercise activities.
	Exercise Equipment	11 66 13	
	Gymnasium Equipment	11 66 23	
	Interior Scoreboards	11 66 43	
	Gymnasium Dividers	11 66 53	
	See Also:		
	Interior Operable Partitions:		
	C1010.50.		
	Athletic Flooring: C2030.80.		
	Gymnasium Dividers: E1070.50.		
	Athletic Rooms: F1010.50.		
	Athletic & Recreational Special Construction: F1060.		
	Athletic Areas: G2050.10.		
E1070.60	Recreational Equipment	11 67 00	Includes: Equipment for use in recreational activities. Includes curling rinks and pistol and rifle range equipment.
	Bowling Alley Equipment	11 67 13	
	Shooting Range Equipment	11 67 23	
	Climbing Walls	11 67 33	
	Table Games Equipment	11 67 43	

## E EQUIPMENT AND FURNISHINGS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Game Room Equipment	11 67 53	
	See Also:		
	Swimming Pools: F1050.10.		
	Athletic & Recreational Special Construction: F1060.		
	Recreational Areas: G2050.30.		
<b>E1090</b>	<b>Other Equipment</b>	11 90 00	
E1090.10	Solid Waste Handling Equipment	11 82 00	Includes: Equipment involving the collection, shredding, compaction, removal and incineration of trash and other solid waste.
	Solid Waste Handling Equipment Performance Requirements	01 87 13	
	Solid Waste Bins	11 82 13	
	Incinerators	11 82 19	
	Recycling Equipment	11 82 23	
	Waste Compactors and Destructors	11 82 26	
	Composting Equipment	11 82 29	
	Facility Waste Shredders	11 82 33	
	Facility Waste Balers	11 82 36	
	See Also:		
	Trash Chutes: D1050.60.		
E1090.30	Agricultural Equipment	11 92 00	Includes: Equipment related to land cultivating, raising crops, and feeding, breeding, and raising of livestock.
	Milkers	11 92 13	
	Stock Feeders	11 92 16	
	Stock Waterers	11 92 19	
	Agricultural Waste Clean-Up Equipment	11 92 23	
	See Also:		
	Kennels and Animal Shelters: F1050.70.		
E1090.40	Horticultural Equipment	11 93 00	Includes: Equipment related to cultivating flowers, fruits, vegetables, or ornamental plants.
	Hydroponic Growing Systems	11 93 13	
	Seeders	11 93 16	
	Transplanters	11 93 19	
	Potting Machines	11 93 23	
	Flat Fillers	11 93 26	
	Baggers	11 93 29	
	Soil Mixers	11 93 33	
	Agricultural Irrigation	32 86 00	
	See Also:		
	Planting Irrigation: G2080.10.		
E1090.60	Decontamination Equipment		Includes: Equipment associated with decontamination operations.
	See Also:		
	Hazardous Materials Remediation: F2010.		
	Site Remediation: G1050.		
<b>E20</b>	<b>FURNISHINGS</b>	12 00 00	
	Furnishings Performance Requirements	01 87 16	
<b>E2010</b>	<b>Fixed Furnishings</b>		
E2010.10	Fixed Art	12 10 00	Includes: Interior and exterior fixed art objects.
	Murals	12 11 00	
	Fixed Wall Decorations	12 12 00	
	Paintings	12 12 00	
	Tapestries	12 12 23	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Wall Hangings	12 12 26	
	Fixed Sculptures	12 14 00	
	Art Glass	12 17 00	
	Fixed Religious Art	12 19 00	
	See Also:		
	Religious Equipment: E1040.40.		
	Religious Casework: E2010.30.		
	Fixed Pews: E2010.70.		
	Movable Religious Art: E2050.10.		
	Suspended Decorative Elements		
	See Also:		
	Moveable Art: E2050.10.		
E2010.20	Window Treatments	12 20 00	Includes: Interior window coverings and associated hardware and controls.
	Window Blinds	12 21 00	
	Curtains and Drapes	12 22 00	
	Interior Shutters	12 23 00	
	Window Shades	12 24 00	
	Window Treatment Operating Hardware	12 25 00	
	See Also:		
	Windows with Integral Blinds: B2020.		
	Exterior Protection Devices for Openings: B2080.30.		
E2010.30	Casework	12 30 00	Includes: Custom and manufactured stock design steel, wood, and laminate faced cabinets and other casework units. Includes countertops with integral sinks, fixtures and accessories.
	Specialty Casework	12 35 00	
	Bank Casework	12 35 17	
	Hospitality Casework	12 35 25	
	See Also:		
	Hospitality Turntables: D1030.30.		
	Hospitality Equipment: E1030.50.		
	Hospitality Furniture: E2050.30.		
	Residential Casework	12 35 30	
	See Also:		
	Unit Kitchens: E1030.55.		
	Residential Appliances: E1060.10.		
	Utility Room Casework	12 35 33	
	Educational/Library Casework	12 35 50	
	See Also:		
	Library Equipment: E1040.10.		
	Library Furniture: E2050.30.		
	Laboratory Casework	12 35 53	
	See Also:		
	Process Support Plumbing Systems: D2060.		
	Laboratory Equipment: E1040.10.		
	Laboratory Furniture: E2050.30.		
	Display Casework	12 35 59	

## E EQUIPMENT AND FURNISHINGS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Healthcare Casework See Also: Healthcare Plumbing Fixtures: D2010.60. Process Support Plumbing Systems: D2060. Healthcare Communications & Monitoring: D6060.30. Healthcare Equipment: E1040.20. Healthcare Furniture: E2050.30. Healthcare Special Procedures: Z1020.70.	12 35 70	
	Religious Casework See Also: Religious Equipment: E1040.40. Fixed Religious Art: E2010.10. Fixed Pews: E2010.70. Movable Religious Art: E2050.10.	12 35 91	
	Reception Casework Countertops See Also: Lockers: C1090.70. Storage Specialties: C1090.70. Mercantile and Service Equipment: E1030.10.	12 36 00	
E2010.70	Fixed Multiple Seating	12 60 00	Includes: Fixed, and telescoping seating for theaters, auditoriums, lecture halls, stadiums, arenas, gymnasiums, religious buildings, restaurants, and other facilities where multiple seating is required.
	Fixed Waiting Area Seating		
	Fixed Audience Seating	12 61 00	
	Stadium and Arena Seating	12 63 00	
	Bleachers	13 34 16.53	
	Fixed Booths and Tables	12 64 00	
	Multiple-Use Fixed Seating	12 65 00	
	Telescoping Stands	12 66 00	
	Fixed Pews and Benches	12 67 00	
	Fixed Seat and Table Assemblies	12 68 00	
	Lecture Hall Seating See Also: Moveable Multiple Seating: E2050.60. Exterior Grandstands and Bleachers: F1020.40.		
E2010.90	Other Fixed Furnishings	12 90 00	
	Fixed Interior Planters and Artificial Plants	12 92 00	Includes: Fixed artificial plants, planters, and accessories.
	Fixed Interior Artificial Plants	12 92 13	
	Fixed Interior Planters	12 92 33	
	Interior Landscaping Accessories See Also: Movable Interior Planters and Artificial Plant: E2050.90.	12 92 43	



## E EQUIPMENT AND FURNISHINGS

NUMBER	TITLE	MF NUMBER	EXPLANATION
<b>E2050</b>	<b>Movable Furnishings</b>		Includes: Items of moveable furniture and furnishing accessories. Includes furniture for a variety of uses including classroom, dormitory, ecclesiastical, hotel and motel, laboratory, library, lounge, medical, office, restaurant, and residential.
	<i>See Also:</i> <i>Interior Demountable Partitions:</i> <i>C1010.</i> <i>Storage Assemblies: C1090.</i> <i>Library Casework: E2010.30.</i>		
E2050.10	Movable Art	12 10 00	Includes: Interior and exterior moveable art objects such as paintings, and sculpture.
	<i>See Also:</i> <i>Fixed Art: E2010.10.</i>		
	Movable Sculptures	12 14 00	
	Movable Religious Art	12 19 00	
	<i>See Also:</i> <i>Religious Equipment: E1040.40.</i> <i>Musical Equipment: E1070.20.</i> <i>Fixed Religious Art: E2010.10.</i> <i>Religious Casework: E2010.30.</i> <i>Fixed Pews: E2010.70.</i>		
E2050.30	Furniture	12 50 00	Includes: Movable interior furniture.
	Office Furniture	12 51 00	
	<i>See Also:</i> <i>Office Equipment: E1030.75.</i> <i>Office Shelters and Booths:</i> <i>F1010.50.</i>		
	Seating	12 52 00	
	Office Seating	12 52 23	
	Healthcare Seating	12 52 70	
	Retail Furniture	12 53 00	
	Hospitality Furniture	12 54 00	
	Hotel and Motel Furniture	12 54 13	
	Restaurant Furniture	12 54 16	
	<i>See Also:</i> <i>Hospitality Turntables: D1030.30.</i> <i>Hospitality Equipment: E1030.50.</i> <i>Hospitality Casework: E2010.30.</i>		
	Educational Furniture		
	Detention Furniture	12 55 00	
	<i>See Also:</i> <i>Detention Monitoring and Control:</i> <i>D7070.</i> <i>Detention Equipment: E1040.70.</i> <i>Detention Cell Modules: F1010.10.</i> <i>Metal Detention Enclosures:</i> <i>F1010.50.</i> <i>Detention Project Procedures:</i> <i>Z1020.70.</i>		
	Institutional Furniture	12 56 00	
	Classroom Furniture	12 56 33	
	Lecterns	12 56 39	
	Dormitory Furniture	12 56 43	
	Library Furniture	12 56 51	
	<i>See Also:</i> <i>Library Equipment: E1040.10.</i> <i>Library Casework: E2010.30.</i>		

## E EQUIPMENT AND FURNISHINGS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Audio-Visual Furniture	12 56 52	
	Laboratory Furniture	12 56 53	
	See Also:		
	Process Support Plumbing Systems:		
	D2060.		
	Laboratory Equipment: E1040.10.		
	Laboratory Casework: E2010.30.		
	Healthcare Furniture	12 56 70	
	See Also:		
	Healthcare Communications &		
	Monitoring: D6060.30.		
	Healthcare Equipment: E1040.20.		
	Healthcare Casework: E2010.30.		
	Healthcare Special Procedures:		
	Z1020.70.		
	Industrial Furniture	12 57 00	
	Welding Benches	12 57 13	
	Welding Screens	12 57 16	
	Residential Furniture	12 58 00	
	See Also:		
	Residential Casework: E2010.30.		
	Systems Furniture	12 59 00	
E2050.40	Accessories	12 40 00	Includes: Interior furnishing accessories not attached to permanent construction.
	Office Accessories	12 41 00	
	Table Accessories	12 42 00	
	Portable Lamps	12 43 00	
	Bath Furnishings	12 44 00	
	Shower Curtains	12 44 16	
	Bedroom Furnishings	12 45 00	
	Furnishing Accessories	12 46 00	
	Moveable Rugs and Mats	12 48 00	
	See Also:		
	Carpeting: C2030.75.		
	Entrance Flooring: C2030.85.		
E2050.60	Movable Multiple Seating	12 60 00	Includes: Portable seating for auditoriums, lecture halls, stadiums, arenas, gymnasiums, religious buildings, restaurants, and other facilities where multiple seating is required.
	Portable Audience Seating	12 62 00	
	Portable Multiple-Use Seating	12 65 00	
	Portable Pews and Benches	12 67 00	
	Portable Seat and Table Assemblies	12 68 00	
	Portable Waiting Area Seating		
	See Also:		
	Fixed Multiple Seating: E2010.70.		
	Exterior Grandstands and		
	Bleachers: F1020.40.		
E2050.90	Other Movable Furnishings	12 90 00	
	Movable Interior Planters and		
	Artificial Plants	12 92 00	Includes: Moveable artificial plants, and planters.
	Movable Interior Artificial Plants	12 92 13	
	Movable Interior Planters	12 92 33	
	Interior Landscaping Accessories	12 92 43	
	See Also:		
	Fixed Interior Planters and Artificial		
	Plants: E2010.90.		

# F SPECIAL CONSTRUCTION AND DEMOLITION

NUMBER	TITLE	MF NUMBER	EXPLANATION
<b>F10</b>	<b>SPECIAL CONSTRUCTION</b>		
	Special Construction Performance Requirements	01 88 13	
<b>F1010</b>	<b>Integrated Construction</b>		
F1010.10	Building Modules	13 42 00	Includes: Fabricated and pre-engineered modules for site assembly by stacking or linking.
	Building Modules Performance Requirements	01 88 13	
	Load Capacity	01 88 13	
	Wind Load Capacity	01 88 13	
	Fire Rating	01 88 13	
	Thermal Resistance	01 88 13	
	Vapor Transmission Resistance	01 88 13	
	Air Infiltration Resistance	01 88 13	
	Sound Transmission	01 88 13	
	Hospital Unit Modules	13 42 25	
	Dwelling Unit Modules	13 42 33	
	Dormitory Unit Modules	13 42 43	
	Detention Cell Modules	13 42 63	
	See Also:		
	Exterior Detention Windows:		
	B2020.50.		
	Exterior Detention Doors:		
	B2050.40.		
	Interior Detention Windows:		
	C1020.50.		
	Interior Detention Doors: C1030.70.		
	Detention Lighting: D5040.50.		
	Detention Monitoring and Control:		
	D7070.		
	Detention Equipment: E1040.70.		
	Detention Furniture: E2050.30.		
	Metal Detention Enclosures:		
	F1010.50.		
	Detention Project Procedures:		
	Z1020.70.		
F1010.50	Manufactured/Fabricated Rooms	13 20 00	Includes: Prefabricated and pre-engineered rooms designed and constructed to meet critical performance requirements of environmental control, dimensional tolerances, sound control, fire protection, and other special conditions.
	Manufactured/Fabricated Rooms Performance Requirements	01 88 13	
	Fire Rating	01 88 13	
	Thermal Resistance	01 88 13	
	Vapor Transmission Resistance	01 88 13	

## F SPECIAL CONSTRUCTION AND DEMOLITION

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Sound Transmission	01 88 13	
	See Also:		
	Interior Special Function Windows:		
	C1020.50.		
	Interior Special Function Doors:		
	C1030.70.		
	Special Facility Components:		
	F1050.		
	Controlled Environment Rooms	13 21 00	
	Clean Rooms	13 21 13	
	See Also:		
	Clean Room Special Procedures:		
	Z1020.70.		
	Hyperbaric Rooms	13 21 16	
	Insulated Rooms	13 21 23	
	Cold Storage Rooms	13 21 26	
	See Also:		
	Cold Storage Doors: C1030.70.		
	Constant Temperature Rooms	13 21 29	
	Sound-Conditioned Rooms	13 21 48	
	Office Shelters and Booths	13 22 00	Includes: Interior shelters and booths.
	See Also:		
	Office Equipment: E1030.75.		
	Office Furniture: E2050.30.		
	Covers and Shelters: G2060.		
	Planetariums	13 23 00	
	See Also:		
	Planetarium Equipment: E1040.10.		
	Special Activity Rooms	13 24 00	
	Saunas	13 24 16	
	Steam Baths	13 24 26	
	Athletic Rooms	13 24 66	
	See Also:		
	Athletic Flooring: C2030.80.		
	Athletic Equipment: E1070.50.		
	Athletic & Recreational Special Construction: F1060.		
	Athletic Areas: G2050.10.		
	Vaults	13 27 00	
	See Also:		
	Interior Vault Doors: C1030.70.		
	Vault Equipment: E1030.20.		
	Vaults: F1010.50.		
	Metal Detention Enclosures	05 59 63	
F1010.70	Modular Mezzanines	13 44 00	Includes: Prefabricated and pre-engineered mezzanine modules complete with structural support, flooring, railings, stairs, and other accessories.
	Modular Mezzanines Performance Requirements	01 88 13	
	Load Capacity	01 88 13	
	Deflection	01 88 13	
	Vibration	01 88 13	
	Levelness	01 88 13	
	See Also:		
	Mezzanine Construction: B1010.40.		

## F SPECIAL CONSTRUCTION AND DEMOLITION

NUMBER	TITLE	MF NUMBER	EXPLANATION
<b>F1020</b>	<b>Special Structures</b>	13 30 00	
	Special Structures Performance Requirements	01 88 13	
	See Also:		
	Superstructure: B10.		
F1020.10	Fabric Structures	13 31 00	Includes: Structures of flexible membrane material support by air pressure, tensioned cables, or other framing system.
	Fabric Structures Performance Requirements	01 88 13	
	Load Capacity	01 88 13	
	Air-Supported Fabric Structures	13 31 13	
	Tensioned Fabric Structures	13 31 23	
	Framed Fabric Structures	13 31 33	
F1020.20	Space Frames	13 32 00	Includes: Three-dimensional structural frame of any material capable of transmitting loads in three dimensions.
	Space Frames Performance Requirements	01 88 13	
	Load Capacity		
F1020.30	Geodesic Structures	13 33 00	Includes: Dome shaped structure constructed of straight members of any material that form a triangular gridwork.
	Geodesic Structures Performance Requirements	01 88 13	
	Geodesic Domes	13 33 13	
F1020.40	Manufacturer-Engineered Structures	13 34 00	Includes: Prefabricated, pre-engineered buildings and structures assembled on temporary and permanent foundations.
	Manufactured-Engineered Structures	01 88 13	
	Performance Requirements		
	Load Capacity	01 88 13	
	Wind Load Capacity	01 88 13	
	Fire Rating	01 88 13	
	Thermal Resistance	01 88 13	
	Vapor Transmission Resistance	01 88 13	
	Air Infiltration Resistance	01 88 13	
	Sound Transmission	01 88 13	
	Glazed Structures	13 34 13	
	Exterior Grandstands and Bleachers	13 34 16	
	Metal Building Systems	13 34 19	
	Observatories	13 34 56	
	See Also:		
	Planetarium Equipment: E1040.10.		
	Telescoping Stands: E2010.70.		
	Special Facility Components:		
	F1050.		
	Covers and Shelters: G2060.		
F1020.60	Manufactured Canopies	10 73 16	Includes: Fabricated and pre-engineered canopies.
	Manufactured Canopy Performance	01 88 13	
	Requirements		
	Load Capacity	01 88 13	
	Wind Load Capacity	01 88 13	
	See Also:		
	Canopy Frame: B1020.30.		
	Canopy Roofing: B3010.70.		
	Exterior Ceilings and Soffits: B3080.		
F1020.65	Rammed Earth Construction	13 35 00	
	Rammed Earth Walls	13 35 13	

## F SPECIAL CONSTRUCTION AND DEMOLITION

NUMBER	TITLE	MF NUMBER	EXPLANATION
F1020.70	Towers	13 36 00	Includes: Fabricated and pre-engineered structures of a vertical nature for a variety of purposes.
	Towers Performance Requirements	01 88 13	
	Wind Load Capacity	01 88 13	
	Functional Towers		
	Decorative Towers		
	See Also:		
	Electrical Utility Towers: G4010.20.		
	Towers Grounding: G4010.70.		
	Communications Towers:		
	G5010.10.		
<b>F1030</b>	<b>Special Function Construction</b>		
F1030.10	Sound and Vibration Control	13 48 00	Includes: Manufactured components for the reduction of undesirable sound and vibration within a structure.
	Sound and Vibration Control Performance Requirements	01 88 13	
	Sound Transmission	01 88 13	
	Vibration	01 88 13	
	See Also:		
	Acoustical Wall Treatment: C2010.		
	Acoustical Ceiling Treatment: C2050.		
	Plumbing Vibration, and Seismic Control: D20.		
	HVAC Sound, Vibration, and Seismic Control: D30.		
	Fire Protection Sound, Vibration, and Seismic Control: D40.		
F1030.30	Seismic Control	13 48 00	Includes: Manufactured components for the control of seismic loads on a structure.
	Seismic Control Performance Requirements	01 88 13	
	Seismic Zone	01 88 13	
	See Also:		
	Plumbing Sound, Vibration, and Seismic Control: D20.		
	HVAC Sound, Vibration, and Seismic Control: D30.		
	Fire Protection Sound, Vibration, and Seismic Control: D40.		
F1030.50	Radiation Protection	13 49 00	Includes: Radiation shielding components and structures for protection against radio frequency, x-ray, nuclear radiation, electromagnetic fields, and high energy magnetic pulse projection.
	Radiation Protection Performance Requirements	01 88 13	
	Radiation Levels	01 88 13	
	Radio Frequency Protection	01 88 13	
	X-Ray Protection	01 88 13	
	Nuclear Radiation Protection	01 88 13	
	Electromagnetic Field Protection	01 88 13	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	High Energy Magnetic Pulse Protection	01 88 13	
	See Also:		
	Exterior Radiation Shielding		
	Windows: B2020.50.		
	Exterior Radiation Shielding Doors:		
	B2050.40.		
	Interior Radiation Shielding		
	Windows: C1020.50.		
	Interior Radiation Shielding Doors:		
	C1030.70.		
	Radiation Detection and Alarm:		
	D7050.20.		
<b>F1050</b>	<b>Special Facility Components</b>		
F1050.10	Pools		Includes: Prefabricated and pre-engineered components, field assembled for aquatic sport, recreation, and health purposes.
	Pools Performance Requirements	01 88 13	
	Swimming Pools	13 11 00	
	Tubs and Pools	13 17 00	
	Hot Tubs	13 17 13	
	Therapeutic Pools	13 17 23	
	Whirlpool Tubs	13 17 33	
	Pool Plumbing Systems	22 51 00	
	Pool Equipment		
	Pool Water Treatment	22 51 19	
	Pool Pumps	22 51 16	
	Pool Equipment Controls	22 51 23	
	Pool Piping System	22 51 13	
	Pool Specialties		
	See Also:		
	Underwater Lighting: D5040.50.		
	Swimming Pool Equipment: F1050.		
	Special Activity Rooms: F1010.		
F1050.20	Interior Fountains	13 12 23	Includes: Interior decorative or functional manufactured fountains.
	Interior Fountains Performance Requirements	01 88 13	
	Interior Fountain Plumbing Systems	22 52 00	
	Interior Fountain Equipment		
	Interior Fountain Water Treatment	22 52 19	
	Interior Fountain Pumps	22 52 16	
	Interior Fountain Equipment Controls	22 52 23	
	Interior Fountain Piping System	22 52 13	
	Interior Fountain Specialties		
	See Also:		
	Underwater Lighting: D5040.50.		
	Exterior Fountains: G2060.10.		
F1050.30	Interior Water Features		Includes: Interior water features other than fountains such as water curtains.
	Decorative Water Curtains		
F1050.40	Aquariums	13 13 00	Includes: Tubs, bowls, and other containers for containing and displaying of aquatic animals and plants.
F1050.50	Amusement Park Structures and Equipment	13 14 00	Includes: Fabricated or pre-engineered components, field assembled for sport or recreational purposes.
	Water Slides	13 14 13	
	Wave Generating Equipment	13 14 16	
	Amusement Park Rides	13 14 23	

## F SPECIAL CONSTRUCTION AND DEMOLITION

NUMBER	TITLE	MF NUMBER	EXPLANATION
F1050.60	Ice Rinks	13 18 00	Includes: Freezing equipment, piping, floor systems, and surrounding enclosures for ice rinks.
F1050.70	Animal Containment	13 19 00	Includes: Enclosures, gates, and feeding devices for kennels and animal shelters.
	<i>See Also:</i> <i>Agricultural Equipment: E1090.</i> <i>Fences and Gates: G2060.</i>		
<b>F1060</b>	<b>Athletic and Recreational Special Construction</b>	13 28 00	Includes: Special construction for athletic and recreational activities that are directly related to the adjacent construction.
F1060.10	Indoor Soccer Boards	13 28 13	
F1060.20	Safety Netting	13 28 16	
F1060.30	Arena Football Boards	13 28 19	
F1060.40	Floor Sockets	13 28 26	
F1060.50	Athletic and Recreational Court Walls	13 28 33	
F1060.60	Demountable Athletic Surfaces	13 28 66	
	<i>See Also:</i> <i>Athletic Flooring: C2030.80.</i> <i>Athletic Equipment: E1070.50.</i> <i>Athletic Rooms: F1010.50.</i> <i>Athletic Areas: G2050.10.</i> <i>Swimming Pools: F1050.10.</i> <i>Recreational Areas: G2050.30.</i>		
<b>F1080</b>	<b>Special Instrumentation</b>	13 50 00	Includes: Instrumentation for measuring and recording phenomena such as stresses in structures, solar and wind energy, and effects of earthquakes.
F1080.10	Stress Instrumentation	13 51 00	
F1080.20	Seismic Instrumentation	13 52 00	
F1080.40	Meteorological Instrumentation	13 53 00	
	Solar Instrumentation	13 53 13	
	Wind Instrumentation	13 53 23	
F1080.60	Earth Movement Monitoring		
<b>F20</b>	<b>FACILITY REMEDIATION</b>		
<b>F2010</b>	<b>Hazardous Materials Remediation</b>	02 80 00	Includes: Remediation for abatement and removal and disposal of contaminated materials within structures.
	Hazardous Materials Remediation Performance Requirements		
	<i>See Also:</i> <i>Decontamination Equipment: E1090.60.</i> <i>Site Remediation: G1050.</i>		
F2010.10	Transportation and Disposal of Hazardous Materials	02 81 00	Includes: Transporting and disposal of hazardous materials within structures.
F2010.20	Asbestos Remediation	02 82 00	Includes: Abatement or removal of asbestos material within structures.
	Asbestos Abatement	02 82 13	
	Engineered Control of Asbestos Containing	02 82 16	
	Removal and Disposal of Asbestos Containing	02 82 33	
F2010.30	Lead Remediation	02 83 00	Includes: Abatement or removal of lead material within structures.
	Lead Hazard Control Activities	02 83 13	
	Lead-Based Paint Remediation	02 83 19	
	Removal and Disposal of Materials Containing	02 83 33	



## F SPECIAL CONSTRUCTION AND DEMOLITION

NUMBER	TITLE	MF NUMBER	EXPLANATION
F2010.40	Polychlorinate Biphenyl Remediation	02 84 00	Includes: Abatement or removal of polychlorinated biphenyl material within structures.
	Handling of Lighting Ballasts and Lamps	02 84 16	
	Removal and Disposal of Polychlorinate	02 84 33	
F2010.50	Mold Remediation	02 85 00	Includes: Remediation of areas and materials contaminated by mold, mildew, or fungus.
	Precautions for Mold Remediation	02 85 13	
	Mold Remediation Preparation and Containment	02 85 16	
	Mold Remediation Clearance Air Sampling	02 85 19	
	Removal and Disposal of Materials with Mold	02 85 33	
<b>F30</b>	<b>DEMOLITION</b>		
	<i>See Also:</i>		
	<i>Site Elements Demolition: G1020.</i>		
<b>F3010</b>	<b>Structure Demolition</b>	02 41 16	Includes: Complete removal and disposal of structures.
F3010.10	Building Demolition	02 41 16.13	
F3010.30	Tower Demolition	02 41 16.23	
F3010.50	Bridge Demolition	02 41 16.33	
F3010.70	Dam Demolition	02 41 16.43	
<b>F3030</b>	<b>Selective Demolition</b>	02 41 19	Includes: Removal and disposal of parts of structures.
F3030.10	Selective Building Demolition	02 41 19.13	
F3030.30	Selective Interior Demolition	02 41 19.16	
F3030.50	Selective Bridge Demolition	02 41 19.33	
F3030.70	Selective Historic Demolition	02 41 91	
	<i>See Also:</i>		
	<i>Historic Restoration Requirements:</i>		
	<i>1030.70.</i>		
	<i>Building Demolition: F3010.10.</i>		
	<i>Historic Treatment Procedures:</i>		
	<i>Z1020.70.</i>		
<b>F3050</b>	<b>Structure Moving</b>	02 43 00	Includes: Preparation and processes of relocating and raising structures.
	Structure Moving Performance Requirements		
	<i>See Also:</i>		
	<i>Site Element Relocations: G1030.</i>		
F3050.10	Structure Relocation	02 43 13	
F3050.30	Structure Raising	02 43 16	

