

UniFormat™

A Uniform Classification of
Construction Systems and Assemblies



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***UniFormat*[™]: A Uniform Classification of Construction Systems and Assemblies**

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INTRODUCTION

UniFormat[™] is an arrangement of construction information based on physical parts of a facility called *functional elements*¹, otherwise known as *systems and assemblies*. These elements are characterized by their function without identifying the work results² that compose them. Elements render a view of a constructed facility different from the view rendered by a breakdown of building materials, products, and activities that comprise work results. In this way, *UniFormat* complements *MasterFormat*[™]. *UniFormat* subdivides a facility by functional elements and *MasterFormat* subdivides by work results.

As an outcome of this differing view, *UniFormat* is able to achieve consistency in economic evaluation of existing and new projects, enhance reporting of design program information, especially for preliminary project descriptions³ and performance specifications, and provide a basis for systematic filing information for facility management, drawing details, BIM objects, and construction market data. It also provides a means for the sustainable design evaluation of systems and assemblies in contrast to evaluating individual products.

SCOPE

UniFormat includes elements for a range of building types and construction related to buildings. Future expansions to *UniFormat* will include elements related to other project types in addition to buildings. Besides elements, detailed titles are presented that provide some designed elements that may apply to any given element; these designed element titles are cross-referenced to *MasterFormat*. The term *designed elements*⁴ refers to physical parts of buildings with a particular design, construction, or technical solution.

BACKGROUND

Construction professionals have focused on the need to better organize project information for many years. The project manual concept⁵, 50-Division format⁶, and *MasterFormat* were developed in response to these challenges and have evolved through several revisions. These organizational principles enhance communication within the construction industry, improve the retrieval of construction information, and aid the analysis of construction information particularly during the detailed design and construction of a project.

The construction industry needed a consistent, expandable organizing concept to standardize information developed in addition to those developed more explicitly for organizing construction documents. This included information used to evaluate and compare alternative construction concepts in terms of a facility's functional parts, particularly during early design stages. There was a

¹ Element: "Construction entity part which, in itself or in combination with other such parts, fulfils a predominating function of the construction entity." International Organization for Standardization. ISO 12006-2:2001. *Building construction -- Organization of information about construction works -- Part 2: Framework for classification of information*. Geneva, Switzerland: ISO, 2001.

² Work result: "Construction result achieved in the production stage or by subsequent alteration, maintenance, or demolition processes and identified by one or more of the following: the particular skill or trade involved; the construction resources used; the part of the construction entity which results; the temporary work or other preparatory or completion work which results." Ibid.

³ Preliminary project description: "Written documentation for Schematic Design phase documents to provide descriptions of the systems and assemblies comprising the project shown in Schematic Design drawings." Construction Specifications Institute. *PPDFormat: A Guide to Developing Preliminary Project Descriptions*. Alexandria, VA: CSI, 2010.

⁴ Designed element: "Element for which the work results have been defined." International Organization for Standardization.

⁵ Project manual concept is discussed in Construction Specifications Institute. *Project Resource Manual*. New York: McGraw-Hill, 2001. Module 5.9.1.

⁶ The 50-Division format is discussed in Construction Specifications Institute. *Project Resource Manual*. New York: McGraw-Hill, 2001. Module 5.5.4.2.

need for organizing documents for use in reporting the owner's program information and the designer's parameters and criteria for early design stages. There is also a need for an organizational structure for the evaluation of completed buildings. The facility's fiscal model, owner's program, and designer's parameters and criteria continue to evolve through all production phases and can be introduced into and compared with construction documents at any phase.

HISTORY

Construction information arranged according to functional building elements was first introduced outside of the United States. Elements were included in one of five tables in a comprehensive Swedish classification system known as "SfB." In 1947, Sweden formed a committee of 32 major building industry organizations called *Samarbetskommitten for Byggnadsfr Cgor*, which provided the initials for the classification. Its first work was published in 1950 in the form of general material and work specifications for buildings. This was a collection of codes and practices arranged according to SfB.

The Royal Institute of Chartered Surveyors (UK) published a standard list of elements in 1969, *Standard Form of Cost Analysis*, which was reprinted in December 1995.⁷ The Canadian Institute of Quantity Surveyors published *Elemental Cost Analysis Method of Measurement and Pricing*.⁸

In the early 1970s, the first element-based classification in the United States was developed by the American Institute of Architects (AIA) for the General Services Administration (GSA). *UniFormat* has since been used by U.S. Federal agencies, RS Means, and others.

In 1989, the ASTM Subcommittee on Building Economics began development of classification for building elements. In 1990, the Construction Specifications Institute (CSI) became active on the working group of this ASTM subcommittee. Other participating organizations include the American Association of Cost Engineers, American Society of Professional Estimators, GSA, Naval Facilities Engineering Command, U.S. Air Force, and U.S. Army Corps of Engineers.

The ASTM Working Group and DoD Tri Service Committee each prepared versions of an element-based format in the first half of 1992. The two formats were similar but not identical. In August 1992, the National Institute of Standards and Technology (NIST) published *UNIFORMAT II: A Recommended Classification for Building Elements and Related Sitework*. *UNIFORMAT II* was influenced greatly by discussions held at ASTM Working Group meetings.

The first edition of *UniFormat* was published by CSI as an interim edition, based on the work of the ASTM Working Group and the DoD Tri Service Committee. The *UniFormat Interim Edition* was published with the 1992 edition of *CSI Manual of Practice* and included coordination with the 1988 edition of *MasterFormat*. This interim edition was published for trial use and comment.

After the publication of NIST and CSI versions, ASTM⁹ balloted and accepted *UNIFORMAT II* in 1993 as ASTM E 1557. The ASTM standard was based on NIST and DoD documents but did not include a numbering system or the low-level element classification. In 1996, ASTM adopted the numbering scheme used in CSI's *UniFormat* for the 1996 edition of ASTM E 1557.

In 1995, CSI and CSC began revising *UniFormat*. Revisions were intended to align ASTM and CSI documents and to coordinate *UniFormat* with *MasterFormat*, 1995 edition. CSI and CSC actively solicited public comments on the *UniFormat* Interim Edition and continued ongoing discussions with ASTM Subcommittee E06.81 to determine the direction for the next edition.

⁷ Royal Institute of Chartered Surveyors. *Standard Form of Cost Analysis*. London: RICS, 1969, reprinted 1995, revised 2008.

⁸ Canadian Institute of Quantity Surveyors, *Elemental Cost Analysis Method of Measurement and Pricing*. Toronto, Ontario, Canada: CIQS, first issued 1972, revised 1990, 2006.

⁹ Committee E6—Building Performance, Subcommittee E06.81—Building Economics.

THIS EDITION

In 2005, a CSI/CSC task team was appointed to review the contents of *UniFormat* and recommend revisions and improvements. An initial scoping and brainstorming meeting was held at the National Institute of Science and Technology (NIST) headquarters in July 2006 with attendees from CSI, NIST, the ASTM subcommittee, the General Services Administration (GSA), National Institute of Building Sciences (NIBS), the National Building Information Model Standard (NBIMS) Project Committee, and the Naval Facilities Engineering Command (NAVFAC), among others. Outcomes from that meeting served to give direction to the CSI/CSC effort.

Over the next five years, several additional workshops were held and three drafts for commentary were produced. This revised edition of *UniFormat* is the result of decisions made in response to discussion and commentary received.

The CSI/CSC UniFormat Task Team made the following changes to this edition:

- Revised *UniFormat* to increase its usefulness for classifying information for new applications such as Building Information Modeling (BIM).
- Changed the title of the introductory element from “Project Description” to “Introduction” and added additional material on project criteria and owner’s development activities.
- Moved stairs from Category C Interiors to B Shell.
- Reorganized Category D Services to reflect more of a systems approach with generic functional categories.
- Provided standardized numbers for Level 4 titles throughout *UniFormat*.
- Added example performance requirements to many functional elements.
- Separated Related Activities from physical elements in the A Substructure and G Sitework elements. These activities may be included with functional elements as appropriate.
- Placed supplementary components for many functional elements into separate categories to avoid repeating them with each functional element. The Supplementary Components are intended to be included with each functional element in that category as appropriate.
- *MasterFormat* references have been updated to the 2010 version of *MasterFormat*.

BASIC ORGANIZATION

UniFormat classifies information into the following nine Level 1 elements:

INTRODUCTION

A	SUBSTRUCTURE	E	EQUIPMENT AND FURNISHINGS
B	SHELL	F	SPECIAL CONSTRUCTION AND DEMOLITION
C	INTERIORS	G	BUILDING SITEWORK
D	SERVICES	Z	GENERAL

The nine elemental categories above can be used to arrange preliminary project descriptions, cost information, BIM elements, facility management information, and organizing drawing details. Category Z General is designated by the last letter of the alphabet to ensure that this category will remain last no matter how the content of *UniFormat* may be expanded to cover additional types of construction.

Titles in Levels 1 through 3 can be applied to most project descriptions and preliminary cost estimates. Level 4 provides a more detailed breakdown of the functional elements. Detailed listings below Level 4 provide a checklist of designed elements for selection of design, construction, or technical solutions to allow for a more comprehensive and complete application of *UniFormat*.

RELATIONSHIP WITH MASTERFORMAT

MasterFormat establishes a location for specifying element-based project information within Project Manuals. This location is in Division 01, within 01 80 00 Performance Requirements.

MasterFormat refers to *UniFormat* for organizing and titling elements. The two documents provide complementary views of project information for such diverse applications as Project Manuals and cost estimating, where reference to both products and functional elements may be useful.

The information in *UniFormat* under *30 Procurement Requirements* and *40 Contracting Requirements* in the Introduction is based on the *MasterFormat* organizational structure for that subject matter. The information in *UniFormat* under *Z10 General Requirements* is also based on the *MasterFormat* organizational structure.

DIFFERENCES FROM MASTERFORMAT

The primary difference between *UniFormat* and *MasterFormat* lies in how each views construction information. *UniFormat* identifies elements, each with one or more characteristic functions. For example, foundations provide the function to stabilize and support. Numbered *UniFormat* classifications stop above the level of defining the technical solutions used to achieve the function described. The detailed listings in *UniFormat* below Level 4 do provide a checklist of possible construction solutions that relate to *MasterFormat*.

By comparison, information in *MasterFormat* is arranged by *work results*, defined in *MasterFormat* as “permanent or temporary aspects of construction projects achieved in the production stage or by subsequent alteration, maintenance, or demolition processes, through the application of a particular skill or trade to construction resources.” This arrangement allows for more specificity in description of the information addressed, but also makes some of the functions served by *UniFormat*, such as preliminary project descriptions, comparison of design choices, or early cost estimates, more difficult or impossible.

Work results are the basic components in *MasterFormat's* view of construction. This view emphasizes the perspective of the product manufacturer, supplier, detailed designer, specifier, cost estimator, and contractor during the detailed design and construction phases.

UniFormat, on the other hand, looks at construction the way elements are used. This perspective coincides with the way the user, owner, cost estimator, and designer look at construction during the early design phases and when evaluating completed projects.

This suggests using *UniFormat* for organizing preliminary project descriptions, cost summaries, and performance specifications of entire elements, such as HVAC systems and exterior wall assemblies, and using *MasterFormat* to organize detailed cost estimates and analyses, descriptive specifications, and more detailed information about design choices made.

UniFormat and *MasterFormat* titles suggest complementary views of construction products and performance requirements: *UniFormat* names elements that have a determinable function; *MasterFormat* names components that have specifiable characteristics. Because construction information is viewed, used, and manipulated by people with varying interests at the various stages of the project, complementary organizational concepts are helpful.

APPLICATION GUIDE

This application guide suggests basic strategies for numbering and titling elements for information storage and retrieval purposes. It is not intended to describe rigid methods for applying *UniFormat*TM but to develop the user's intuition for using this system consistently.

This application guide also includes important considerations for applying *UniFormat* for organizing cost information, preliminary project descriptions, arranging project manuals, and organizing facility management and construction market information. Discussions are provided for understanding the underlying structure and presentation conventions used and for selecting *UniFormat* numbers and titles.

SELECTING UNIFORMAT NUMBERS AND TITLES

Not all *UniFormat* titles will be used for a given project. *UniFormat* is an expandable structure that can accommodate additional titles to meet specific requirements. However, designated numbers and titles listed should not be changed. This helps set a consistent arrangement.

UniFormat titles are generic, descriptive titles independent of the design solution. *UniFormat* titles are the starting point for elements. When creating a user-defined Level 3 or 4 title, incorporate wording from the parent title so the new titles are complete, clear, and descriptive.

THE STRUCTURE UNDERLYING UNIFORMAT

The *UniFormat* hierarchy comprises the major categories of construction information separated by their special function. These special functions include the following nine categories:

INTRODUCTION

A	SUBSTRUCTURE	E	EQUIPMENT AND FURNISHINGS
B	SHELL	F	SPECIAL CONSTRUCTION AND DEMOLITION
C	INTERIORS	G	BUILDING SITEWORK
D	SERVICES	Z	GENERAL

The letters and titles of Level 1 categories are fixed and should not be changed in application. The first category, Introduction, does not have a letter designation. This allows it to appear first in the list of titles and distinguishes its contents from the other titles. The contents of Introduction are not building systems or assemblies. Instead, it is a collection of basic information that allows users to give readers an introduction to the project before reading details of the building elements in other categories. Introduction contains Procurement and Contracting Requirements and allows *UniFormat* to be used as a stand-alone contracting structure for construction projects, especially design-build applications.

Category Z General, which also does not contain information about building systems or assemblies, is designated by the last letter of the alphabet so that the system can expand beyond building construction and allow this category to remain last.

UniFormat divides Level 1 categories into classes of information by separating the categories into the discrete concepts that compose them. Level 2 classes carry the letter of their parent category, plus a two-digit number. Alphanumeric designations and titles of Level 2 classes are also fixed and should not be changed in application.

Levels 3 and 4 are developed by further subdividing Level 2 classes. These subclasses carry the alphanumeric designation of their parent category and class, plus a two-digit number per level, with the two-digit Level 4 numbers being set off by a decimal point as shown in the example below. Alphanumeric designations and titles of Level 3 and 4 subclasses are also fixed and should not be changed in application. Alphanumeric designations for Level 4 that are unassigned within a group of Level 3 subclasses can be assigned by the user.

Detailed listings below Level 4 present specialized design solutions of their parent Level 4 subclasses. Particular materials may be identified (e.g., concrete and steel) to differentiate one specialized solution from another. No standard alphanumeric designation is assigned to these subclasses, though extensions may be assigned by the user. The user-assigned number should carry the alphanumeric designation of the parent Level 4 subclass, plus additional characters, such as a two-digit number, an alphanumeric designator, or the corresponding *MasterFormat* number separated from the Level 4 number by an additional decimal point. The numbering system is as follows (the “CF” appended to the Continuous Footings title below is merely one possible example of how to number such a title):

A	SUBSTRUCTURE	Level 1
A10	Foundations	Level 2
A1010	Standard Foundations	Level 3
A1010.10	Wall Foundations	Level 4
A1010.10.CF	Continuous Footings	Level 5

The numbering system can expand to allow for additional numbers and titles at any level. Should a user choose to use a variety of lower level titles beyond Level 5, the added digits should include any numbering provided for parent subcategories similar to the way demonstrated by the upper level numbering. This allows *UniFormat* to expand in the future and allows users to add titles and numbers for subjects not in the current edition. User-defined numbers and titles that fit within the established framework of *UniFormat* can similarly be added at any level, as long as they do not duplicate the subject matter of any existing title or take the place of any existing number.

EXTENDING UNIFORMAT BY USING MASTERFORMAT

Some users may want to add *MasterFormat* materials and methods information to a document organized according to *UniFormat*. *MasterFormat* numbers may be included if some materials and methods have been determined. For example, if the building structural frame will be steel but the design solutions for exterior walls have not been determined, *MasterFormat* numbers could be included for B10 Superstructure but not for B20 Exterior Vertical Enclosures. Users may refine documents organized according to *UniFormat* during subsequent design phases as materials and construction activities are determined.

The following is an example application for adding *MasterFormat* numbers to the *UniFormat* alphanumeric designations. A2010 Walls for Subgrade Enclosures is an example where the direct relationship with *MasterFormat* is referenced in the detailed listings below Level 4.

A20	Subgrade Enclosures	
A2010	Walls for Subgrade Enclosures	
A2010.10	Subgrade Enclosure Wall Construction	
	Cast-in-Place Concrete	03 30 00 Cast-in-Place Concrete
	Unit Masonry	04 20 00 Unit Masonry

In the example above, a related *MasterFormat* number is not available until the material designations of cast-in-place concrete and unit masonry are included. When the material to be used for Subgrade Enclosure Walls has been decided upon, a *MasterFormat* number can then be added after another decimal point to designate the material to be used for Subgrade Enclosure Wall Construction.

A2020.10.033000 Cast-in-Place Concrete Subgrade Enclosure Wall Construction
 A2020.10.042000 Unit Masonry Subgrade Enclosure Wall Construction

This use of *MasterFormat* numbers as an extension for *UniFormat* is available for users who want to indicate direct relationships between the two organizational principles in the project information.

The transition from project information organized according to *UniFormat* to one organized according to *MasterFormat* may be made easier by using *MasterFormat* extensions. If *MasterFormat* number extensions have been added, the document organized according to *UniFormat* may be searched or sorted according to those *MasterFormat* extensions to regroup information according to *MasterFormat*. This may help reveal additional information, for example, a list of all elements of cast-in-place concrete construction in the project.

USING UNIFORMAT

ARRANGING COST INFORMATION

The list of elements or systems serves as a basis to organize cost information. Cost information may be reported in varying degrees of detail; as design decisions are made, the information can be refined. This arrangement of cost information allows for the comparison of various building elements and evaluation of alternative technical solutions, particularly during early design phases. The *UniFormat* cost model can evolve along with a cost model organized according to *MasterFormat*.

These two cost models render different views of the same project and provide details appropriate for different requirements. For example, a cost model organized by *UniFormat* can provide information about the cost of a concrete structure compared with a steel structure, even though there will be more concrete or steel on the project. *UniFormat* provides cost comparison information for the structural function so that the value, cost, and time scheduling of various structural solutions may be evaluated. In comparison, a cost model organized by *MasterFormat* can provide information about the cost of all the concrete and steel on a project regardless of the structural system chosen.

Value analysis requires a consistent naming scheme carried throughout the project. *UniFormat* is particularly useful for value analysis, which requires attaching a cost to a particular use or facility function rather than to particular products and activities. Using *MasterFormat* in combination with element designations organized by *UniFormat* helps the value analyst evaluate value-analysis change proposals.

The Related Activities categories in *UniFormat* may be included with the appropriate functional elements in formulating cost information. The items under Supplementary Components categories in *UniFormat* should be included with the functional elements as appropriate.

ARRANGING PRELIMINARY PROJECT DESCRIPTIONS

Preliminary project descriptions are described in the CSI publication *PPDFormat: A Guide to Developing Preliminary Project Descriptions*. A preliminary project description helps the owner understand the various components and systems proposed by the designer for the project. It also serves a requirement normally included in a design services agreement in which the designer must submit a report after completing the schematic design before proceeding to design development. These descriptions may be supported by, and serve as a basis of, an estimate of probable construction costs.

UniFormat provides a logical sequence of elements to describe a construction project before all materials and methods have been determined. *UniFormat* is used to organize, and serves as a checklist for preparing, preliminary project descriptions at various levels of detail.

As the design progresses, both descriptions and the estimate of probable construction cost can be refined. Thus Preliminary Project Descriptions can be used to document the early design process as it progresses. This can begin with the determination and recording of the performance requirements for the various functional elements. The potential technical solutions for value analysis can then be listed. Finally the selected solution and resulting components can be added. The above steps will not move at the same pace for the various functional elements. A Preliminary Project Description can be used to record that progress for the various functional elements so that an up-to-date progress report can be easily produced at any time.

The Related Activities categories in *UniFormat* may be included with the appropriate functional elements in preparing Preliminary Project Descriptions or they may be kept separate. The items under Supplementary Components categories in *UniFormat* may be included with the appropriated functional elements or they can be described separately.

ARRANGING PERFORMANCE BASED PROJECT MANUALS

Arranging Project Manuals, or portions of them, according to *UniFormat* is appropriate when performance specifying is the method employed for all or some of the project. Performance specifying can be used at many levels, from a single product to major subsystems or entire projects. It allows the owner to access a range of options, from existing technology to innovative systems and developing technologies. Performance specifying encourages full bidding competition based on nonrestrictive requirements and, in its broadest application, is used for design-build projects. Whether the entire building or only a portion of it is specified using performance specifications, *UniFormat* can be used to organize performance specifications for elements crossing *MasterFormat* section and division boundaries.

The Procurement Requirements and Contracting Requirements in the Introduction may be used for performance based contract documents. The General Requirements in Z General may be used for the same purpose.

A checklist of some performance requirements has been added to many of the functional elements in this edition of *UniFormat*. These performance requirement checklists are not intended to be comprehensive or complete but to provide some examples.

ORGANIZING DRAWINGS AND BIM OBJECT LIBRARIES

UniFormat numbers and titles can be used as a file-naming convention for library files of standard details and schedules. The Uniform Drawing System (UDS) portion of the U.S. National CAD Standard (NCS) provides a detailed description for this application.¹⁰ Similarly, *UniFormat* can be used to organize BIM element libraries.

Library files are named differently from project files because the information requirements are different and demand different classification and indexing. Library file naming should be grouped by building systems, assemblies, or use because that is the most natural way to search for them. *UniFormat* is the best used for organizing and naming objects representing building systems and assemblies, otherwise known as functional elements. *UniFormat's* usefulness continues as the solutions to these elements are defined, but as the level of detail increases and more system components are identified, *MasterFormat* also becomes a useful tool for organizing project objects and information. Project detail and object files must also be organized to make it easy to produce

¹⁰ National Institute of Building Sciences. *United States National CAD Standard, version 4.0*. Washington, DC: NIBS, 2007, UDS-01.16, "Library Files"

project contract documents, record documents, and facility management documents, possibly from multiple files, and organization by both *UniFormat* and *MasterFormat* make that possible.

The NCS recommends an eight-character designator for naming CAD library schedule files. A numbering system based on *UniFormat* can be used for preliminary phases of a project. *UniFormat* numbers can be used during the construction documents phase for schedules made up of assemblies of materials that might otherwise have separate *MasterFormat* numbers.

ARRANGING FACILITIES MANAGEMENT INFORMATION

As *UniFormat* is used for preliminary project descriptions to communicate element concepts to a building owner, preliminary project descriptions can be refined and used to communicate the building's functional elements for real estate due-diligence reports and organizing maintenance and operation programs and data.

UniFormat is an ideal organizational framework to describe systems design intent for facility commissioning purposes. *UniFormat* can be used to document how elements function. Preliminary project descriptions can be refined and can evolve through all design phases, ultimately making the commissioning authority's system performance testing and acceptance easier. Descriptions can then be used by the facility operators and maintenance personnel to store information about systems maintenance and operations.

ARRANGING CONSTRUCTION MARKET INFORMATION

Market information reporting agencies can use *UniFormat* to describe the facility being reported. *UniFormat* can also be used to assemble, store, and report information about elements separate from and in addition to reports on products and activities. This helps show trends for major elements containing products and activities crossing *MasterFormat* section and division boundaries.

ARRANGING INFORMATION FOR DESIGN-BUILD APPLICATIONS

Design-build project delivery has created a need for an organizational structure for communicating functional performance requirements, including organizing design-build requests for proposals. The requirements for a design-build proposal may also include some prescriptive requirements. To communicate project performance and prescriptive requirements to design-build entities in requests for proposals, owners must describe those requirements. In turn, design-build contractors must respond to performance requirements with proposed construction solutions in their proposals. *UniFormat* provides the organizational structure to describe performance and prescriptive requirements as well as for construction solution responses to those requirements.

The Procurement Requirements and Contracting Requirements in the Introduction may be used for design-build contract documents. The General Requirements in Z General may be used for the same purpose.

A checklist of some performance requirements has been added to many of the functional elements in this edition of *UniFormat*. These performance requirement checklists are not intended to be comprehensive or complete but to provide some examples.

LEVELS ONE THROUGH THREE NUMBERS AND TITLES

INTRODUCTION

10 PROJECT DESCRIPTION

- 1010 Project Summary
- 1020 Project Program
- 1030 Project Criteria
- 1040 Existing Conditions
- 1050 Owner's Work
- 1090 Funding

20 OWNER DEVELOPMENT

- 2010 Site Acquisition
- 2020 Permits
- 2030 Professional Services
- 2050 Other Activities
- 2080 Budget Project Contingencies
- 2090 Budget Financing

30 PROCUREMENT REQUIREMENTS

- 3010 Project Delivery
- 3020 Solicitation
- 3030 Instructions for Procurement
- 3040 Available Project Information
- 3050 Procurement Forms and Supplements

40 CONTRACTING REQUIREMENTS

- 4010 Contracting Forms and Supplements
- 4020 Project Forms
- 4030 Conditions of the Contract
- 4040 Revisions, Clarifications, and Modifications

LEVELS ONE THROUGH THREE NUMBERS AND TITLES

ELEMENT **A SUBSTRUCTURE**

A10 FOUNDATIONS

- A1010 Standard Foundations
- A1020 Special Foundations

A20 SUBGRADE ENCLOSURES

- A2010 Walls for Subgrade Enclosures

A40 SLABS-ON-GRADE

- A4010 Standard Slabs-on-Grade
- A4020 Structural Slabs-on-Grade
- A4030 Slab Trenches
- A4040 Pits and Bases
- A4090 Slab-On-Grade Supplementary Components

A60 WATER AND GAS MITIGATION

- A6010 Building Subdrainage
- A6020 Off-Gassing Mitigation

A90 SUBSTRUCTURE RELATED ACTIVITIES

- A9010 Substructure Excavation
- A9020 Construction Dewatering
- A9030 Excavation Support
- A9040 Soil Treatment

ELEMENT **B SHELL**

B10 SUPERSTRUCTURE

- B1010 Floor Construction
- B1020 Roof Construction
- B1080 Stairs

B20 EXTERIOR VERTICAL ENCLOSURES

- B2010 Exterior Walls
- B2020 Exterior Windows
- B2050 Exterior Doors and Grilles
- B2070 Exterior Louvers and Vents
- B2080 Exterior Wall Appurtenances
- B2090 Exterior Wall Specialties

B30 EXTERIOR HORIZONTAL ENCLOSURES

- B3010 Roofing
- B3020 Roof Appurtenances
- B3040 Traffic Bearing Horizontal Enclosures
- B3060 Horizontal Openings
- B3080 Overhead Exterior Enclosures

ELEMENT **C INTERIORS**

C10 INTERIOR CONSTRUCTION

- C1010 Interior Partitions
- C1020 Interior Windows
- C1030 Interior Doors
- C1040 Interior Grilles and Gates
- C1060 Raised Floor Construction
- C1070 Suspended Ceiling Construction
- C1090 Interior Specialties

C20 INTERIOR FINISHES

- C2010 Wall Finishes
- C2020 Interior Fabrications
- C2030 Flooring
- C2040 Stair Finishes
- C2050 Ceiling Finishes
- C2090 Interior Finish Schedules

ELEMENT D SERVICES

D10 CONVEYING

- D1010 Vertical Conveying Systems
- D1030 Horizontal Conveying
- D1050 Material Handling
- D1080 Operable Access Systems

D20 PLUMBING

- D2010 Domestic Water Distribution
- D2020 Sanitary Drainage
- D2030 Building Support Plumbing Systems
- D2050 General Service Compressed-Air
- D2060 Process Support Plumbing Systems

D30 HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)

- D3010 Facility Fuel Systems
- D3020 Heating Systems
- D3030 Cooling Systems
- D3050 Facility HVAC Distribution Systems
- D3060 Ventilation
- D3070 Special Purpose HVAC Systems

D40 FIRE PROTECTION

- D4010 Fire Suppression
- D4030 Fire Protection Specialties

D50 ELECTRICAL

- D5010 Facility Power Generation
- D5020 Electrical Service and Distribution
- D5030 General Purpose Electrical Power
- D5040 Lighting
- D5080 Miscellaneous Electrical Systems

D60 COMMUNICATIONS

- D6010 Data Communications
- D6020 Voice Communications
- D6030 Audio-Video Communication
- D6060 Distributed Communications and Monitoring
- D6090 Communications Supplementary Components

D70 ELECTRONIC SAFETY AND SECURITY

- D7010 Access Control and Intrusion Detection
- D7030 Electronic Surveillance
- D7050 Detection and Alarm
- D7070 Electronic Monitoring and Control
- D7090 Electronic Safety and Security Supplementary Components

D80 INTEGRATED AUTOMATION

- D8010 Integrated Automation Facility Controls

ELEMENT E EQUIPMENT AND FURNISHINGS

E10 EQUIPMENT

- E1010 Vehicle and Pedestrian Equipment
- E1030 Commercial Equipment
- E1040 Institutional Equipment
- E1060 Residential Equipment
- E1070 Entertainment and Recreational Equipment
- E1090 Other Equipment

E20 FURNISHINGS

- E2010 Fixed Furnishings
- E2050 Movable Furnishings

ELEMENT **F SPECIAL CONSTRUCTION AND DEMOLITION**

F10 SPECIAL CONSTRUCTION

- F1010 Integrated Construction
- F1020 Special Structures
- F1030 Special Function Construction
- F1050 Special Facility Components
- F1060 Athletic and Recreational Special Construction
- F1080 Special Instrumentation

F20 FACILITY REMEDIATION

- F2010 Hazardous Materials Remediation

F30 DEMOLITION

- F3010 Structure Demolition
- F3030 Selective Demolition
- F3050 Structure Moving

ELEMENT **G SITEWORK**

G10 SITE PREPARATION

- G1010 Site Clearing
- G1020 Site Elements Demolition
- G1030 Site Element Relocations
- G1050 Site Remediation
- G1070 Site Earthwork

G20 SITE IMPROVEMENTS

- G2010 Roadways
- G2020 Parking Lots
- G2030 Pedestrian Plazas and Walkways
- G2040 Airfields
- G2050 Athletic, Recreational, and Playfield Areas
- G2060 Site Development
- G2080 Landscaping

G30 LIQUID AND GAS SITE UTILITIES

- G3010 Water Utilities
- G3020 Sanitary Sewerage Utilities
- G3030 Storm Drainage Utilities
- G3050 Site Energy Distribution
- G3060 Site Fuel Distribution
- G3090 Liquid and Gas Site Utilities Supplementary Components

G40 ELECTRICAL SITE IMPROVEMENTS

- G4010 Site Electric Distribution Systems
- G4050 Site Lighting

G50 SITE COMMUNICATIONS

- G5010 Site Communications Systems

G90 MISCELLANEOUS SITE CONSTRUCTION

- G9010 Tunnels

ELEMENT **Z GENERAL**

Z10 GENERAL REQUIREMENTS

- Z1010 Price and Payment Procedures
- Z1020 Administrative Requirements
- Z1040 Quality Requirements
- Z1050 Temporary Facilities and Controls
- Z1060 Product Requirements
- Z1070 Execution and Closeout Requirements
- Z1090 Life Cycle Activities

Z70 TAXES, PERMITS, INSURANCE AND BONDS

- Z7010 Taxes
- Z7030 License Fees
- Z7050 Permit Costs
- Z7070 Bond Fees

Z90 FEES AND CONTINGENCIES

- Z9010 Overhead
- Z9030 Profit
- Z9050 Construction Contingencies
- Z9090 Financing Costs

MASTER LIST OF NUMBERS, TITLES, EXPLANATIONS, AND RELATED *MasterFormat*[™] NUMBERS

INFORMATION

The left column includes the master list of *UniFormat*[™] numbers and titles in Levels 1-4 and subsequent titles.

The middle column includes related 6-digit classification numbers of *MasterFormat*. Not all of the items have related *MasterFormat* numbers.

The right column includes general descriptions of the Level 4 categories. The explanation together with the detailed listings in the left column under each Level 4 category provide an understanding of the scope of the Level 4 category. Under the headings "See also" are lists of other categories in *UniFormat* which contain elements of work related to the Level 4 category.

INTRODUCTION

NUMBER	TITLE	MF NUMBER	EXPLANATION
10	PROJECT DESCRIPTION		
	<i>See Also:</i> <i>General Requirements: Z10.</i>		
1010	Project Summary	01 10 00	Includes: Brief summary of overall project and each facility that comprises the project.
1010.10	Summary of Work	01 11 00	
1010.30	Multiple Contract Summaries	01 12 00	
1010.50	Work Restrictions	01 14 00	
1020	Project Program		Includes: Description of scope, size, scale, and quality of the project. Includes regulatory requirements, such as applicable codes and other standards that are to govern the design and construction.
1020.10	Site Program		Includes: Description of site development and design requirements, and desired quality. Includes related data sheets used to identify specific program requirements for each site improvement.
1020.50	Facility Program		Includes: Description of required spaces, sizes, quality, materials, relationships, and design requirements. Includes related data sheets used to identify specific program requirements.
1030	Project Criteria		Includes: Project design criteria as imposed by zoning, code, and other legal requirements. Includes other criteria for the design of the project including sustainable design and historic restoration criteria.
1030.10	Zoning Requirements	01 41 00	
	<i>See Also:</i> <i>Zoning Permits: 2020.10</i>		
1030.15	Planned Unit Development Requirements		
	<i>See Also:</i> <i>Planned Unit Development: 2020.15</i>		
1030.20	Code Analysis	01 41 13	
1030.40	Design Loads		
1030.50	Sustainable Design Requirements	01 81 13	
	<i>See Also:</i> <i>Sustainable Design Reporting: Z1020.50.</i> <i>Sustainable Design Closeout Documentation: Z1070.70.</i>		
1030.53	Facility Environmental Requirements	01 81 16	
1030.56	Indoor Air Quality Requirements	01 81 19	
	<i>See Also:</i> <i>Indoor Air Quality Procedures: Z1020.70.</i>		
1030.70	Historic Restoration Requirements	01 35 91	
	<i>See Also:</i> <i>Selective Historic Demolition: F3030.70.</i>		

INTRODUCTION

NUMBER	TITLE	MF NUMBER	EXPLANATION
	<i>Historic Treatment Procedures: Z1020.70.</i>		
1040	Existing Conditions	02 00 00	Includes: Summary of existing conditions that affect development of a project or facilities comprising a project.
	<i>See Also: Existing Condition Information: 3040.30.</i>		
1040.30	Assessment	02 20 00	
	Surveys	02 21 00	
	Existing Conditions Assessment	02 22 00	
	Exiting Material Assessment	02 25 00	
	Hazardous Material Assessment	02 26 00	
	<i>See Also: Environmental Assessment Information: 3040.40. Existing Material Information: 3040.45. Existing Hazardous Material Information: 3040.50.</i>		
1040.50	Subsurface Investigation	02 30 00	
	Geophysical Investigations	02 31 00	
	Geotechnical Investigations	02 32 00	
	<i>See Also: Geophysical Data: 3040.55. Geotechnical Data: 3040.60.</i>		
1050	Owner's Work	01 11 16	Includes: Summary of work to be completed separately by the owner or separate contractors. Includes work that is performed before, during, or after the work of the project.
1090	Funding		Includes: Summary of owner's project funding information.
1090.10	Budget	00 31 16	Includes: Summary of the owner's project budget.
1090.30	Sources		Includes: Summary of the owner's project funding sources.
1090.50	Cash Flow		Includes: Summary of the owner's project cash flow requirements or projections.
20	OWNER DEVELOPMENT		
2010	Site Acquisition		Includes: Summary of the owner's securing of the project site.
2010.10	Site Purchase		
2010.20	Site Lease		
2010.40	Rights-of-Way and Easements		
2020	Permits	00 31 46	Includes: Permits and approvals required for design and construction.
	<i>See Also: Permit Costs: Z7050.</i>		
2020.10	Zoning Permits	01 35 63	
	<i>See Also: Zoning Requirements: 1030.10.</i>		
2020.15	Planned Unit Development		
	<i>See Also: Planned Unit Development Requirements: 1030.15.</i>		

NUMBER	TITLE	MF NUMBER	EXPLANATION
2020.30	Building Permits	01 41 26	
	<i>See Also:</i> <i>Permit Application: 3040.90.</i>		
2020.50	Regulatory Required Permits	01 41 00	
2030	Professional Services		Includes: Summary of professional services to be retained by the owner.
2030.10	Project Managers		
2030.20	Design Professionals		
	Architects		
	Structural Engineers		
	Mechanical, Electrical, and Plumbing Engineers		
	Landscape Architects		
	Civil Engineers		
	Interior Designers		
2030.30	Other Consultants		
	Surveyors		
	Geotechnical Engineers		
	Commissioning Agents		
	Sustainable Design Consultants		
2030.40	Testing Laboratories	01 45 29	
2030.50	Special Inspectors	01 45 23	
2030.60	Attorneys		
2030.70	Land/Project Development		
2050	Other Activities		Includes: Summary of owner's other miscellaneous activities in support of project.
2050.10	Advertising and Promotion		
2050.30	Relocations		
	Moving		
	Disruptions		
	Temporary Relocations		
2050.50	Rezoning		
2050.70	Code Appeals and Variances	01 41 13	
2080	Budget Project Contingencies		
2080.10	Budget Design Contingencies	01 21 16	Includes: Risk factor applied to the project budget to compensate for extent of available design definition.
	<i>See Also:</i> <i>Design Contingencies: Z9050.10.</i>		
2080.20	Budget Construction Contingencies	01 21 16	Includes: Risk factor applied to the project budget to compensate for degree of unknown or unforeseeable construction conditions.
2080.40	Budget Unforeseen Subsurface Conditions		Includes: Risk factor applied to the project budget to compensate for degree of unforeseeable subsurface conditions.
2080.60	Budget Project Delays		Includes: Risk factor applied to the project budget to compensate for degree of unforeseeable subsurface conditions.
2090	Budget Financing		Includes: Summary of owner's budget for financing of the project.
	<i>See Also:</i> <i>Financing Costs: Z9090.</i>		
2090.10	Construction Loans		
2090.30	Permanent Loans		

INTRODUCTION

NUMBER	TITLE	MF NUMBER	EXPLANATION
30	PROCUREMENT REQUIREMENTS	00 00 00	
3010	Project Delivery		
3010.10	Project Delivery Methods		Includes: Description of project delivery method such as general contract, multiple prime contracts, construction management, design-build, or integrated project delivery. Includes qualifications solicitation, qualifications statements, project approach, and project team.
	Design-Bid Build		
	Design-Negotiate Build		
	Construction Management		
	Construction Manager as Advisor (CMa)	00 52 26	
		00 72 26	
	Construction Manager as Constructor (CMc)	00 52 23	
		00 72 23	
	Design-Build	00 52 53	
		00 52 56	
		00 72 53	
		00 72 56	
	Standard		
	Bridging		
	Owner-Build		
	Integrated Project Delivery	00 52 95	
		00 72 95	
	Project Alliances		
	Single Purposed Entities		
	Relational Contracts		
3010.30	Number of Construction Contracts		Includes: Listing and scope of construction contracts.
	Single Contract		
	Multiple Contracts		
3010.50	Methods of Payment		Includes: Description of methods of payment.
	Stipulated Sum	00 52 13	
		00 52 16	
		00 72 13	
		00 72 16	
	Unit Price	00 52 43	
		00 52 46	
		00 72 43	
		00 72 46	
	Cost Plus a Fee	00 52 33	
		00 52 36	
		00 72 33	
		00 72 36	
	Cost Plus a Fee with a Guaranteed Maximum Price (GMP)		
3020	Solicitation	00 10 00	Includes: Project information to attract qualified bidders or proposers.
3020.10	Advertisements and Invitations	00 11 00	
3030	Instructions for Procurement	00 20 00	Includes: Conditions affecting the award of the contract and procedures with which bidders and proposers must comply.
3030.10	Instructions	00 21 00	
3030.15	Supplementary Instructions	00 22 00	
3030.20	Procurement Definitions	00 23 00	
3030.30	Procurement Scopes	00 24 00	
3030.50	Procurement Meetings	00 25 00	

NUMBER	TITLE	MF NUMBER	EXPLANATION
3030.70	Procurement Substitution Procedures	00 26 00	
3040	Available Project Information	00 31 00	Includes: Information that is made available to bidders, proposers, or contractors but that is not normally intended to be included in the contract documents.
3040.10	Preliminary Schedules	00 31 13	
3040.15	Project Budget Information	00 31 16	
3040.30	Existing Condition Information	00 31 19	
	<i>See Also:</i>		
	<i>Existing Conditions: 1040.</i>		
3040.35	Survey Information	00 31 21	
3040.40	Environmental Assessment Information	00 31 24	
3040.45	Existing Material Information	00 31 25	
3040.50	Existing Hazardous Material Information	00 31 26	
	<i>See Also:</i>		
	<i>Assessment: 1040.30</i>		
3040.55	Geophysical Data	00 31 31	
3040.60	Geotechnical Data	00 31 32	
	<i>See Also:</i>		
	<i>Subsurface Investigation: 1040.50.</i>		
3040.90	Permit Application	00 31 43	
	<i>See Also:</i>		
	<i>Building Permits: 2020.30.</i>		
3050	Procurement Forms and Supplements		Includes: Forms and supplements for submitting bids or proposals.
3050.10	Bid Forms	00 41 00	
3050.20	Proposal Forms	00 42 00	
3050.30	Procurement Form Supplements	00 43 00	
3050.50	Representations and Certifications	00 45 00	
40	CONTRACTING REQUIREMENTS	00 00 00	
4010	Contracting Forms and Supplements	00 50 00	Includes: Contract Forms and attachments.
4010.10	Notice of Award	00 51 00	
4010.30	Agreement Forms	00 52 00	
4010.35	Agreement Form Supplements	00 54 00	
4010.50	Notice to Proceed	00 55 00	
4020	Project Forms	00 60 00	Includes: Includes forms related to contracting requirements.
4020.10	Bond Forms	00 61 00	
4020.30	Certificates and Other Forms	00 62 00	
4020.50	Clarification and Modification Forms	00 63 00	
4020.70	Closeout Forms	00 65 00	
4030	Conditions of the Contract	00 70 00	Includes: Rights, responsibilities, and relationships of the parties to a construction contract.
4030.10	Contracting Definitions	00 71 00	
4030.30	General Conditions	00 72 00	
4030.35	Supplementary Conditions	00 73 00	
4040	Revisions, Clarifications, and Modifications	00 90 00	Includes: Filing and documentation of revisions, clarifications, and modifications to the construction documents.
4040.10	Precontract Revisions	00 91 00	
4040.30	Record Clarifications and Proposals	00 93 00	
4040.50	Record Modifications	00 94 00	

A SUBSTRUCTURE

Facility Substructure Performance Requirements 01 82 00

NUMBER	TITLE	MF NUMBER	EXPLANATION
A10	FOUNDATIONS		
	Foundations Performance Requirements	01 82 13	
	Load Capacity	01 82 13	
	Settlement	01 82 13	
A1010	Standard Foundations		Includes: Formwork, concrete, masonry and reinforcement. Includes Standard Foundation Supplementary Components as appropriate. May Include: Related Activities: Excavation, dewatering, excavation support systems, backfill and compaction, and soil treatment.
	<i>See Also:</i>		
	<i>Substructure Excavation: A9010.</i>		
	<i>Construction Dewatering: A9020.</i>		
	<i>Excavation Support Systems: A9030.</i>		
	<i>Backfill and Compaction: A9010.10.</i>		
	<i>Soil Treatment: A9040.</i>		
A1010.10	Wall Foundations		
	Continuous Footings		
	Cast-In-Place Concrete	03 30 00	
	Foundation Walls		
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Unit Masonry	04 20 00	
	Treated Wood Foundations	06 14 00	
	<i>See Also:</i>		
	<i>Subdrainage Systems: A6010.</i>		
A1010.30	Column Foundations		
	Spread Footings		
	Cast-In-Place Concrete	03 30 00	
	Column Piers		
	Cast-In-Place Concrete	03 30 00	
A1010.90	Standard Foundation Supplementary Components		Includes: Void forms, dampproofing and Insulation, to be included with standard foundation elements above as appropriate.
	Void Forms	03 11 00	
	Dampproofing	07 11 00	
	Insulation	07 21 00	
A1020	Special Foundations	31 60 00	May Include: Excavation, dewatering, excavation support systems, backfill and compaction, and soil treatment.
	<i>See Also:</i>		
	<i>Substructure Excavation: A9010.</i>		
	<i>Construction Dewatering: A9020.</i>		
	<i>Excavation Support Systems: A9030.</i>		
	<i>Backfill and Compaction: A9010.10.</i>		
	<i>Soil Treatment: A9040.</i>		
A1020.10	Driven Piles	31 62 00	Includes: Piles, pile driving, pile cut off, pile testing.

A SUBSTRUCTURE

NUMBER	TITLE	MF NUMBER	EXPLANATION
A1020.15	Bored Piles	31 63 00	Includes: Drilling, casing, bell bottom excavation, dewatering, removal of excavated materials, reinforcing, and concrete.
A1020.20	Caissons	31 64 00	Includes: Sunken or driven load-bearing enclosures to protect excavation for foundations, promote substructure construction, and become part of permanent structure.
A1020.30	Special Foundation Walls	31 66 16	Includes: Foundation walls of a special design.
A1020.40	Foundation Anchors	31 68 00	Includes: Anchor assemblies to fasten deep foundations, walls, and similar element to rock or other material.
A1020.50	Underpinning	31 48 00	Includes: Replacing a structural element's foundation while the structural element remains in place.
	<i>See Also:</i> <i>Excavation Support Systems:</i> <i>A9030.</i>		
A1020.60	Raft Foundations	03 71 00	Includes: Fine grading, subbase layer, mud slab, insulation, vapor retarder, waterproofing, formwork, expansion joints, control joints, reinforcement, concrete, and finishing.
	Cast-In-Place Concrete	03 30 00	
	<i>See Also:</i> <i>Slab-On-Grade Supplementary Components: A4090.</i>		
A1020.70	Pile Caps		Includes: Formwork, reinforcement, and concrete.
	Cast-In-Place Concrete	03 30 00	
A1020.80	Grade Beams		Includes: Formwork, reinforcement, and concrete.
	Cast-In-Place Concrete	03 30 00	
A20	SUBGRADE ENCLOSURES		
	Basement Construction Performance Requirements	01 82 16	
	Thermal Resistance	01 82 16	
	Lateral Earth Pressures	01 82 16	
	Water Vapor Transmission Resistance	01 82 16	
A2010	Walls for Subgrade Enclosures		Includes: Perimeter walls enclosing building space below grade. Includes formwork, reinforcing, concrete and masonry. Includes Subgrade Enclosure Wall Supplementary Components as appropriate. May Include: Related Activities: Excavation, dewatering, excavation support systems, backfill and compaction, and soil treatment.
	<i>See Also:</i> <i>Substructure Excavation: A9010.</i> <i>Construction Dewatering: A9020.</i> <i>Excavation Support Systems:</i> <i>A9030.</i> <i>Backfill and Compaction: A9010.10.</i> <i>Soil Treatment: A9040.</i>		
A2010.10	Subgrade Enclosure Wall Construction		
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Unit Masonry	04 20 00	

NUMBER	TITLE	MF NUMBER	EXPLANATION
A2010.20	Subgrade Enclosure Wall Interior Skin Plaster and Gypsum Board <i>See Also:</i> <i>Wall Finishes: C2010.</i>	09 20 00	
A2010.90	Subgrade Enclosure Wall Supplementary Components Dampproofing Waterproofing Insulation Vapor Retarder <i>See Also:</i> <i>Perimeter Insulation: A4090.10.</i> <i>Waterproofing below Slabs on Grade: A4090.30.</i> <i>Subdrainage Systems: A6010.</i>		Includes: Dampproofing, waterproofing, insulation, and vapor retarders to be included with subgrade enclosure wall elements above as appropriate.
		07 11 00	
		07 10 00	
		07 20 00	
		07 26 00	
A40	SLABS-ON-GRADE		
	Slabs-On-Grade Performance Requirements	01 82 00	
	Load Capacity	01 82 00	
	Thermal Resistance	01 82 00	
	Water Vapor Transmission Resistance	01 82 00	
	Levelness	01 82 00	
A4010	Standard Slabs-on-Grade		Includes: Slab construction supported continuously by earth or compacted fill. Includes fine grading, subbase layer, mud slab, insulation, vapor retarder, waterproofing, formwork, expansion joints, control joints, reinforcement, concrete, and finishing. Includes: Slabs-On-Grade Supplementary Components as appropriate. May Include: Related Activities: Excavation, dewatering, excavation support systems, backfill and compaction, and soil treatment.
	Cast-In-Place Concrete <i>See Also:</i> <i>Substructure Excavation: A9010.</i> <i>Construction Dewatering: A9020.</i> <i>Excavation Support Systems: A9030.</i> <i>Backfill and Compaction: A9010.10.</i> <i>Soil Treatment: A9040.</i> <i>Subgrade Enclosure Wall Waterproofing: A2010.90.</i> <i>Flooring: C2030.</i>	03 30 00	
A4020	Structural Slabs-on-Grade		Includes: Self-supporting slab construction not supported continuously by earth or compacted fill. Includes formwork, accessories, reinforcement, concrete, and finishing. Includes Slabs-On-Grade Supplementary Components as appropriate. May Include: Related Activities: Excavation, dewatering, excavation support systems, backfill and compaction, and soil treatment.

A SUBSTRUCTURE

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Cast-In-Place Concrete <i>See Also:</i> <i>Floor Structural Frame: B1010.</i> <i>Flooring: C2030.</i>	03 30 00	
A4030	Slab Trenches		Includes: Linear depressions in slabs on grade to collect and transmit liquids. Includes excavation, formwork, accessories, reinforcement, concrete, finishing, and trench cover.
	Cast-In-Place Concrete	03 30 00	
A4040	Pits and Bases		Includes: Depressions in slabs on grade or protrusions above slabs on grade. Includes formwork, accessories, reinforcement, concrete, finishing, pit covers, and anchor bolts.
	Cast-In-Place Concrete	03 30 00	
A4090	Slab-On-Grade Supplementary Components		Includes: Insulation, vapor retarder, waterproofing, mud slabs, and subbase layer to be included with slab-on-grade elements above as appropriate.
A4090.10	Perimeter Insulation	07 21 00	
A4090.20	Vapor Retarder	07 26 00	
A4090.30	Waterproofing	07 10 00	
A4090.50	Mud Slab	03 30 00	
A4090.60	Subbase Layer	31 23 23	
A60	WATER AND GAS MITIGATION		
A6010	Building Subdrainage	33 46 00	Includes: Systems to collect moisture and water below grade usually located at perimeter of structure or below slabs. Includes excavation, perforated pipe, drainage boards, granular fill, filter fabrics, and connection to storm sewerage systems or to daylight.
	Subdrainage Systems Performance Requirements <i>See Also:</i> <i>Building Support Plumbing Systems: D2030.</i> <i>Retaining Wall Drainage: G2060.60.</i> <i>Site Subdrainage: G3030.60.</i>	01 82 00	
A6010.10	Foundation Drainage	33 46 13	
A6010.20	Underslab Drainage <i>See Also:</i> <i>Retaining Walls: G2060.</i>	33 46 19	
A6020	Off-Gassing Mitigation	31 21 00	Includes: Mitigation of gases from underground sources.
	Off-Gassing Mitigation Performance Requirements		
A6020.10	Radon Mitigation	31 21 13	
A6020.50	Methane Mitigation	31 21 16	
A90	SUBSTRUCTURE RELATED ACTIVITIES		May be included with any other substructure element above.
A9010	Substructure Excavation	31 23 16	Includes: Excavation for structures below grade.

NUMBER	TITLE	MF NUMBER	EXPLANATION
A9010.10	Backfill and Compaction	31 23 23	Includes: Placing backfill and compacting fill in excess excavation for structures below grade.
	Backfill and Compaction Performance	01 82 00	
	Compaction	01 82 00	
	See Also:		
	Site Earthwork: G1070.		
A9020	Construction Dewatering	31 23 19	Includes: Removal of excessive water during construction operations.
	Construction Dewatering Performance Requirements		
A9030	Excavation Support	31 50 00	Includes: Cribbing, anchors, and other means of permanent and temporary support of excavations.
	Excavation Support Performance Requirements	01 82 00	
	Lateral Earth Pressures	01 82 00	
	See Also:		
	Underpinning: A1020.50.		
A9030.10	Anchor Tiebacks	31 51 00	Includes: Anchor assemblies to support
	Excavation Soil Anchors	31 51 13	
	Excavation Rock Anchors	31 51 16	
A9030.20	Cofferdams	31 52 00	Includes: Watertight enclosure that allow construction operation below the surface of water.
	Sheet Piling Cofferdams	31 52 13	
	Timber Cofferdams	31 52 16	
	Precast Concrete Cofferdams	31 52 19	
A9030.40	Cribbing and Walers	31 53 00	Includes: Structural members to line and support the lining of an excavation.
	Timber Cribwork	31 53 13	
A9030.60	Ground Freezing	31 54 00	Includes: Stabilizing earthwork by freezing.
A9030.70	Slurry Walls	31 56 00	Includes: Subsurface barriers constructed of trenches filled with a slurry mixture to impede or stop groundwater flow.
	Bentonite Slurry Walls	31 56 13	
	Attipulgite Slurry Walls	31 56 16	
	Slurry-Geomembrane Composite Slurry Walls	31 56 19	
	Lean Concrete Slurry Walls	31 56 23	
	Bio-Polymer Trench Drain	31 56 26	
A9040	Soil Treatment	31 31 00	Includes: Soil treatments to resist invasion of adjoining structure by pests and growth of vegetation.
	Rodent Control	31 31 13	
	See Also:		
	Rodent Control Devices: C1090.90		
	Termite Control	31 31 16	
	Vegetation Control	31 31 19	
	See Also:		
	Site Soil Treatment: G1070.90.		

B SHELL

Facility Shell Performance Requirements 01 83 00

NUMBER	TITLE	MF NUMBER	EXPLANATION
B10	SUPERSTRUCTURE		
	Superstructure Performance Requirements	01 83 13	
	See Also:		
	Special Structures: F1020.		
B1010	Floor Construction		
	Floor Construction Performance Requirements	01 83 13	
	Load Capacity	01 83 13	
	Deflection	01 83 13	
	Vibration	01 83 13	
	Fire Rating	01 83 13	
	Sound Transmission	01 83 13	
	Levelness	01 83 13	
	Thermal Resistance	01 83 13	
	Water Vapor Transmission Resistance	01 83 13	
B1010.10	Floor Structural Frame		Includes: Structural elements required for support of floor construction within basements and above grade. Includes columns, girders, beams, trusses, joists. Includes cast-in-place concrete, precast concrete, unit masonry, metal framed, and wood framed systems. Includes framed and sleeved openings for services. Includes Floor Construction Supplementary Components as appropriate.
	Columns Supporting Floors		
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Unit Masonry	04 20 00	
	Structural Metal Framing	05 10 00	
	Wood Framing	06 11 00	
	Heavy Timber Construction	06 13 00	
	Glued-Laminated Columns	06 18 16	
	Structural Plastics	06 50 00	
	Floor Girders and Beams		
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Structural Metal Framing	05 10 00	
	Steel Joist Girder Framing	05 21 23	
	Wood Framing	06 11 00	
	Heavy Timber Construction	06 13 00	
	Glued-Laminated Beams	06 18 13	
	Structural Plastics	06 50 00	
	Floor Trusses		
	Structural Metal Framing	05 10 00	
	Cold-Formed Metal Trusses	05 44 00	
	Wood Framing	06 11 00	
	Heavy Timber Trusses	06 13 26	
	Shop-Fabricated Wood Trusses	06 17 53	
	Floor Joists		
	Metal Joists	05 20 00	
	Cold-Formed Metal Joist Framing	05 42 00	
	Wood Framing	06 11 00	

B SHELL

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Wood-I-Joists	06 17 33	
	Metal-Web Wood Joists	06 17 36	
	<i>See Also:</i>		
	<i>Walls for Subgrade Enclosures:</i>		
	<i>A2010.</i>		
	<i>Exterior Load-Bearing Walls:</i>		
	<i>B2010.</i>		
	<i>Interior Load-Bearing Walls: C1010.</i>		
B1010.20	Floor Decks, Slabs, and Toppings		Includes: Structural slab, deck, and sheathing floor construction at intermediate floors of basement construction and above grade. Includes cast-in-place concrete, precast concrete, cementitious decks and toppings, metal decking, wood sheathing, and wood decking. Includes framed and sleeved penetrations for services and housekeeping pads for equipment. Includes Floor Construction Supplementary Components as appropriate.
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Cast Decks and Underlayment	03 50 00	
	Metal Decking	05 30 00	
	Acoustical Metal Decking	05 34 00	
	Raceway Decking Assemblies	05 35 00	
	Structural Panels	06 12 00	
	Wood Decking	06 15 00	
	Sheathing	06 16 00	
	Glued-Laminated Construction	06 18 00	
	Plastic Decking	06 53 00	
	Composite Decking	06 73 00	
	<i>See Also:</i>		
	<i>Raised Floor Construction: C1060.</i>		
	<i>Flooring: C2030.</i>		
B1010.30	Balcony Floor Construction		Includes: Structural frame and decks, slabs, and sheathing for balcony construction. Includes framed and sleeved penetrations for services and housekeeping pads for equipment. Includes Floor Construction Supplementary Components as appropriate.
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Glass Unit Masonry	04 23 16	
	Structural Metal Framing	05 10 00	
	Metal Joists	05 20 00	
	Metal Balconies	05 59 13	
	Wood Framing	06 11 00	
	Structural Panels	06 12 00	
	Heavy Timber Construction	06 13 00	
	Wood Decking	06 15 00	
	Sheathing	06 16 00	
	Shop-Fabricated Structural Wood	06 17 00	
	Glued-Laminated Construction	06 18 00	
	Structural Plastics	06 50 00	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Composite Decking	06 73 00	
	See Also:		
	Exterior Balcony Railings: B2080.		
	Traffic Bearing Coatings: B3040.		
	Exterior Ceilings and Soffits: B3080.		
	Interior Railings: C1090.		
	Flooring: C2030.		
B1010.40	Mezzanine Floor Construction		Includes: Structural frame and decks, slabs, and sheathing for mezzanine construction. Includes framed and sleeved penetrations for services and housekeeping pads for equipment. Includes Floor Construction Supplementary Components as appropriate.
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Glass Unit Masonry	04 23 16	
	Structural Metal Framing	05 10 00	
	Metal Joists	05 20 00	
	Wood Framing	06 11 00	
	Structural Panels	06 12 00	
	Heavy Timber Construction	06 13 00	
	Wood Decking	06 15 00	
	Sheathing	06 16 00	
	Shop-Fabricated Structural Wood	06 17 00	
	Glued-Laminated Construction	06 18 00	
	Structural Plastics	06 50 00	
	Composite Decking	06 73 00	
	See Also:		
	Interior Railings: C1090.		
	Flooring: C2030.		
	Modular Mezzanines: F1010.70.		
B1010.50	Ramps		Includes: Structural frame and decks, slabs, and sheathing for ramp construction.
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Structural Metal Framing	05 10 00	
	Metal Joists	05 20 00	
	Metal Ramps	05 51 36.16	
	Wood Framing	06 11 00	
	Structural Panels	06 12 00	
	Heavy Timber Construction	06 13 00	
	Wood Decking	06 15 00	
	Sheathing	06 16 00	
	Shop-Fabricated Structural Wood	06 17 00	
	Glued-Laminated Construction	06 18 00	
	Structural Plastics	06 50 00	
	Composite Decking	06 73 00	
	See Also:		
	Interior Railings and Handrails: C1090.		
	Flooring: C2030.		
B1010.90	Floor Construction Supplementary Components		Includes: Vapor retarders, air barriers, insulation, fireproofing, firestopping, expansion control, sound, vibration, and seismic control to be included with floor construction elements above as appropriate.

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Grouting	03 60 00	
	Vapor Retarder	07 26 00	
	Air Barrier	07 27 00	
	Insulation	07 20 00	
	Fireproofing	07 80 00	
	<i>See Also:</i>		
	<i>Plaster Fireproofing: C2010 and C2050.</i>		
	<i>Gypsum Board Fireproofing: C2010 and C2050.</i>		
	Firestopping	07 84 00	
	Expansion Control	07 95 00	
	Sound, Vibration, and Seismic Control	13 48 00	
B1020	Roof Construction		
	Roof Construction Performance Requirements	01 81 13	
	Load Capacity	01 81 13	
	Fire Rating	01 81 13	
	Sound Transmission	01 81 13	
	Thermal Resistance	01 81 13	
	Vapor Transmission Resistance	01 81 13	
B1020.10	Roof Structural Frame		Includes: Structural elements required for support of roof construction. Includes columns, girders, beams, trusses, and joists. Includes cast-in-place concrete, precast concrete, unit masonry, metal framed, and wood framed systems. Includes framed and sleeved openings for services. Includes Roof Construction Supplementary Components as appropriate.
	Columns Supporting Roofs		
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Unit Masonry	04 20 00	
	Structural Metal Framing	05 10 00	
	Wood Framing	06 11 00	
	Heavy Timber Construction	06 13 00	
	Glued-Laminated Columns	06 18 16	
	Structural Plastics	06 50 00	
	Roof Girders and Beams		
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Structural Metal Framing	05 10 00	
	Steel Joist Girder Framing	05 21 23	
	Wood Framing	06 11 00	
	Heavy Timber Construction	06 13 00	
	Glued-Laminated Beams	06 18 13	
	Structural Plastics	06 50 00	
	Roof Trusses		
	Structural Metal Framing	05 10 00	
	Cold-Formed Metal Trusses	05 44 00	
	Wood Framing	06 11 00	
	Heavy Timber Trusses	06 13 26	
	Shop-Fabricated Wood Trusses	06 17 53	
	Roof Joists		
	Metal Joists	05 20 00	
	Cold-Formed Metal Joist Framing	05 42 00	
	Wood Framing	06 11 00	
	Wood-I-Joists	06 17 33	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Metal-Web Wood Joists	06 17 36	
	See Also:		
	Exterior Load-Bearing Walls:		
	B2010.		
	Interior Load-Bearing Partitions:		
	C1010.		
B1020.20	Roof Decks, Slabs, and Sheathing		Includes: Structural roof deck, slab, and sheathing construction. Includes cast-in-place concrete, precast concrete, cementitious decks and toppings, metal decking, wood sheathing, wood decking, timber decking and expansion control. Includes framed and sleeved penetrations for services and housekeeping pads for equipment. Includes Roof Construction Supplementary Components as appropriate.
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Cast Decks and Underlayment	03 50 00	
	Lightweight Concrete Roof Insulation	03 52 00	
	Metal Decking	05 30 00	
	Acoustical Metal Decking	05 34 00	
	Raceway Decking Assemblies	05 35 00	
	Structural Panels	06 12 00	
	Wood Decking	06 15 00	
	Sheathing	06 16 00	
	Glued-Laminated Construction	06 18 00	
	Plastic Decking	06 53 00	
	Composite Decking	06 73 00	
	See Also:		
	Roofing: B3010.		
B1020.30	Canopy Construction		Includes: Structural frame and decks, slabs, and sheathing for canopy construction.
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Structural Metal Framing	05 10 00	
	Canopy Support Truss Assemblies	05 19 19	
	Metal Joists	05 20 00	
	Wood Framing	06 11 00	
	Structural Panels	06 12 00	
	Heavy Timber Construction	06 13 00	
	Wood Decking	06 15 00	
	Sheathing	06 16 00	
	Shop-Fabricated Structural Wood	06 17 00	
	Glued-Laminated Construction	06 18 00	
	Structural Plastics	06 50 00	
	Composite Decking	06 73 00	
	See Also:		
	Canopy Roofing: B3010.70.		
	Exterior Ceilings and Soffits: B3080.		
	Manufactured Canopies: F1020.60.		
B1020.90	Roof Construction Supplementary Components		Includes: Vapor retarders, air barriers, insulation, fireproofing, firestopping, and expansion control to be included with roof construction elements above as appropriate.
	Grouting	03 60 00	
	Vapor Retarder	07 26 00	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Air Barrier	07 27 00	
	Insulation	07 20 00	
	Fireproofing	07 80 00	
	<i>See Also:</i>		
	<i>Plaster Fireproofing: C2010 and C2050.</i>		
	<i>Gypsum Board Fireproofing: C2010 and C2050.</i>		
	Firestopping	07 84 00	
	Expansion Control	07 95 00	
	<i>See Also:</i>		
	<i>Roofing Vapor Retarder and Insulation: B3010.90.</i>		
B1080	Stairs		Includes: Stairs, fire escapes, metal walkways, and ladders.
	Stairways Performance Requirements	01 84 16	
	Load Capacity	01 84 16	
B1080.10	Stair Construction		Includes: Structural framing for exterior and interior stairs including treads, risers, and landings. Includes fire escapes and ladders.
	Concrete Stair Forming	03 11 23	
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete Stairs	03 41 23	
	Precast Concrete Stair Treads	03 48 19	
	Metal Stairs	05 51 00	
	Metal Stair Treads and Nosings	05 55 00	
	Decorative Metal Stairs	05 71 00	
	Wood Stairs	06 43 00	
	<i>See Also:</i>		
	<i>Stair Finishes: C2040.</i>		
	<i>Retractable Stairs: E1060.50.</i>		
	<i>Exterior Steps and Ramps: G2030.</i>		
B1080.30	Stair Soffits		
	Plaster and Gypsum Board	09 20 00	
	<i>See Also:</i>		
	<i>Ceiling Finishes: C2050.</i>		
B1080.50	Stair Railings		
	Wire Rope Railings	05 15 00	
	Metal Railings	05 52 00	
	Decorative Metal Railings	05 73 00	
	Wood Railings	06 43 16	
	Plastic Railings	06 63 00	
	Composite Railings	06 81 00	
	<i>See Also:</i>		
	<i>Exterior Railings: B2080.50.</i>		
	<i>Interior Railings: C1090.</i>		
B1080.60	Fire Escapes	05 51 23	
B1080.70	Metal Walkways	05 51 36	Includes: Catwalks and gratings over horizontal openings.
	Metal Catwalks	05 51 36.13	
	Metal Gratings	05 53 00	
B1080.80	Ladders	05 51 23	
	<i>See Also:</i>		
	<i>Roof Ladders: B3020.10.</i>		
	<i>Elevators: D1010.10</i>		

NUMBER	TITLE	MF NUMBER	EXPLANATION
B20	EXTERIOR VERTICAL ENCLOSURES		
	Vertical Exterior Enclosure Performance	01 83 16	
	Sustainable Design Requirements	01 83 16	
B2010	Exterior Walls		Includes: Exterior Wall Supplementary Components as appropriate. Includes Exterior Wall Opening Supplementary Components as appropriate.
	Exterior Walls Performance Requirements	01 83 16	
	Wind Load Capacity	01 83 16	
	Fire Rating	01 83 16	
	Thermal Resistance	01 83 16	
	Vapor Transmission Resistance	01 83 16	
	Air Infiltration Resistance	01 83 16	
	Sound Transmission	01 83 16	
	<i>See Also:</i>		
	<i>Exterior Windows: B2020.</i>		
	<i>Exterior Doors and Grilles: B2050.</i>		
	<i>Exterior Louvers and Vents: B2070.</i>		
	<i>Exterior Wall Appurtenances:</i>		
	<i>B2080.</i>		
B2010.10	Exterior Wall Veneer		Includes: Nonstructural outside face elements of exterior walls. Includes precast concrete veneer, unit masonry veneer, exterior insulation and finish systems, manufactured siding, and stucco. Includes water repellents, coatings, and painting.
	Precast Concrete	03 40 00	
	Unit Masonry	04 20 00	
	Masonry Veneer	04 26 13	
	Exterior Stone Cladding	04 42 00	
	Stone Masonry Veneer	04 43 13	
	Manufactured Masonry	04 70 00	
	Façade Support Truss Assemblies	05 19 13	
	Exterior Finish Carpentry	06 20 13	
	Simulated Stone	06 61 00	
	Water Repellents	07 19 00	
	Exterior Insulation and Finish Systems	07 24 00	
	Wall Panels	07 42 00	
	Faced Panels	07 44 00	
	Siding	07 46 00	
	Cement Plastering	09 24 00	
	Cement Stucco	09 24 23	
	Painting and Coating	09 90 00	
B2010.20	Exterior Wall Construction		Includes: Exterior wall construction including backup systems for wall veneer. May be vertical load bearing. Includes cast-in-place concrete walls, precast concrete walls, unit masonry walls, metal framed wall systems, and wood framed wall systems.
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Unit Masonry	04 20 00	
	Structural Metal Stud Framing	05 41 00	
	Wood Framing	06 11 00	
	Structural Panels	06 12 00	
	Sheathing	06 16 00	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
B2010.30	Exterior Wall Interior Skin		Includes: Materials to provide finish or protective covering on inside of face of exterior walls. May include insulation and vapor retarder.
	Plaster and Gypsum Board	09 20 00	
	<i>See Also:</i> <i>Wall Finishes: C2010.</i>		
B2010.40	Fabricated Exterior Wall Assemblies		Includes: Manufactured or fabricated assemblies that include exterior veneer and wall construction within one fabricated assembly and may also include interior skin. Includes Exterior Wall Supplementary Components as appropriate.
	Unit Masonry Panels	04 25 00	
	Fabricated Wall Panel Assemblies	07 42 63	
	Fabricated Faced Panel Assemblies	07 44 63	
	Curtain Wall Assemblies	08 44 00	
	Translucent Wall Assemblies	08 45 00	
	<i>See Also:</i> <i>Window Wall: B2020.30.</i>		
B2010.50	Parapets		Includes: Exterior wall construction above plane of roof. Includes Exterior Wall Veneers.
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Unit Masonry	04 20 00	
	Structural Metal Stud Framing	05 41 00	
	Wood Framing	06 11 00	
	Structural Panels	06 12 00	
	Sheathing	06 16 00	
	<i>See Also:</i> <i>Exterior Wall Veneer: B2010.10.</i>		
B2010.60	Equipment Screens		Includes: Exterior wall construction to screen equipment from public view. Includes Exterior Wall Veneers.
	Precast Concrete	03 40 00	
	Unit Masonry	04 20 00	
	Louvered Equipment Enclosures	08 92 00	
	<i>See Also:</i> <i>Exterior Wall Veneer: B2010.10.</i> <i>Exterior Fixed Grilles and Screens: B2080.10.</i>		
B2010.80	Exterior Wall Supplementary Components		Includes: Weather barriers, vapor retarders, air barriers, insulation, and expansion joints to be included with exterior wall elements above as appropriate.
	Grouting	03 60 00	
	Weather Barriers	07 25 00	
	Vapor Retarder	07 26 00	
	Air Barrier	07 27 00	
	Insulation	07 20 00	
	Expansion Joints	07 95 00	
B2010.90	Exterior Wall Opening Supplementary Components		Includes: Lintels, joint sealants, flashing, and sills to be included with exterior wall elements above as appropriate.
	Lintels		
	Joint Sealants	07 92 00	
	Flashing	07 60 00	
	Sills		

NUMBER	TITLE	MF NUMBER	EXPLANATION
B2020	Exterior Windows	08 50 00	Includes: Fixed or operable windows used singly and in multiples located in the exterior vertical enclosure. Includes Exterior Window Supplementary Components as appropriate. Includes windows units with louver blinds integrally set between glass panels. Includes metal, wood, plastic, and composite window units. May Include: Wall Opening Supplementary Components as appropriate.
	Exterior Windows Performance Requirements	01 83 16	
	Performance Class and Grade	01 83 16	
	Wind Load Capacity	01 83 16	
	Windborne Debris Resistance	01 83 16	
	Thermal Resistance	01 83 16	
	Condensation Resistance	01 83 16	
	Water Resistance	01 83 16	
	Air Infiltration	01 83 16	
	Shading Coefficient	01 83 16	
	Solar Heat Gain Coefficient	01 83 16	
	Visible Light Transmittance	01 83 16	
	Sound Transmission	01 83 16	
	Forced Entry Resistance	01 83 16	
	Bullet Resistance	01 83 16	
	Radio-Frequency-Interference Protection	01 83 16	
	Radiation Protection	01 83 16	
	Pressure Resistance	01 83 16	
	<i>See Also:</i>		
	<i>Exterior Wall Opening</i>		
	<i>Supplementary Components:</i>		
	<i>B2010.90.</i>		
	<i>Exterior Opening Protection</i>		
	<i>Devices: B2080.30.</i>		
	<i>Skylights: B3060.10.</i>		
	<i>Roof Windows: B3060.10.</i>		
	<i>Interior Windows: C1020.</i>		
	<i>Window Treatments: E2010.</i>		
B2020.10	Exterior Operating Windows	08 50 00	Includes: Window screens and storm windows.
	Window Screens	08 51 66	
		08 52 66	
		08 53 66	
		08 54 66	
	Storm Windows	08 51 69	
		08 52 69	
		08 53 69	
		08 54 69	
B2020.20	Exterior Fixed Windows	08 50 00	
B2020.30	Exterior Window Wall		
	Storefronts	08 43 00	
	<i>See Also:</i>		
	<i>Curtain Wall Assemblies: B2010.40.</i>		
	<i>Interior Glazed Partitions:</i>		
	<i>C1010.20.</i>		

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NUMBER	TITLE	MF NUMBER	EXPLANATION
B2020.50	Exterior Special Function Windows	08 56 00	Includes: Exterior windows with special characteristics for a special function.
	<i>See Also:</i> <i>Interior Special Function Windows:</i> <i>C1020.50.</i>		
	Exterior Pressure-Resistant Windows	08 55 00	
	Pressure-Resistant Glazing	08 88 39	
	<i>See Also:</i> <i>Exterior Pressure-Resistant Doors:</i> <i>B2050.40.</i> <i>Interior Pressure-Resistant Doors:</i> <i>C1030.70,</i>		
	Exterior Pass Windows	08 56 19	
	<i>See Also:</i> <i>Interior Pass Windows: C1020.50.</i>		
	Exterior Radio-Frequency-Interference Shielding Windows	08 56 46	
	<i>See Also:</i> <i>Exterior Radio-Frequency-Interference Shielding Doors:</i> <i>B2050.40.</i> <i>Interior Radio-Frequency-Interference Shielding Windows:</i> <i>C1020.50.</i> <i>Interior Radio-Frequency-Interference Shielding Doors:</i> <i>C1030.70.</i>		
	Exterior Radiation Shielding Windows	08 56 49	
	Radiation-Resistant Glazing	08 88 49	
	<i>See Also:</i> <i>Exterior Radiation Shielding Doors:</i> <i>B2050.40.</i> <i>Interior Radiation Shielding Windows: C1020.50.</i> <i>Interior Radiation Shielding Doors:</i> <i>C1030.70.</i> <i>Radiation Detection and Alarm:</i> <i>D7050.20.</i> <i>Radiation Protection: F1030.50.</i>		
	Exterior Security Windows	08 56 53	
	Security Glazing	08 88 53	
	Ballistics-Resistant Glazing	08 88 56	
	<i>See Also:</i> <i>Exterior Security Doors: B2050.40.</i> <i>Exterior Security Gates: B2050.70.</i> <i>Interior Security Windows:</i> <i>C1020.50.</i> <i>Interior Security Doors: C1030.70.</i> <i>Interior Security Gates: C1040.50.</i> <i>Electronic Safety and Security: D70.</i> <i>Security Equipment: E1040.60.</i> <i>Security Procedures: Z1020.70.</i> <i>Temporary Security Barriers & Enclosures: Z1050.40.</i>		

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Exterior Detention Windows	08 56 63	
	<i>See Also:</i>		
	<i>Exterior Detention Doors:</i>		
	<i>B2050.40.</i>		
	<i>Interior Detention Windows:</i>		
	<i>C1020.50.</i>		
	<i>Interior Detention Doors: C1030.70.</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>		
	Exterior Sound Control Windows	08 56 73	
	<i>See Also:</i>		
	<i>Exterior Sound Control Doors:</i>		
	<i>B2050.40,</i>		
	<i>Interior Sound Control Windows:</i>		
	<i>C1020.50.</i>		
	<i>Interior Sound Control Doors:</i>		
	<i>C1030.70, B2020.90</i>		
	Exterior Window Supplementary Components		Includes: Glazing, operating hardware, screens, and other accessories to be included with exterior window elements above as appropriate.
	Hardware	08 75 00	
	Glazing	08 80 00	
	Finishes		
	<i>See Also:</i>		
	<i>Exterior Wall Opening</i>		
	<i>Supplementary Components:</i>		
	<i>B2010.90.</i>		
	<i>Exterior Opening Protection</i>		
	<i>Devices: B2080.30.</i>		
B2050	Exterior Doors and Grilles		Includes: Doors, grilles, and gates located in the exterior vertical enclosure. Includes screen and storm door assemblies. Includes Exterior Door Supplementary Components as appropriate. May Include: Wall Opening Supplementary Components as appropriate.
	Exterior Doors Performance Requirements	01 83 16	
	Wind Load Capacity	01 83 16	
	Thermal Resistance	01 83 16	
	Air Infiltration	01 83 16	
	Water Resistance	01 83 16	
	Sound Transmission	01 83 16	
	Forced Entry Resistance	01 83 16	
	Bullet Resistance	01 83 16	
	Radio-Frequency-Interference Protection	01 83 16	
	Radiation Protection	01 83 16	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Pressure Resistance <i>See Also:</i> <i>Exterior Wall Opening</i> <i>Supplementary Components:</i> <i>B2010.90.</i> <i>Interior Doors: C1030.</i> <i>Interior Grilles: C1040.</i>	01 83 16	
B2050.10	Exterior Entrance Doors	08 42 00	Includes: Exterior personnel door assemblies at exterior main entrances. Includes automatic, revolving, balanced, and other special operating entrance doors, and sliding storefront wall systems. Includes Exterior Door Supplementary Components as appropriate when not part of storefront or curtain wall system.
	Sliding Glass Doors	08 32 00	
	All-Glass Entrances	08 42 26	
	Automatic Entrances	08 42 29	
	Revolving Door Entrances	08 42 33	
	Balanced Door Entrances	08 42 36	
	Sliding Storefronts <i>See Also:</i> <i>Glazed Curtain Wall: B2010.40.</i> <i>Exterior Window Wall: B2020.30.</i> <i>Interior Entrance Doors: C1030.20.</i>	08 43 29	
B2050.20	Exterior Utility Doors	08 10 00	Includes: Exterior personnel doors assemblies other than at main entrances. Includes Exterior Door Supplementary Components as appropriate.
B2050.30	Exterior Oversize Doors		Includes: Large exterior door assemblies to allow for passage of large objects involving a variety of operating methods. Includes Exterior Door Supplementary Components as appropriate including operators and drive mechanisms.
	Exterior Coiling Doors	08 33 00	
	Exterior Panel Doors	08 36 00	
	Exterior Sectional Doors	08 36 13	
	Exterior Single-Panel Doors	08 36 16	
	Exterior Multi-Leaf Vertical Lift Doors	08 36 19	
	Exterior Telescoping Vertical Lift Doors	08 36 23	
	Hangar Doors	08 34 16	
B2050.40	Exterior Special Function Doors	08 30 00	Includes: Exterior door assemblies for a variety of special functions and applications involving a variety of operating methods. Includes Exterior Door Supplementary Components as appropriate including controls and operators.
	Exterior Cold Storage Doors <i>See Also:</i> <i>Cold Storage Rooms: F1010.50.</i>	08 34 13	
	Exterior Industrial Doors	08 34 19	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Exterior Radio-Frequency-Interference Shielding Doors	08 34 46	
	See Also:		
	Exterior Radio-Frequency-Interference Shielding Windows:		
	B2020.50.		
	Interior Radio-Frequency-Interference Shielding Windows:		
	C1020.50.		
	Interior Radio-Frequency-Interference Shielding Doors:		
	C1030.70.		
	Exterior Radiation Shielding Doors	08 34 49	
	Radiation-Resistant Glazing	08 88 49	
	See Also:		
	Exterior Radiation Shielding Windows: B2020.50.		
	Interior Radiation Shielding Windows: C1020.50.		
	Interior Radiation Shielding Doors: C1030.70.		
	Radiation Detection and Alarm: D7050.20.		
	Radiation Protection: F1030.50.		
	Exterior Security Doors	08 34 53	
	Security Glazing	08 88 53	
	Ballistics-Resistant Glazing	08 88 56	
	See Also:		
	Exterior Security Windows: B2020.50.		
	Exterior Security Gates: B2050.70.		
	Interior Security Windows: C1020.50.		
	Interior Security Doors: C1030.70.		
	Interior Security Gates: C1040.50.		
	Electronic Safety and Security: D70.		
	Security Equipment: E1040.60.		
	Security Procedures: Z1020.70.		
	Temporary Security Barriers & Enclosures: Z1050.40.		
	Exterior Detention Doors	08 34 63	
	See Also:		
	Exterior Detention Windows: B2020.50.		
	Interior Detention Windows: C1020.50.		
	Interior Detention Doors: C1030.70.		
	Detention Monitoring and Control: D7070.		
	Detention Equipment: E1040.70.		
	Detention Cell Modules: F1010.10.		
	Metal Detention Enclosures: F1010.50.		
	Detention Project Procedures: Z1020.70.		

B SHELL

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Exterior Sound Control Doors <i>See Also:</i> <i>Exterior Sound Control Windows:</i> <i>B2020.50.</i> <i>Interior Sound Control Windows:</i> <i>C1020.50.</i> <i>Interior Sound Control Doors:</i> <i>C1030.70.</i>	08 34 73	
	Exterior Traffic Doors <i>See Also:</i> <i>Interior Traffic Doors: C1030.70.</i>	08 38 00	
	Exterior Pressure-Resistant Doors <i>See Also:</i> <i>Exterior Pressure-Resistant Windows: B2020.50.</i> <i>Interior Pressure-Resistant Doors: C1030.70.</i> <i>Interior Special Function Doors: C1030.70.</i>	08 39 00	
B2050.60	Exterior Grilles		Includes: Exterior devices of open construction to provide moveable barrier to provide access through wall or other divider.
	Exterior Coiling Grilles	08 33 00	
	Exterior Folding Grilles <i>See Also:</i> <i>Exterior Fixed Grilles and Screens: B2080.10.</i> <i>Interior Grilles: C1040.10.</i>	08 35 16	
B2050.70	Exterior Gates <i>See Also:</i> <i>Interior Gates: C1040.50.</i> <i>Fences and Gates: G2060.</i>		Includes: Exterior devices of solid or open construction to provide moveable barrier to provide access through wall or other divider.
	Exterior Security Gates <i>See Also:</i> <i>Exterior Security Windows: B2020.50.</i> <i>Exterior Security Doors: B2050.40.</i> <i>Interior Security Windows: C1020.50.</i> <i>Interior Security Doors: C1030.70.</i> <i>Interior Security Gates: C1040.50.</i> <i>Electronic Safety and Security: D70.</i> <i>Security Equipment: E1040.60.</i> <i>Security Procedures: Z1020.70.</i> <i>Temporary Security Barriers & Enclosures: Z1050.40.</i>	08 34 56	
B2050.90	Exterior Door Supplementary Components		Includes frames, hardware, glazing and louvers that are part of door to be included with exterior door elements above as appropriate.
	Frames	08 10 00	
	Specialty Door Frames	08 30 00	
	Door Hardware	08 71 00	
	Door Glazing	08 80 00	
	Door Louvers	08 91 26	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Finishes		
	<i>See Also:</i>		
	<i>Interior Door Louvers: C2030.90.</i>		
B2070	Exterior Louvers and Vents	08 90 00	Includes: Exterior louvers which are not an integral part of mechanical equipment, including louvers connected to ducts.
B2070.10	Exterior Louvers	08 91 00	
	Exterior Louvers Performance Requirements	01 83 16	
	Performance Rating	01 83 16	
	Wind Load Capacity	01 83 16	
	Free Area	01 83 16	
	Air Performance	01 83 16	
	Wind-Driven Rain Performance	01 83 16	
	Sound Transmission	01 83 16	
	<i>See Also:</i>		
	<i>Louvered Equipment Screens:</i>		
	<i>B2010.60.</i>		
	<i>Exterior Door Louvers: B2050.90.</i>		
	<i>Interior Louvers: C1090.15.</i>		
	<i>Interior Door Louvers: C2030.90.</i>		
B2070.50	Exterior Vents	08 95 00	
B2080	Exterior Wall Appurtenances		
B2080.10	Exterior Fixed Grilles and Screens	10 82 13	Includes: Exterior enclosures, grilles and screens of wood, metal, plastic, and other materials for a variety of purposes including screening of equipment.
	Decorative Metal	05 70 00	
	Wood Screens	06 49 00	
	Plastic Fabrications	06 60 00	
	Composite Fabrications	06 80 00	
	<i>See Also:</i>		
	<i>Equipment Screens: B2010.60.</i>		
	<i>Interior Screens: C1010.</i>		
	<i>Site Screening Devices: G2060.80.</i>		
B2080.30	Exterior Opening Protection Devices		Includes: Manufactured items such as louvers, fins, shutters, demountable panels, awnings, and sun screens to provide sun control, privacy, security, insulation, and storm protection on exterior of windows, skylights, and entrances. Includes fixed and moveable, manually and electrically operated, and automatically controlled devices.
	<i>See Also:</i>		
	<i>Window Treatments: E2010.</i>		
	Exterior Protection	10 71 00	
	Exterior Sun Control Devices	10 71 13	
	Storm Panels	10 71 16	
	Awnings	10 73 13	
B2080.50	Exterior Balcony Walls and Railings	05 52 00	Includes: Complete balcony wall and railing assemblies. Includes cast-in-place concrete,
	Balcony Walls	05 73 00	
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Unit Masonry	04 20 00	
	Structural Metal Stud Framing	05 41 00	
	Wood Framing	06 11 00	

B SHELL

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Sheathing	06 16 00	
	<i>See Also:</i>		
	<i>Exterior Wall Veneer: B2010.10.</i>		
	Railings		
	Metal Railings	05 52 00	
	Decorative Metal Railings	05 73 00	
	Wood Railings	06 43 16	
	Plastic Railings	06 63 00	
	Composite Railings	06 81 00	
	<i>See Also:</i>		
	<i>Balcony Floor Construction:</i>		
	<i>B1010.30.</i>		
	<i>Interior Railings: C1090.</i>		
	<i>Stair Railings: B1080.50.</i>		
B2080.70	Exterior Fabrications		Includes: Exterior fabrications of a variety of materials formed to various profiles for a variety of purposes including column covers.
	Glass-Fiber-Reinforced Concrete	03 49 00	
	Metal Fabrications	05 50 00	
	Column Covers	05 58 13	
	Decorative Metal	05 70 00	
	Ornamental Woodwork	06 44 00	
	Plastic Fabrications	06 60 00	
	Simulated Stone Fabrications	06 61 00	
	Composite Fabrications	06 80 00	
	Plaster Fabrications	09 27 00	
	<i>See Also:</i>		
	<i>Interior Fabrications: C2020.</i>		
B2080.80	Bird Control Devices	10 81 13	Includes: Mechanical, electrical, physical, and chemical repellent systems, and protective devices.
	<i>See Also:</i>		
	<i>Pest Control Devices: C1090.90.</i>		
B2090	Exterior Wall Specialties	10 74 00	Includes: Complete fabrication of metal, wood, and fiberglass, including accessories and appurtenances.
	Wall Specialties	07 77 00	
	Exterior Clocks	10 74 13	
	Below-Grade Egress Assemblies	10 74 43	
	Window Wells	10 74 46	
	<i>See Also:</i>		
	<i>Roof Specialties: B3020.30.</i>		
B30	EXTERIOR HORIZONTAL ENCLOSURES		
	Horizontal Exterior Enclosure Performance	01 83 16	
B3010	Roofing		
	Roofing Performance Requirements	01 83 19	
	Sustainable Design Requirements	01 83 19	
	<i>See Also:</i>		
	<i>Roof Construction: B1020.</i>		

NUMBER	TITLE	MF NUMBER	EXPLANATION
B3010.10	Steep Slope Roofing	07 30 00	Includes: Lapped roofing shingles, shakes and roofing tiles, including fastening and flashing products and methods. Includes Roofing Supplementary Components as appropriate.
	Steep Roofing Performance Requirements	01 83 19	
	Sustainable Design Requirements	01 83 19	
	Fire Rating	01 83 19	
	Exterior Fire-Test Exposure	01 83 19	
	Wind Resistance	01 83 19	
	Wind Uplift Resistance	01 83 19	
	FMG Fire/Windstorm Rating	01 83 19	
	FMG Hail Resistance Rating	01 83 19	
	Impact Resistance	01 83 19	
	Thermal Resistance	01 83 19	
	Exposed Surface Solar Reflectance	01 83 19	
	Energy Performance	01 83 19	
	Water Vapor Transmission Resistance	01 83 19	
	Roofing Weight	01 83 19	
	Roofing Shingles and Shakes	07 31 00	
	Roof Tiles	07 32 00	
	Roof Panels	07 41 00	
	Sheet Metal Roofing	07 61 00	
	Sheet Metal Roofing Specialties	07 63 00	
	<i>See Also:</i>		
	<i>Rainwater Management: B3020.70.</i>		
B3010.50	Low-Slope Roofing		Includes: Includes membrane roofing of various types and protected membrane roofing, including fastening and flashing products. Includes Roofing Supplementary Components as appropriate.
	Low-Slope Roofing Performance Requirements	01 83 19	
	Sustainable Design Requirements	01 83 19	
	Fire Rating	01 83 19	
	Exterior Fire-Test Exposure	01 83 19	
	Wind Uplift Resistance	01 83 19	
	FMG Fire/Windstorm Rating	01 83 19	
	FMG Hail Resistance Rating	01 83 19	
	Thermal Resistance	01 83 19	
	Exposed Surface Solar Reflectance	01 83 19	
	Energy Performance	01 83 19	
	Water Vapor Transmission Resistance	01 83 19	
	Roofing Weight	01 83 19	
	Low-Slope Roofing Membrane	07 50 00	
	Protected Membrane Roofing	07 55 00	
	Low-Slope Roofing Cover	07 50 00	
	Roofing Ballast	07 50 00	
	Roofing Gravel		
	Roofing Pavers	07 76 00	
	Roofing Coatings		
	Vegetated Low-Slope Roofing	07 55 63	
	<i>See Also:</i>		
	<i>Rainwater Management: B3020.70.</i>		
	<i>Traffic Bearing Horizontal Enclosures: B3040.</i>		

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NUMBER	TITLE	MF NUMBER	EXPLANATION
B3010.70	Canopy Roofing		Includes: Roofing of various types over canopies. Includes Roofing Supplementary Components as appropriate.
	<p><i>See Also:</i> <i>Canopy Frame: B1020.30.</i> <i>Exterior Ceilings and Soffits: B3080.</i> <i>Manufactured Canopies: F1020.60.</i></p>		
B3010.90	Roofing Supplementary Components		Includes: Substrate boards, vapor retarder, air barriers, deck insulation, flashing and sheet metal, and expansion joints to be included with roofing elements above as appropriate.
	Substrate Board	09 28 00	
	Deck Insulation	07 22 00	
	Vapor Retarder	07 26 00	
	Air Barrier	07 27 00	
	Sheet Metal Flashing and Trim	07 62 00	
	Flexible Flashing	07 65 00	
	Copings	07 71 13	
	Counterflashing Systems	07 71 16	
	Gravel Stops and Fascias	07 71 19	
	Expansion Joints	07 71 29	
	<p><i>See Also:</i> <i>Lightweight Concrete Roof Insulation: B1020.20.</i> <i>Roof Construction Vapor Retarders and Air Barriers: B1020.90.</i> <i>Roof Construction Insulation: B1020.90.</i> <i>Rainwater Management: B3020.70.</i></p>		
B3020	Roof Appurtenances		Includes: Roof specialties and accessories installed on or in roofing or traffic bearing horizontal enclosure systems. Includes components for the management of rainwater. Includes accessories installed on and in roofing other than mechanical and structural items.
	<p><i>See Also:</i> <i>Vents and Hatches: B3060.50.</i></p>		
B3020.10	Roof Accessories	07 72 00	
	Roof Ladders	05 51 33	
	<p><i>See Also:</i> <i>Ladders: B1080.80.</i></p>		
	Roof Curbs	07 72 13	
	Relief Vents	07 72 23	
	Ridge Vents	07 72 26	
	Roof Walkways	07 72 46	
	Snow Guards	07 72 53	
B3020.30	Roof Specialties	10 74 00	
	Cupolas	10 74 23	
	Spires	10 74 26	
	Steeple	10 74 29	
	Weather vanes	10 74 33	
	<p><i>See Also:</i> <i>Sheet Metal Roofing Specialties: B3010.10.</i></p>		

NUMBER	TITLE	MF NUMBER	EXPLANATION
B3020.70	Rainwater Management		Includes: Components to manage rain water from roofing and traffic bearing horizontal enclosures.
	Conductor Heads		
	Gutters	07 71 23	
	Downspouts	07 71 23	
	Scuppers	07 71 33	
	Precast Concrete Splash Blocks	03 48 16	
	<i>See Also:</i>		
	<i>Stormwater Drainage Piping System: D2030.20</i>		
B3040	Traffic Bearing Horizontal Enclosures		Includes: Horizontal enclosures that are also traffic bearing. Includes Horizontal Enclosure Supplementary Components as appropriate.
	Traffic Bearing Horizontal Enclosures	01 83 16	
	Fire Rating	01 83 16	
	Exterior Fire-Test Exposure	01 83 16	
	Wind Uplift Resistance	01 83 16	
	Thermal Resistance	01 83 16	
	Water Vapor Transmission Resistance	01 83 16	
	Slip Resistance	01 83 16	
	System Weight	01 83 16	
	<i>See Also:</i>		
	<i>Low Slope Roofing: B3010.</i>		
	<i>Roof Appurtenances: B3020.</i>		
	<i>Rainwater Management: B3020.70.</i>		
B3040.10	Traffic Bearing Coatings	07 18 00	Includes: Surface applied waterproofing exposed to weather and suitable for pedestrian or vehicular traffic.
B3040.30	Horizontal Waterproofing Membrane	07 10 00	Includes waterproofing membranes of various types. Includes substrate board, deck insulation, vapor retarder, sheet metal flashing and trim, flexible flashing, and expansion joints.
B3040.50	Wear Surfaces		Includes: Wearing surfaces on top of horizontal waterproofing membrane that are suitable for pedestrian or vehicular traffic.
	Roof Pavers	07 76 00	
	Rigid Paving	32 13 00	
	Unit Pavers	32 14 00	
B3040.90	Horizontal Enclosure Supplementary Components		Includes: Substrate board, deck insulation, vapor retarder, sheet metal flashing and trim, flexible flashing, and expansion joints to be included with horizontal enclosure elements above as appropriate.
	Substrate Board	09 28 00	
	Deck Insulation	07 20 00	
	Vapor Retarder	07 26 00	
	Sheet Metal Flashing and Trim	07 62 00	
	Flexible Flashing	07 65 00	
	Copings	07 71 13	
	Counterflashing Systems	07 71 16	
	Gravel Stops and Fascias	07 71 19	
	Expansion Joints	07 71 29	
	<i>See Also:</i>		
	<i>Rainwater Management: B3020.70.</i>		

B SHELL

NUMBER	TITLE	MF NUMBER	EXPLANATION
B3060	Horizontal Openings		Includes: Openings in horizontal enclosures including roofing and traffic bearing horizontal enclosures. Includes Horizontal Opening Supplementary Components as appropriate.
	Horizontal Openings Performance Requirements		
B3060.10	Roof Windows and Skylights	08 60 00	
	Roof Window and Skylight Performance	01 83 16	
	Load Capacity	01 83 16	
	Concentrated Loads	01 83 16	
	Deflection	01 83 16	
	Thermal Resistance	01 83 16	
	Solar Heat Gain	01 83 16	
	Visible Light Transmittance	01 83 16	
	Air Infiltration Resistance	01 83 16	
	Roof Windows	08 61 00	Includes: Operable and non-operable roof windows.
	Unit Skylights	08 62 00	Includes: Skylights without framing with plastic and glass glazing.
	Framed Skylights		Includes: Skylights with framing.
	Metal-Framed Skylights	08 63 00	
	Plastic-Framed Skylights	08 64 00	
	Skylight Protection and Screens	08 67 00	
	<i>See Also:</i>		
	<i>Exterior Windows: B2020.</i>		
B3060.50	Vents and Hatches		Includes: Other roof openings such as roof hatches, smoke vents, and gravity roof ventilators.
	Roof Hatches	07 72 33	
	Smoke Vents	07 72 36	
	<i>See Also:</i>		
	<i>Roof Appurtenances: B3020.</i>		
	<i>Elevators: D1010.10.</i>		
B3060.90	Horizontal Opening Supplementary Components		Includes: Frames, hardware, glazing, flashing, and joint sealants to be included with horizontal opening elements above as appropriate.
	Frames		
	Hardware	08 75 00	
	Glazing	08 80 00	
	Flashing	07 60 00	
	Joint Sealants	07 92 00	
B3080	Overhead Exterior Enclosures		Includes: Exposed to weather construction under horizontal enclosure construction. Includes suspension and support systems, insulation, vapor retarders, and air barriers.
	Overhead Exterior Enclosures Performance	01 83 16	
	Wind Load Capacity	01 83 16	
	Thermal Resistance	01 83 16	
	Vapor Transmission Resistance	01 83 16	
	Fire Rating	01 83 16	
B3080.10	Exterior Ceilings		
	Wall Panels	07 42 00	
	Faced Panels	07 44 00	
	Plaster and Gypsum Board	09 20 00	
	Specialty Ceilings	09 54 00	
	Textured Ceilings	09 56 00	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Painting and Coating	09 90 00	
	<i>See Also:</i>		
	<i>Interior Suspended Ceiling</i>		
	<i>Construction: C1070.</i>		
B3080.20	Exterior Soffits		
	Soffit Panels	07 42 93	
	Faced Panels	07 44 00	
	Plaster and Gypsum Board	09 20 00	
	Specialty Ceilings	09 54 00	
	Textured Ceilings	09 56 00	
	Painting and Coating	09 90 00	
	Soffit Vents	08 95 13	
B3080.30	Exterior Bulkheads		
	Wall Panels	07 42 00	
	Faced Panels	07 44 00	
	Plaster and Gypsum Board	09 20 00	
	Specialty Ceilings	09 54 00	
	Textured Ceilings	09 56 00	
	Painting and Coating	09 90 00	

C INTERIORS

Interiors Performance Requirement

01 84 00

NUMBER	TITLE	MF NUMBER	EXPLANATION
C10	INTERIOR CONSTRUCTION		
	Interior Construction Performance Requirements	01 84 13	
C1010	Interior Partitions	10 22 00	
	Interior Partitions Performance Requirements	01 84 13	
	Lateral Load Capacity	01 84 13	
	Fire Rating	01 84 13	
	Sound Transmission	01 84 13	
	Thermal Resistance	01 84 13	
	Water Vapor Transmission Resistance	01 84 13	
	Bullet Resistance	01 84 13	
	Radio-Frequency-Interference Protection	01 84 13	
	Radiation Protection	01 84 13	
	See Also:		
	Applied Wall Finishes: C2010.		
C1010.10	Interior Fixed Partitions		Includes: Enclosures and partitions which are fixed and secured in place. Includes walls of concrete; and masonry; and wood and metal stud partitions with associated wall surfaces. Includes partitions of an open nature, such as wire mesh partitions. Partitions may be load bearing or non-load bearing. Includes Interior Partition Supplementary Components as appropriate.
	Cast-In-Place Concrete	03 30 00	
	Precast Concrete	03 40 00	
	Unit Masonry	04 20 00	
	Structural Metal Stud Framing	05 41 00	
	Wood Framing	06 11 00	
	Plaster and Gypsum Board	09 20 00	
	Wire Mesh Partitions	10 22 13	
	See Also:		
	Compartments and Cubicles: C1090.		
C1010.20	Interior Glazed Partitions		Includes: Partitions primarily composed of glazed elements that may be fabricated or field constructed. Includes Interior Partition Supplementary Components as appropriate.
	Storefronts	08 43 00	
	See Also:		
	Exterior Window Walls: B2020.30.		
C1010.40	Interior Demountable Partitions	10 22 19	Includes: Partitions which can be demounted and relocated with minimum of labor.
	Interior Demountable Partitions Performance Requirements	01 84 13	
	Lateral Load Capacity	01 84 13	
	Fire Rating	01 84 13	
	Sound Transmission	01 84 13	
	Flame Spread Index	01 84 13	
	Smoke Developed Index	01 84 13	
	Demountable Metal Partitions	10 22 19.13	

C INTERIORS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Demountable Wood Partitions	10 22 19.23	
	Demountable Plastic Partitions	10 22 19.33	
	Demountable Composite Partitions	10 22 19.43	
	Demountable Gypsum Partitions	10 22 19.53	
C1010.50	Interior Operable Partitions		Includes: Track-supported, operable panels and partitions, top hung and floor supported, and manually and power operated. Includes auditorium partitions and dividers. Includes overhead supports.
	Interior Operable Partitions Performance Requirements	01 84 13	
	Fire Rating	01 84 13	
	Sound Transmission	01 84 13	
	Noise Isolation	01 84 13	
	Sound Adsorption	01 84 13	
	Flame Spread Index	01 84 13	
	Smoke Developed Index	01 84 13	
	Accordion Folding Partitions	10 22 33	
	Coiling Partitions	10 22 36	
	Folding Panel Partitions	10 22 39	
	Sliding Partitions	10 22 43	
	<i>See Also:</i>		
	<i>Interior Sliding Doors: C1030.25.</i>		
	<i>Interior Folding Doors: C1030.30.</i>		
	<i>Gymnasium Dividers: E1070.50.</i>		
C1010.70	Interior Screens		Includes: Portable and open dividers.
	Portable Partitions, Screens and Panels	10 22 23	
	Grilles and Screens	10 82 23	
	<i>See Also:</i>		
	<i>Interior Grilles and Gates: C1040.</i>		
C1010.90	Interior Partition Supplementary Components		Includes: Sound isolation components, firestopping, and expansion control to be included with interior partition elements above as appropriate.
	Sound Isolation	13 48 00	
	Acoustic Insulation	09 81 00	
	Firestopping	07 84 00	
	Expansion Control	07 95 00	
C1020	Interior Windows	08 50 00	Includes: Interior fixed or operable windows used singly and in multiples. Includes Interior Window Supplementary Components as appropriate. Includes metal, wood, plastic, and composite window units.
	Interior Windows Performance Requirements	01 84 13	
	Fire Rating	01 84 13	
	Sound Transmission	01 84 13	
	Forced Entry Resistance	01 84 13	
	Bullet Resistance	01 84 13	
	Radio-Frequency-Interference Protection	01 84 13	
	Radiation Protection	01 84 13	
	<i>See Also:</i>		
	<i>Exterior Windows: B2020.</i>		
	<i>Interior Glazed Partitions:</i>		
	<i>C1010.20.</i>		
C1020.10	Interior Operating Windows	08 50 00	
C1020.20	Interior Fixed Windows	08 50 00	

NUMBER	TITLE	MF NUMBER	EXPLANATION
C1020.50	Interior Special Function Windows	08 56 00	Includes interior windows with special characteristics for a special function.
	Interior Observation Windows		
	Interior Pass Windows	08 56 19	
	<i>See Also:</i>		
	<i>Exterior Pass Windows: B2020.50.</i>		
	Interior Radio-Frequency-Interference Shielding Windows	08 56 46	
	<i>See Also:</i>		
	<i>Exterior Radio-Frequency-Interference Shielding Windows: B2020.50.</i>		
	<i>Exterior Radio-Frequency-Interference Shielding Doors: B2050.40.</i>		
	<i>Interior Radio-Frequency-Interference Shielding Doors: C1030.70.</i>		
	Interior Radiation Shielding Windows	08 56 49	
	Radiation-Resistant Glazing	08 88 49	
	<i>See Also:</i>		
	<i>Exterior Radiation Shielding Windows: B2020.50.</i>		
	<i>Exterior Radiation Shielding Doors: B2050.40.</i>		
	<i>Interior Radiation Shielding Doors: C1030.70.</i>		
	<i>Radiation Detection and Alarm: D7050.20.</i>		
	<i>Radiation Protection: F1030.50.</i>		
	Interior Security Windows	08 56 53	
	Security Glazing	08 88 53	
	Ballistics-Resistant Glazing	08 88 56	
	<i>See Also:</i>		
	<i>Exterior Security Windows: B2020.50.</i>		
	<i>Exterior Security Doors: B2050.40.</i>		
	<i>Exterior Security Gates: B2050.70.</i>		
	<i>Interior Security Doors: C1030.70.</i>		
	<i>Interior Security Gates: C1040.50.</i>		
	<i>Electronic Safety and Security: D70.</i>		
	<i>Security Equipment: E1040.60.</i>		
	<i>Security Procedures: Z1020.70.</i>		
	<i>Temporary Security Barriers & Enclosures: Z1050.40.</i>		
	Interior Detention Windows	08 56 63	
	<i>See Also:</i>		
	<i>Exterior Detention Windows: B2020.50.</i>		
	<i>Exterior Detention Doors: B2050.40.</i>		
	<i>Interior Detention Doors: C1030.70.</i>		
	<i>Detention Monitoring and Control: D7070.</i>		
	<i>Detention Equipment: E1040.70.</i>		
	<i>Metal Detention Enclosures: F1010.50.</i>		

C INTERIORS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	<i>Detention Project Procedures: Z1020.70.</i>		
	Interior Sound Control Windows	08 56 73	
	<i>See Also:</i>		
	<i>Exterior Sound Control Windows: B2020.50.</i>		
	<i>Exterior Sound Control Doors: B2050.40.</i>		
	<i>Interior Sound Control Doors: C1030.70.</i>		
C1020.90	Interior Window Supplementary Components		Includes: Frames, sills, operating hardware, glazing to be included with interior window elements above as appropriate.
	Frames and Sills		
	Hardware	08 75 00	
	Glazing	08 80 00	
	Finishes		
C1030	Interior Doors	08 10 00	Includes: Interior door assemblies. Includes metal doors and frames, wood doors and frames, plastic doors, and composite doors. Includes Interior Door Supplementary Components as appropriate.
	Interior Doors Performance Requirements	01 84 13	
	Fire Rating	01 84 13	
	Temperature-Rise Limit	01 84 13	
	Sound Transmission	01 84 13	
	Thermal Resistance	01 84 13	
	Forced Entry Resistance	01 84 13	
	Bullet Resistance	01 84 13	
	Radio-Frequency-Interference Protection	01 84 13	
	Radiation Protection	01 84 13	
	Pressure Resistance	01 84 13	
	<i>See Also:</i>		
	<i>Exterior Doors: B2050.</i>		
C1030.10	Interior Swinging Doors	08 10 00	
C1030.20	Interior Entrance Doors	08 42 00	Includes: Exterior personnel door assemblies at interior main entrances. Includes automatic, revolving, balanced, and other special operating entrance doors, and sliding storefront wall systems. Includes Interior Door Supplementary Components as appropriate when not part of storefront system.
	All-Glass Entrances	08 42 26	
	Automatic Entrances	08 42 29	
	Revolving Door Entrances	08 42 33	
	Balanced Door Entrances	08 42 36	
	Sliding Storefronts	08 43 29	
	<i>See Also:</i>		
	<i>Exterior Entrance Doors: B2050.10.</i>		
C1030.25	Interior Sliding Doors	08 11 73	
	Sliding Glass Doors	08 32 00	
	<i>See Also:</i>		
	<i>Interior Operable Partitions: C1010.50.</i>		

NUMBER	TITLE	MF NUMBER	EXPLANATION
C1030.30	Interior Folding Doors <i>See Also:</i> <i>Interior Operable Partitions:</i> <i>C1010.50.</i>	08 35 13	
C1030.40	Interior Coiling Doors Coiling Counter Doors	08 33 00 08 33 13	
C1030.50	Interior Panel Doors Interior Sectional Doors Interior Single-Panel Doors Interior Multi-Leaf Vertical Lift Doors Interior Telescoping Vertical Lift Doors	08 36 00 08 36 13 08 36 16 08 36 19 08 36 23	Includes: Interior large opening doors constructed of panels that move.
C1030.70	Interior Special Function Doors Interior Cold Storage Doors Interior Industrial Doors Interior Lightproof Doors Interior Darkroom Doors <i>See Also:</i> <i>Photographic Processing</i> <i>Equipment: E1030.60.</i> Interior Radio-Frequency-Interference Shielding Doors <i>See Also:</i> <i>Exterior Radio-Frequency-Interference Shielding Windows:</i> <i>B2020.50.</i> <i>Exterior Radio-Frequency-Interference Shielding Doors:</i> <i>B2050.40.</i> <i>Interior Radio-Frequency-Interference Shielding Windows:</i> <i>C1020.50.</i> Interior Radiation Shielding Doors Radiation-Resistant Glazing <i>See Also:</i> <i>Exterior Radiation Shielding</i> <i>Windows: B2020.50.</i> <i>Exterior Radiation Shielding Doors:</i> <i>B2050.40.</i> <i>Interior Radiation Shielding</i> <i>Windows: C1020.50.</i> <i>Radiation Detection and Alarm:</i> <i>D7050.20.</i> <i>Radiation Protection: F1030.50.</i> Interior Security Doors Security Revolving Door Entrances Security Glazing	08 30 00 08 34 13 08 34 19 08 34 33 08 34 36 08 34 46 08 34 49 08 88 49 08 34 53 08 42 33.13 08 88 53	Includes: Interior door assemblies for a variety of special functions and applications involving a variety of operating methods. Includes Interior Door Supplementary Components as appropriate.

C INTERIORS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Ballistics-Resistant Glazing See Also: Exterior Security Windows: B2020.50. Exterior Security Doors: B2050.40. Exterior Security Gates: B2050.70. Interior Security Windows: C1020.50. Interior Security Gates: C1040.50. Electronic Safety and Security: D70. Security Equipment: E1040.60. Security Procedures: Z1020.70. Temporary Security Barriers & Enclosures: Z1050.40.	08 88 56	
	Interior Vault Doors See Also: Vault Equipment: E1030.20. Vaults: F1010.50.	08 34 59	
	Interior Detention Doors See Also: Exterior Detention Windows: B2020.50. Exterior Detention Doors: B2050.40. Interior Detention Windows: C1020.50. Detention Monitoring and Control: D7070. Detention Equipment: E1040.70. Metal Detention Enclosures: F1010.50. Detention Project Procedures: Z1020.70.	08 34 63	
	Interior Sound Control Doors See Also: Exterior Sound Control Windows: B2020.50. Exterior Sound Control Doors: B2050.40. Interior Sound Control Windows: C1020.50.	08 34 73	
	Interior Traffic Doors See Also: Exterior Traffic Doors: B2020.50.	08 38 00	
	Interior Pressure-Resistant Doors See Also: Exterior Pressure-Resistant Windows: B2020.50. Exterior Pressure-Resistant Doors: B2050.40. Exterior Special Function Doors: B2050.40.	08 39 00	
C1030.80	Interior Access Doors and Panels	08 31 00	Includes: Doors and panels in walls, ceilings, and floors to provide access to concealed spaces. Includes frames and hardware.

NUMBER	TITLE	MF NUMBER	EXPLANATION
C1030.90	Interior Door Supplementary Components		Includes: Frames, hardware, glazing, and louvers that are part of door to be included with interior door elements above as appropriate.
	Frames	08 10 00	
	Specialty Frames	08 30 00	
	Hardware	08 71 00	
	Glazing	08 80 00	
	Door Louvers	08 91 26	
	<i>See Also:</i>		
	<i>Exterior Door Louvers: B2050.90.</i>		
	<i>Interior Louvers: C1090.15.</i>		
C1040	Interior Grilles and Gates		Includes: Interior operable grilles and gates. Includes frames and hardware.
	<i>See Also:</i>		
	<i>Interior Screens: C1010.70.</i>		
C1040.10	Interior Grilles		
	Interior Sliding Metal Grilles	08 11 74	
	Interior Coiling Grilles	08 33 00	
	Interior Folding Grilles	08 35 16	
C1040.50	Interior Gates		Includes: Interior devices of solid or open construction, usually hinged, to provide moveable barrier for access through partition or other divider. Includes hardware, accessories, and finishing.
	<i>See Also:</i>		
	<i>Exterior Gates: B2050.</i>		
	<i>Fences and Gates: G2060.</i>		
	Interior Security Gates	08 34 56	
	<i>See Also:</i>		
	<i>Exterior Security Windows: B2020.50.</i>		
	<i>Exterior Security Doors: B2050.40.</i>		
	<i>Exterior Security Gates: B2050.70.</i>		
	<i>Interior Security Windows: C1020.50.</i>		
	<i>Interior Security Doors: C1030.70.</i>		
	<i>Electronic Safety and Security: D70.</i>		
	<i>Security Equipment: E1040.60.</i>		
	<i>Security Procedures: Z1020.70.</i>		
	<i>Temporary Security Barriers & Enclosures: Z1050.40.</i>		
	Interior Folding Gates	10 22 16	
C1060	Raised Floor Construction		
	Raised Floor Construction Performance Requirements	01 84 13	
	Load Capacity	01 84 13	
	Concentrated Loads	01 84 13	
	Rolling Loads	01 84 13	
	Impact Loads	01 84 13	
	Deflection	01 84 13	
	Slip Resistance	01 84 13	
	Static Dissipative	01 84 13	
	Conductive	01 84 13	
C1060.10	Access Flooring	09 69 00	Includes: Free-standing, elevated accessible floor assembly forming an underfloor cavity that may be used for utility or other purposes.

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NUMBER	TITLE	MF NUMBER	EXPLANATION
C1060.30	Platform/Stage Floors		Includes: Fixed construction of raised floor for platforms or stages.
	<i>See Also:</i> <i>Folding and Portable Stages:</i> <i>E1070.10.</i>		
C1070	Suspended Ceiling Construction		Includes: Ceiling Suspension Components.
	Suspended Ceiling Construction Performance Requirements	01 84 13	
	Fire Rating	01 84 13	
	Sound Transmission	01 84 13	
	Sound Attenuation	01 84 13	
	Sound Absorption	01 84 13	
	Light Reflectance	01 84 13	
	Flame Spread Index	01 84 13	
	Smoke Developed Index	01 84 13	
	<i>See Also:</i> <i>Applied Ceiling Finishes: C2050.</i>		
C1070.10	Acoustical Suspended Ceilings	09 51 00	Includes: Suspended tiles and panels with specific characteristics for acoustical purposes.
	Acoustic Insulation	09 81 00	
	<i>See Also:</i> <i>Applied Acoustical Ceiling Treatment: C2050.80.</i>		
C1070.20	Suspended Plaster and Gypsum Board Ceilings	09 20 00	Includes: Suspended assemblies with plaster and gypsum board surfaces.
	Suspension Systems	09 22 26	
	Acoustic Insulation	09 81 00	
C1070.50	Specialty Suspended Ceilings	09 54 00	Includes: Suspended specialty ceiling panels, units, and materials manufactured as finished
	Textured Suspended Ceilings	09 56 00	
C1070.70	Special Function Suspended Ceilings	09 57 00	Includes: Suspended ceiling assemblies with an additional special function including integrated ceiling assemblies.
	Security Ceiling Assemblies	09 57 53	
	<i>See Also:</i> <i>Security Lighting: D5040.50.</i> <i>Electronic Safety and Security: D70.</i> <i>Security Equipment: E1040.60.</i> <i>Security Procedures: Z1020.70.</i> <i>Temporary Security Barriers & Enclosures: Z1050.40.</i>		
	Integrated Ceiling Assemblies	09 58 00	
C1070.90	Ceiling Suspension Components		Includes: Hangers and framing to suspend ceiling and sound isolation components to be included with suspended ceiling construction elements above as appropriate.
	Suspension Systems		
	Suspended Ceiling Sound Isolation	13 48 00	
C1090	Interior Specialties		
C1090.10	Interior Railings and Handrails		Includes: Complete interior railing assemblies of various types including glazed railings.
	Interior Railings and Handrails Performance Requirements	01 84 00	
	Uniform Load on Handrails and Top Rails of Guards	01 84 00	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Concentrated Load on Handrails and Top Rails of Guards	01 84 00	
	Concentrated Load on Infill of Guards	01 84 00	
	Metal Railings	05 52 00	
	Decorative Metal Railings	05 73 00	
	Wood Railings	06 43 16	
	Plastic Railings	06 63 00	
	Composite Railings	06 81 00	
	<i>See Also:</i>		
	<i>Stair Railings: B1080.50.</i>		
	<i>Exterior Railings: B2080.50.</i>		
C1090.15	Interior Louvers	08 91 00	Includes: Interior louvers, and other items for ventilation which are not an integral part of the mechanical system. Includes operable and stationary louvers.
	Interior Louvers Performance Requirements	01 84 00	
	Free Area	01 84 00	
	Air Performance	01 84 00	
	Sound Transmission	01 84 00	
	<i>See Also:</i>		
	<i>Louvered Equipment Screens: B2010.60.</i>		
	<i>Exterior Door Louvers: B2050.90.</i>		
	<i>Exterior Louvers: B2070.10</i>		
	<i>Interior Door Louvers: C2030.90.</i>		
C1090.20	Information Specialties	10 10 00	Includes: Visual display units, display cases, directories, interior signage, telephone specialties, and informational kiosks.
	Visual Display Units	10 11 00	
	Chalkboards	10 11 13	
	Markerboards	10 11 16	
	Tackboards	10 11 23	
	Sliding Visual Display Units	10 11 33	
	Visual Conference Units	10 11 36	
	Visual Display Rails	10 11 39	
	Visual Display Wall Panels	10 11 43	
	Visual Display Fabrics	10 11 46	
	Display Cases	10 12 00	
	<i>See Also:</i>		
	<i>Display Turntables: D1030.30.</i>		
	<i>Display Lighting: D5040.50.</i>		
	<i>Refrigerated Display Equipment: E1030.30.</i>		
	Directories	10 13 00	
	Interior Signage	10 14 00	
	<i>See Also:</i>		
	<i>Traffic Signs and Traffic Signals: G2010.</i>		
	<i>Parking Lot Traffic Signage: G2020.</i>		
	<i>Exterior Signage: G2060.</i>		
	Telephone Specialties	10 17 00	
	<i>See Also:</i>		
	<i>Voice Communications Terminal Equipment: D6020.20.</i>		
	Informational Kiosks	10 18 00	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
C1090.25	Compartments and Cubicles	10 21 00	Includes: Manufactured compartments and cubicles for specific purposes.
	Toilet Compartments	10 21 13	
	Shower & Dressing Compartments	10 21 16	
	Cubicles	10 21 23	
	Tub and Shower Doors	10 28 19	
	<i>See Also:</i>		
	<i>Toilet, Bath, and Laundry</i>		
	<i>Accessories: C1090.40.</i>		
C1090.30	Service Walls	10 25 00	Includes: Wall assemblies and wall-mounted units incorporating services.
	Patient Bed Service Walls	10 25 13	
	Modular Service Walls	10 25 16	
C1090.35	Wall and Door Protection	10 26 00	Includes: Manufactured protective devices for walls and doors.
	Corner Guards	10 26 13	
	Bumper Guards	10 26 16	
	Protective Wall Covering	10 26 23	
	Door and Frame Protection	10 26 33	
C1090.40	Toilet, Bath, and Laundry Accessories	10 28 00	Includes: Manufactured items for use in conjunction with toilets, baths, and laundries.
	Toilet Accessories	10 28 13	
	Bath Accessories	10 28 16	
	Laundry Accessories	10 28 23	
	<i>See Also:</i>		
	<i>Compartments and Cubicles:</i>		
	<i>C1090.25.</i>		
	<i>Unframed Mirrors: C1090.90.</i>		
C1090.45	Interior Gas Lighting	10 84 16	
	<i>See Also:</i>		
	<i>Exterior Gas Lighting: G2060.45.</i>		
C1090.50	Fireplaces and Stoves	10 30 00	Includes: Masonry fireplaces and manufactured and fabricated fireplaces, stoves, chimneys, dampers, and specialties for use in construction of fireplaces and stove units.
	Site Constructed Fireplaces		
	Refractory Masonry	04 50 00	
	Masonry Fireplaces	04 57 00	
	Manufactured Fireplaces	10 31 00	
	Manufactured Fireplace Chimneys	10 31 13	
	Fireplace Specialties	10 32 00	
	Stoves	10 35 00	
C1090.60	Safety Specialties	10 40 00	Includes: Accessories that provide emergency aid.
	Emergency Access and Information Cabinets	10 41 00	
	Emergency Aid Specialties	10 43 00	
	<i>See Also:</i>		
	<i>Fire Protection Specialties: D4030.</i>		
C1090.70	Storage Specialties	10 50 00	Includes: Lockers, postal specialties, storage specialties, and wardrobe and closet specialties.
	Lockers	10 51 00	
	Locker Room Benches	10 51 53	
	Postal Specialties	10 55 00	
	Mail Boxes	10 55 23	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Mail Chutes	10 55 91	
	<i>See Also:</i>		
	<i>Postal Equipment: E1030.70.</i>		
	Storage Assemblies	10 56 00	
	Storage Shelving		
	Storage Racks	10 56 29	
	Mercantile Storage Assemblies	10 56 33	
	Wardrobe and Closet Specialties	10 57 00	
	Hat and Coat Racks	10 57 13	
	Closet and Utility Shelving	10 57 33	
	<i>See Also:</i>		
	<i>Checkroom Equipment: E1030.</i>		
C1090.90	Other Interior Specialties	10 80 00	Includes: Pest control devices, flags and banners, security mirrors and domes, and scales.
	Pest Control Devices	10 81 00	
	Insect Control Devices	10 81 16	
	Rodent Control Devices	10 81 19	
	<i>See Also:</i>		
	<i>Soil Treatment Rodent Control: A9040.</i>		
	<i>Bird Control Devices: B2080.80.</i>		
	<i>Temporary Pest Control: Z1050.45.</i>		
	Flags and Banners	10 83 00	
	<i>See Also:</i>		
	<i>Flagpoles: G2060.35.</i>		
	Unframed Mirrors	08 83 00	
	<i>See Also:</i>		
	<i>Toilet, Bath, and Laundry Accessories: C1090.40.</i>		
	Security Mirrors and Domes	10 86 00	
	<i>See Also:</i>		
	<i>Interior Security Doors: C1030.70.</i>		
	<i>Interior Security Gates: C1040.50.</i>		
	<i>Electronic Safety and Security: D70.</i>		
	<i>Interior Pedestrian Security Equipment: E1010.70.</i>		
	<i>Security Equipment: E1040.60.</i>		
	<i>Security Procedures: Z1020.70.</i>		
	<i>Temporary Security Barriers & Enclosures: Z1050.40.</i>		
	Scales	10 88 00	
C20	INTERIOR FINISHES		
	Interior Finishes Performance Requirements	01 84 19	
C2010	Wall Finishes	09 70 00	Includes: Wall finishes applied over solid substrates. Includes Wall Finish Supplementary Components as appropriate.
	Wall Finishes Performance Requirements	01 84 19	
	Flame-Spread Index	01 84 19	
	Smoke-Developed Index	01 84 19	
	Light Reflectance	01 84 19	
	Sound Absorption	01 84 19	
	<i>See Also:</i>		
	<i>Interior Partitions: C1010.</i>		

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NUMBER	TITLE	MF NUMBER	EXPLANATION
C2010.10	Tile Wall Finish	09 30 00	Includes: Manufactured surfacing units of impervious, vitreous, semi-vitreous, and non-vitreous materials; glazed, unglazed, conductive, and textured surfaces.
	<i>See Also:</i> <i>Tile Flooring: C2030.20.</i>		
C2010.20	Wall Paneling		Includes: Covering or cladding of interior walls with paneling. Includes associated furring, fastening, and trim.
	Wood Paneling	06 42 00	
	Prefinished Paneling	06 25 00	
	Board Paneling	06 26 00	
	Plastic Paneling	06 64 00	
	Composite Paneling	06 83 00	
	<i>See Also:</i> <i>Ceiling Paneling: C2050.20.</i>		
C2010.30	Wall Coverings	09 72 00	Includes: Wall coverings applied over solid substrates. Includes vinyl-coated fabric, vinyl and cork wall coverings; wall papers; and flexible wood sheets.
	Flexible Wood Sheets	09 74 00	
C2010.35	Wall Carpeting	09 73 00	Includes: Wall carpet materials and accessories.
	<i>See Also:</i> <i>Floor Carpeting: C3020.75.</i>		
C2010.50	Stone Facing	09 75 00	Includes: Natural stone applied as an interior veneer surface.
	<i>See Also:</i> <i>Masonry Flooring: C2030.</i>		
C2010.60	Special Wall Surfacing	09 77 00	Includes: Manufactured decorative interior wall surface products including plastic blocks.
	Stretched-Fabric Wall Systems	09 77 13	
	Fabric-Wrapped Panels	09 77 23	
	Plastic Blocks	09 76 00	
C2010.70	Wall Painting and Coating	09 90 00	Includes: Interior painting and coating with transparent and opaque finishes. Includes stains, varnishes, lacquers, primers, fillers, paint removers, and waxes, and preparation of surfaces.
	<i>See Also:</i> <i>Interior Ceiling Painting and Coating: C2050.70.</i>		
C2010.80	Acoustical Wall Treatment		Includes: Sound absorbing, reflecting, and diffusing wall units, and accessories.
	Acoustic Wall Coating	09 83 13	
	Acoustic Room Components	09 84 00	
	Sound-Absorbing Wall Units	09 84 33	
	<i>See Also:</i> <i>Acoustical Ceiling Treatment: C2050.</i>		
C2010.90	Wall Finish Supplementary Components		Includes: Furring to be included with wall finish elements above as appropriate.
	Wood Furring	06 10 00	
	Metal Furring	09 22 13	
C2020	Interior Fabrications		Includes: Interior fabrications of a variety of materials formed to various profiles for a variety of purposes including column covers.
	Glass-Fiber-Reinforced Concrete	03 49 00	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Metal Fabrications	05 50 00	
	Column Covers	05 58 13	
	Decorative Metal	05 70 00	
	Ornamental Woodwork	06 44 00	
	Plastic Fabrications	06 60 00	
	Simulated Stone Fabrications	06 61 00	
	Composite Fabrications	06 80 00	
	Plaster Fabrications	09 27 00	
	<i>See Also:</i>		
	<i>Exterior Fabrications: B2080.70.</i>		
C2030	Flooring	09 60 00	Includes: Flooring Supplementary Components as appropriate.
	Flooring Performance Requirements	01 84 19	
	Slip Resistance	01 84 19	
	Critical Radiant Flux Classification	01 84 19	
	Static Dissipative	01 84 19	
	Conductive	01 84 19	
	Chemical Resistance	01 84 19	
	Acid Resistance	01 84 19	
	Static Control	01 84 19	
	Sound Absorption	01 84 19	
	<i>See Also:</i>		
	<i>Access Flooring: C1060.10.</i>		
	<i>Stair Finishes: C2040.</i>		
C2030.10	Flooring Treatment	09 61 00	Includes: Coatings and surfacings for finished floor, applied to provide a specific performance characteristic.
	Slip-Resistant Flooring Treatment	09 61 13	
C2030.20	Tile Flooring	09 30 00	Includes: Manufactured surfacing units of impervious, vitreous, semi-vitreous, and non-vitreous materials; glazed, unglazed, conductive, abrasive, and textured surfaces. Includes wall base units.
	<i>See Also:</i>		
	<i>Tile Wall Finishes: C2010.20.</i>		
C2030.30	Specialty Flooring	09 62 00	Includes: Heavy duty and other specialty flooring. Includes asphaltic plank, laminate, bamboo, leather, cork, acoustic, synthetic turf, metal, structural glass, chemical-resistant, acid resistant, conductive, and static control flooring.
	Chemical-Resistant Flooring		
	Chemical-Resistant Tiling	09 35 00	
	Chemical-Resistant Brick Flooring	09 63 13.35	
	Acid-Resistant Flooring	09 62 35	
	Conductive Flooring		
	Conductive Tiling	09 33 00	
	Conductive Resilient Flooring	09 65 33	
	Conductive Terrazzo Flooring	09 66 33	
	Static-Control Flooring		
	Static Resistant Flooring Treatment	09 61 36	
	Static-Control Resilient Flooring	09 65 36	
C2030.40	Masonry Flooring	09 63 00	Includes: Fired clay unit masonry, cat stone, and stone flooring. Includes wall base.
	Brick Flooring	09 63 13	
	Stone Flooring	09 63 40	
	Composition Stone Flooring	09 63 43	
	<i>See Also:</i>		
	<i>Stone Wall Facing: C2010.50.</i>		

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NUMBER	TITLE	MF NUMBER	EXPLANATION
C2030.45	Wood Flooring	09 64 00	Includes: Strip, parquet, block, and composition wood flooring. Includes
C2030.50	Resilient Flooring	09 65 00	Includes: Resilient tile and sheet flooring. Includes integral and applied wall bases.
C2030.60	Terrazzo Flooring	09 66 00	Includes: Cast-in-place, sand-cushion, monolithic, bonded and adhesively- bonded portland cement terrazzo; poured-in-place epoxy, polyester, and resinous matrix terrazzo; and precast terrazzo. Includes integral or precast wall bases, accessories, and finish sealers.
	Portland Cement Terrazzo Flooring	09 66 13	
	Terrazzo Floor Tile	09 66 16	
	Resinous Matrix Terrazzo Flooring	09 66 23	
	<i>See Also:</i>		
	<i>Wall Finishes: C2010.</i>		
C2030.70	Fluid-Applied Flooring	09 67 00	Includes: Flooring applied in a viscous state.
	Elastomeric Liquid Flooring	09 67 13	
	Epoxy-Marble Chip Flooring	09 67 16	
	Magnesium-Oxychloride Flooring	09 67 19	
	Resinous Flooring	09 67 23	
	Quartz Flooring	09 67 26	
C2030.75	Carpeting	09 68 00	Includes: Floor carpet materials including cushions, accessories, and wall base.
	Tile Carpeting	09 68 13	
	Sheet Carpeting	09 68 16	
	<i>See Also:</i>		
	<i>Wall Carpeting: C2010.35.</i>		
	<i>Moveable Rugs and Mats: E2050.</i>		
C2030.80	Athletic Flooring		Includes: Flooring for athletic purposes.
	Wood Athletic Flooring	09 64 66	
	Resilient Athletic Flooring	09 65 66	
	Fluid-Applied Athletic Flooring	09 67 66	
	<i>See Also:</i>		
	<i>Athletic Equipment: E1070.50.</i>		
	<i>Athletic Rooms: F1010.50.</i>		
	<i>Athletic & Recreational Special Construction: F1060.</i>		
	<i>Athletic Areas: G2050.10.</i>		
C2030.85	Entrance Flooring		Includes: Special floor surfaces at entrances.
	Entrance Floor Mats and Frames	12 48 13	
	Entrance Floor Grilles	12 48 16	
	Entrance Floor Gratings	12 48 19	
	Entrance Floor Grids	12 48 23	
	Entrance Tile	12 48 26	
C2030.90	Flooring Supplementary Components		Includes: Furring, underlayment, and sound and vibration control to be included with flooring elements above as appropriate.
	Wood Furring	06 10 00	
	Underlayment	06 16 26	
	Acoustic Underlayment	09 60 13	
	Sound and Vibration Control	09 62 48	
C2040	Stair Finishes		Includes: Stair tread, riser, and landing finish of various materials.
	Stair Finish Performance Requirements	01 84 19	
	Slip Resistance	01 84 19	
	Critical Radiant Flux Classification	01 84 19	
C2040.20	Tile Stair Finish	09 30 00	

NUMBER	TITLE	MF NUMBER	EXPLANATION
C2040.40	Masonry Stair Finish	09 63 00	
C2040.45	Wood Stair Finish	09 64 00	
C2040.50	Resilient Stair Finish	09 65 00	
C2040.60	Terrazzo Stair Finish	09 66 00	
C2040.75	Carpeted Stair Finish	09 68 00	
	<i>See Also:</i>		
	<i>Stair Construction: B1080.10.</i>		
	<i>Stair Soffits: B1080.30.</i>		
	<i>Stair Railings: B1080.50.</i>		
	<i>Flooring: C2030.</i>		
C2050	Ceiling Finishes	09 50 00	Includes: Finishes applied to interior ceiling substrates. Ceiling finishes may be applied to suspended ceiling construction. Includes Ceiling Finish Supplementary Components as appropriate.
	Ceiling Finishes Performance Requirements	01 84 19	
	Sound Absorption	01 84 19	
	Light Reflectance	01 84 19	
	Flame Spread Index	01 84 19	
	Smoke Developed Index	01 84 19	
	<i>See Also:</i>		
	<i>Stair Soffits: B1080.30.</i>		
	<i>Exterior Ceilings: B3080.10.</i>		
	<i>Exterior Soffits: B3080.20.</i>		
	<i>Interior Suspended Ceiling Construction: C1070.</i>		
C2050.10	Plaster and Gypsum Board Finish	09 20 00	Includes: Lathing including accessories and trim. Includes interior plaster including veneer plaster, acoustical plaster, and plaster fireproofing. Includes sound barrier boards and blankets. Includes unfinished and prefinished gypsum board and gypsum backing board for other finishes. Includes gypsum board fireproofing.
	<i>See Also:</i>		
	<i>Suspended Plaster and Gypsum Board Ceilings: C1070.20.</i>		
C2050.20	Ceiling Paneling		Includes: Covering or cladding of interior ceilings with paneling. Includes associated furring, fastening, and trim.
	Wood Paneling	06 42 00	
	Prefinished Paneling	06 25 00	
	Board Paneling	06 26 00	
	Plastic Paneling	06 64 00	
	Composite Paneling	06 83 00	
	<i>See Also:</i>		
	<i>Wall Paneling: C2010.30.</i>		
C2050.70	Ceiling Painting and Coating	09 90 00	Includes: Interior painting and coating of ceilings with transparent and opaque finishes. Includes stains, varnishes, lacquers, primers, fillers, paint removers, and waxes, and preparation of surfaces.
	<i>See Also:</i>		
	<i>Interior Wall Painting and Coating: C2010.70.</i>		
C2050.80	Acoustical Ceiling Treatment		Includes: Sound absorbing, reflecting, and diffusing ceiling units and accessories. Includes directly applied acoustical tiles and panels.

C INTERIORS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Acoustical Metal Decking	05 34 00	
	Acoustic Ceiling Coating	09 83 16	
	Acoustic Room Components	09 84 00	
	Sound-Absorbing Ceiling Units	09 84 36	
	<i>See Also:</i>		
	<i>Suspended Acoustical Ceilings:</i>		
	<i>C1070.10.</i>		
	<i>Acoustical Wall Treatment:</i>		
	<i>C2010.80.</i>		
C2050.90	Ceiling Finish Supplementary Components		Includes: Furring and sound isolation components to be included with ceiling finish elements above as appropriate.
	Wood Furring	06 10 00	
	Metal Furring	09 22 13	
	Ceiling Sound Isolation	13 48 00	
C2090	Interior Finish Schedules		Includes: Schedules of finishes common to C20 Interior Finishes.
	Room Finish Schedule	09 06 00.13	

D SERVICES

Facility Services Performance Requirements 01 86 00

NUMBER	TITLE	MF NUMBER	EXPLANATION
D10	CONVEYING	14 00 00	
	Conveying Equipment Performance Requirements	01 85 00	
	<i>See Also:</i>		
	<i>Starting and Adjusting: Z1070.40.</i>		
	<i>Demonstration and Training: Z1070.80.</i>		
D1010	Vertical Conveying Systems		
	<i>See Also:</i>		
	<i>Construction Aids: Z1050.30.</i>		
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	
	<i>See Also:</i>		
	<i>Vents and Hatches: B3060.50.</i>		
	<i>Ladders: B1080.80.</i>		
	<i>Elevator Telephones: D6020.20.</i>		
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	

D SERVICES

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Stage Lifts	14 43 16	
	<i>See Also:</i>		
	<i>Theater and Stage Equipment:</i>		
	<i>E1070.10.</i>		
	Sidewalk Lifts	14 44 00	
	Vehicle Lifts	14 45 00	
	<i>See Also:</i>		
	<i>Mortuary Lifts: E1040.20.</i>		
	<i>Loading Dock Lifts: E1010.50.</i>		
	<i>Recreational Equipment: E1070.60.</i>		
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	
D1030	Horizontal Conveying		
	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	
	<i>See Also:</i>		
	<i>Hospitality Equipment: E1030.50.</i>		
	<i>Hospitality Casework: E2010.30.</i>		
	<i>Hospitality Furniture: E2050.30.</i>		
	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,
	Cable Transportation	34 14 00	Includes: Steep slope transportation system utilizing moving cable. Includes associated cable, support structures, equipment, controls, and accessories.
D1050	Material Handling		
	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	

D SERVICES

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Trash Chutes	14 91 82	
	<i>See Also:</i> <i>Solid Waste Handling Equipment:</i> <i>E1090.10.</i>		
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.
	<i>See Also:</i> <i>Office Equipment: E1030.75.</i>		
D1080	Operable Access Systems		
	Operable Access Systems Performance Requirements		
	<i>See Also:</i> <i>Maintenance Equipment: E1030.40.</i>		
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.
	<i>See Also:</i> <i>Platform Lifts: D1010.20.</i>		
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	
D20	PLUMBING	22 00 00	
	Plumbing Performance Requirements	01 86 16	
	<i>See Also:</i> <i>Starting and Adjusting: Z1070.40.</i> <i>Demonstration and Training:</i> <i>Z1070.80.</i>		
D2010	Domestic Water Distribution	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	
	<i>See Also:</i> <i>Swimming Pool Plumbing Systems:</i> <i>F1050.10.</i> <i>Pools and Tubs Plumbing Systems:</i> <i>F1050.10.</i> <i>Interior Fountain Plumbing Systems:</i> <i>F1050.20.</i> <i>Site Domestic Water Distribution:</i> <i>G3010.10</i>		
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	

D SERVICES

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	
	<i>See Also:</i>		
	<i>Swimming Pool Plumbing Systems: F1050.10.</i>		
	<i>Pools and Tubs Plumbing Systems: F1050.10.</i>		
	<i>Interior Fountain Plumbing Systems: F1050.20.</i>		
	<i>Sanitary Sewerage Utilities: G3020.</i>		
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	
	<i>See Also:</i>		
	<i>Utility Septic Tanks: G3020.40.</i>		
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
D2030	Building Support Plumbing Systems	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	
	<i>See Also:</i> <i>Rainwater Management: B3020.70.</i> <i>Storm Drainage Utilities: G3020.</i>		
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	
	<i>See Also:</i> <i>Site Stormwater Drains: G3030.40.</i>		
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
D2050	General Service Compressed-Air	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>		
D2060	Process Support Plumbing Systems		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	
	<i>See Also:</i>		
	<i>Healthcare Plumbing Fixtures: D2010.60.</i>		
	<i>Healthcare Equipment: E1040.20.</i>		
	<i>Laboratory Equipment: E1040.10.</i>		
	<i>Healthcare Special Procedures: Z1020.70.</i>		
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	
D30	HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)	23 00 00	
	HVAC Performance Requirements	01 86 19	
	<i>See Also:</i>		
	<i>Starting and Adjusting: Z1070.40.</i>		
	<i>Demonstration and Training: Z1070.80.</i>		
D3010	Facility Fuel Systems	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	
	<i>See Also:</i>		
	<i>Site Fuel Distribution: G3060.</i>		

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.
D3020	Heating Systems		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	
D3030	Cooling Systems		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	
D3050	Facility HVAC Distribution Systems		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	
	<i>See Also:</i>		
	<i>Boilers: D3020.10</i>		
	<i>Chillers: D3030.10</i>		
	<i>Cooling Towers: D3030.10</i>		
	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	
	<i>See Also:</i>		
	<i>Boilers: D3020.10</i>		
	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:</i>		
	<i>Integrated Ceiling Assemblies:</i>		
	<i>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: 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	
D3070	Special Purpose HVAC Systems		
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	
D40	FIRE PROTECTION		
	<i>See Also:</i>		
	<i>Starting and Adjusting: Z1070.40.</i>		
	<i>Demonstration and Training: Z1070.80.</i>		
	<i>Site Fire Protection Water Distribution: G3010.30.</i>		
D4010	Fire Suppression	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 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	
D4030	Fire Protection Specialties	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	
D50	ELECTRICAL	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>		
D5010	Facility Power Generation		
	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	
D5020	Electrical Service and Distribution		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	
	<i>See Also:</i>		
	<i>Site Electrical Distribution Systems:</i>		
	<i>G4010.</i>		
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	
	<i>See Also:</i>		
	<i>Site Grounding: G4010.70</i>		
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	
D5030	General Purpose Electrical Power		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	
D5040	Lighting	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	
	<i>See Also:</i>		
	<i>Site Lighting: G4050.</i>		
	<i>Roadway Lighting: G2010.70</i>		
	<i>Parking Lot Lighting: G2020.70.</i>		
	<i>Pedestrian Plaza and Walkway Lighting: G2030.70.</i>		
	<i>Airfield Lighting: G2040.70.</i>		
	<i>Athletic, Recreation, and Playfield Area Lighting: G2050.</i>		
	<i>Landscape Lighting: G2080.70.</i>		
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	
	<i>See Also:</i>		
	<i>Integrated Ceiling Assemblies:</i>		
	<i>C1070.70.</i>		
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	
D5080	Miscellaneous Electrical Systems		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	
	<i>See Also:</i>		
	<i>Site Lightning Protection:</i>		
	<i>G4010.70.</i>		
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	
D60	COMMUNICATIONS	27 00 00	
	Communications Performance Requirements	01 86 29	
	<i>See Also:</i>		
	<i>Site Communications Systems:</i>		
	<i>G5010.</i>		
D6010	Data Communications	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	
D6020	Voice Communications	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	
	<i>See Also:</i>		
	<i>Telephone Specialties: C1090.20.</i>		
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	
D6030	Audio-Video Communication	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	
D6060	Distributed Communications and Monitoring	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	
	<i>See Also:</i>		
	<i>Healthcare Equipment: E1040.20.</i>		
	<i>Healthcare Special Procedures: Z1020.70.</i>		
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	
D6090	Communications Supplementary Components		
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
D70	ELECTRONIC SAFETY AND SECURITY	28 00 00	
	Electronic Safety and Security Performance Requirements	01 86 33	
	<i>See Also:</i> <i>Exterior Security Windows: B2020.50,</i> <i>Exterior Security Doors: B2050.40.</i> <i>Exterior Security Gates: B2050.70.</i> <i>Interior Security Windows: C1020.50.</i> <i>Interior Security Doors: C1030.70.</i> <i>Interior Security Gates: C1040.50.</i> <i>Security Ceiling Systems: C1070.70.</i> <i>Security Mirrors and Domes: C1090.90.</i> <i>Security Plumbing Fixtures: D2010.60.</i> <i>Security Lighting: D5040.50.</i> <i>Interior Pedestrian Security Equipment: E1010.70.</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 & Enclosures: Z1050.40.</i> <i>Starting and Adjusting: Z1070.40.</i> <i>Demonstration and Training: Z1070.80.</i>		
D7010	Access Control and Intrusion Detection	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	
D7030	Electronic Surveillance	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	
D7050	Detection and Alarm	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	
	<i>See Also:</i>		
	<i>Fire Protection Systems: D4010.</i>		
	<i>Integrated Automation Systems: D8010.</i>		
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	
	<i>See Also:</i> <i>Site Fuel-Oil Distribution: G3060.20.</i>		
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	
	<i>See Also:</i> <i>Cooling Systems: D3030.</i>		
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	
D7070	Electronic Monitoring and Control	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	
	<i>See Also:</i> <i>Exterior Detention Windows: B2020.50.</i> <i>Exterior Detention Doors: B2050.40.</i> <i>Interior Detention Windows: C1020.50.</i> <i>Interior Detention Doors: C1030.70.</i> <i>Detention Equipment: E1040.70.</i> <i>Detention Furniture: E2050.30.</i> <i>Detention Cell Modules: F1010.10.</i> <i>Metal Detention Enclosures: F1010.50.</i> <i>Detention Project Procedures: Z1020.70.</i>		

D SERVICES

NUMBER	TITLE	MF NUMBER	EXPLANATION
D7090	Electronic Safety and Security Supplementary Components		
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	
D80	INTEGRATED AUTOMATION	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>		
D8010	Integrated Automation Facility Controls	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 01 87 00
Requirements

NUMBER	TITLE	MF NUMBER	EXPLANATION
E10	EQUIPMENT	11 00 00	
	Equipment Performance Requirements	01 87 13	
	<i>See Also:</i>		
	<i>Starting and Adjusting: Z1070.40.</i>		
	<i>Demonstration and Training:</i>		
	<i>Z1070.80.</i>		
E1010	Vehicle and Pedestrian Equipment	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	
	<i>See Also:</i>		
	<i>Vehicle Lifts: D1010.20.</i>		
	<i>Vehicle Turntables: D1030.30.</i>		
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	
	<i>See Also:</i>		
	<i>Exterior Parking Control Equipment:</i>		
	<i>G2020.80.</i>		
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	
	<i>See Also:</i>		
	<i>Vehicle Lifts: D1010.20.</i>		
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	
	<i>See Also:</i>		
	<i>Interior Security Windows:</i>		
	<i>C1020.50.</i>		
	<i>Interior Security Doors: C1030.70.</i>		
	<i>Interior Security Gates: C1040.50.</i>		
	<i>Security Mirrors and Domes:</i>		
	<i>C1090.90.</i>		

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 & Enclosures: Z1050.40.</i>		
E1030	Commercial Equipment	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 <i>See Also:</i> <i>Residential Appliances: E1060.10.</i> <i>Residential Casework: E2010.30.</i>	11 26 00	Includes: Manufactured units incorporating plumbing fixtures, appliances, casework and countertops.
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>		
E1040	Institutional Equipment	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 &</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	
	<i>See Also:</i>		
	<i>Unit Kitchens: E1030.55.</i>		
	<i>Residential Casework: E2010.30.</i>		
E1060.50	Retractable Stairs	11 33 00	
E1060.70	Residential Ceiling Fans	11 34 00	
E1070	Entertainment and Recreational Equipment		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	
	<i>See Also:</i>		
	<i>Platform/Stage Floors: C1060.30.</i>		
	<i>Stage and Orchestra Lifts:</i>		
	<i>D1010.20.</i>		
	<i>Stage Turntables: D1030.30.</i>		
	<i>Theatrical Lighting Control:</i>		
	<i>D5040.10.</i>		
	<i>Voice Communication Systems:</i>		
	<i>D6020.</i>		
	<i>Fixed Multiple Seating: E2010.70.</i>		
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	
	<i>See Also:</i>		
	<i>Interior Operable Partitions:</i>		
	<i>C1010.50.</i>		
	<i>Athletic Flooring: C2030.80.</i>		
	<i>Gymnasium Dividers: E1070.50.</i>		
	<i>Athletic Rooms: F1010.50.</i>		
	<i>Athletic & Recreational Special</i>		
	<i>Construction: F1060.</i>		
	<i>Athletic Areas: G2050.10.</i>		
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	
	<i>See Also:</i>		
	<i>Swimming Pools: F1050.10.</i>		
	<i>Athletic & Recreational Special Construction: F1060.</i>		
	<i>Recreational Areas: G2050.30.</i>		
E1090	Other Equipment	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	
	<i>See Also:</i>		
	<i>Trash Chutes: D1050.60.</i>		
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	
	<i>See Also:</i>		
	<i>Kennels and Animal Shelters: F1050.70.</i>		
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	
	<i>See Also:</i>		
	<i>Planting Irrigation: G2080.10.</i>		
E1090.60	Decontamination Equipment		Includes: Equipment associated with decontamination operations.
	<i>See Also:</i>		
	<i>Hazardous Materials Remediation: F2010.</i>		
	<i>Site Remediation: G1050.</i>		
E20	FURNISHINGS	12 00 00	
	Furnishings Performance Requirements	01 87 16	
E2010	Fixed Furnishings		
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	

E EQUIPMENT AND FURNISHINGS

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	
	<i>See Also:</i>		
	<i>Religious Equipment: E1040.40.</i>		
	<i>Religious Casework: E2010.30.</i>		
	<i>Fixed Pews: E2010.70.</i>		
	<i>Movable Religious Art: E2050.10.</i>		
	Suspended Decorative Elements		
	<i>See Also:</i>		
	<i>Moveable Art: E2050.10.</i>		
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	
	<i>See Also:</i>		
	<i>Windows with Integral Blinds: B2020.</i>		
	<i>Exterior Protection Devices for Openings: B2080.30.</i>		
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	
	<i>See Also:</i>		
	<i>Hospitality Turntables: D1030.30.</i>		
	<i>Hospitality Equipment: E1030.50.</i>		
	<i>Hospitality Furniture: E2050.30.</i>		
	Residential Casework	12 35 30	
	<i>See Also:</i>		
	<i>Unit Kitchens: E1030.55.</i>		
	<i>Residential Appliances: E1060.10.</i>		
	Utility Room Casework	12 35 33	
	Educational/Library Casework	12 35 50	
	<i>See Also:</i>		
	<i>Library Equipment: E1040.10.</i>		
	<i>Library Furniture: E2050.30.</i>		
	Laboratory Casework	12 35 53	
	<i>See Also:</i>		
	<i>Process Support Plumbing Systems: D2060.</i>		
	<i>Laboratory Equipment: E1040.10.</i>		
	<i>Laboratory Furniture: E2050.30.</i>		
	Display Casework	12 35 59	

E EQUIPMENT AND FURNISHINGS

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Healthcare Casework <i>See Also:</i> <i>Healthcare Plumbing Fixtures: D2010.60.</i> <i>Process Support Plumbing Systems: D2060.</i> <i>Healthcare Communications & Monitoring: D6060.30.</i> <i>Healthcare Equipment: E1040.20.</i> <i>Healthcare Furniture: E2050.30.</i> <i>Healthcare Special Procedures: Z1020.70.</i>	12 35 70	
	Religious Casework <i>See Also:</i> <i>Religious Equipment: E1040.40.</i> <i>Fixed Religious Art: E2010.10.</i> <i>Fixed Pews: E2010.70.</i> <i>Movable Religious Art: E2050.10.</i>	12 35 91	
	Reception Casework Countertops <i>See Also:</i> <i>Lockers: C1090.70.</i> <i>Storage Specialties: C1090.70.</i> <i>Mercantile and Service Equipment: E1030.10.</i>	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 <i>See Also:</i> <i>Moveable Multiple Seating: E2050.60.</i> <i>Exterior Grandstands and Bleachers: F1020.40.</i>		
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	12 92 43	
	<i>See Also:</i> <i>Movable Interior Planters and Artificial Plant: E2050.90.</i>		

NUMBER	TITLE	MF NUMBER	EXPLANATION
E2050	Movable Furnishings		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
F10	SPECIAL CONSTRUCTION		
	Special Construction Performance Requirements	01 88 13	
F1010	Integrated Construction		
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	
	<i>See Also:</i>		
	<i>Exterior Detention Windows:</i>		
	<i>B2020.50.</i>		
	<i>Exterior Detention Doors:</i>		
	<i>B2050.40.</i>		
	<i>Interior Detention Windows:</i>		
	<i>C1020.50.</i>		
	<i>Interior Detention Doors: C1030.70.</i>		
	<i>Detention Lighting: D5040.50.</i>		
	<i>Detention Monitoring and Control:</i>		
	<i>D7070.</i>		
	<i>Detention Equipment: E1040.70.</i>		
	<i>Detention Furniture: E2050.30.</i>		
	<i>Metal Detention Enclosures:</i>		
	<i>F1010.50.</i>		
	<i>Detention Project Procedures:</i>		
	<i>Z1020.70.</i>		
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	
	<i>See Also:</i>		
	<i>Interior Special Function Windows:</i>		
	<i>C1020.50.</i>		
	<i>Interior Special Function Doors:</i>		
	<i>C1030.70.</i>		
	<i>Special Facility Components:</i>		
	<i>F1050.</i>		
	Controlled Environment Rooms	13 21 00	
	Clean Rooms	13 21 13	
	<i>See Also:</i>		
	<i>Clean Room Special Procedures:</i>		
	<i>Z1020.70.</i>		
	Hyperbaric Rooms	13 21 16	
	Insulated Rooms	13 21 23	
	Cold Storage Rooms	13 21 26	
	<i>See Also:</i>		
	<i>Cold Storage Doors: C1030.70.</i>		
	Constant Temperature Rooms	13 21 29	
	Sound-Conditioned Rooms	13 21 48	
	Office Shelters and Booths	13 22 00	Includes: Interior shelters and booths.
	<i>See Also:</i>		
	<i>Office Equipment: E1030.75.</i>		
	<i>Office Furniture: E2050.30.</i>		
	<i>Covers and Shelters: G2060.</i>		
	Planetariums	13 23 00	
	<i>See Also:</i>		
	<i>Planetarium Equipment: E1040.10.</i>		
	Special Activity Rooms	13 24 00	
	Saunas	13 24 16	
	Steam Baths	13 24 26	
	Athletic Rooms	13 24 66	
	<i>See Also:</i>		
	<i>Athletic Flooring: C2030.80.</i>		
	<i>Athletic Equipment: E1070.50.</i>		
	<i>Athletic & Recreational Special</i>		
	<i>Construction: F1060.</i>		
	<i>Athletic Areas: G2050.10.</i>		
	Vaults	13 27 00	
	<i>See Also:</i>		
	<i>Interior Vault Doors: C1030.70.</i>		
	<i>Vault Equipment: E1030.20.</i>		
	<i>Vaults: F1010.50.</i>		
	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	
	<i>See Also:</i>		
	<i>Mezzanine Construction: B1010.40.</i>		

F SPECIAL CONSTRUCTION AND DEMOLITION

NUMBER	TITLE	MF NUMBER	EXPLANATION
F1020	Special Structures	13 30 00	
	Special Structures Performance Requirements	01 88 13	
	<i>See Also:</i>		
	<i>Superstructure: B10.</i>		
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 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	
	Glazed Structures	13 34 13	
	Exterior Grandstands and Bleachers	13 34 16	
	Metal Building Systems	13 34 19	
	Observatories	13 34 56	
	<i>See Also:</i>		
	<i>Planetarium Equipment: E1040.10.</i>		
	<i>Telescoping Stands: E2010.70.</i>		
	<i>Special Facility Components: F1050.</i>		
	<i>Covers and Shelters: G2060.</i>		
F1020.60	Manufactured Canopies	10 73 16	Includes: Fabricated and pre-engineered canopies.
	Manufactured Canopy Performance Requirements	01 88 13	
	Load Capacity	01 88 13	
	Wind Load Capacity	01 88 13	
	<i>See Also:</i>		
	<i>Canopy Frame: B1020.30.</i>		
	<i>Canopy Roofing: B3010.70.</i>		
	<i>Exterior Ceilings and Soffits: B3080.</i>		
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		
	<i>See Also:</i>		
	<i>Electrical Utility Towers: G4010.20.</i>		
	<i>Towers Grounding: G4010.70.</i>		
	<i>Communications Towers:</i>		
	<i>G5010.10.</i>		
F1030	Special Function Construction		
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	
	<i>See Also:</i>		
	<i>Acoustical Wall Treatment: C2010.</i>		
	<i>Acoustical Ceiling Treatment: C2050.</i>		
	<i>Plumbing Vibration, and Seismic Control: D20.</i>		
	<i>HVAC Sound, Vibration, and Seismic Control: D30.</i>		
	<i>Fire Protection Sound, Vibration, and Seismic Control: D40.</i>		
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	
	<i>See Also:</i>		
	<i>Plumbing Sound, Vibration, and Seismic Control: D20.</i>		
	<i>HVAC Sound, Vibration, and Seismic Control: D30.</i>		
	<i>Fire Protection Sound, Vibration, and Seismic Control: D40.</i>		
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	

F SPECIAL CONSTRUCTION AND DEMOLITION

NUMBER	TITLE	MF NUMBER	EXPLANATION
	High Energy Magnetic Pulse Protection	01 88 13	
	<i>See Also:</i>		
	<i>Exterior Radiation Shielding</i>		
	<i>Windows: B2020.50.</i>		
	<i>Exterior Radiation Shielding Doors:</i>		
	<i>B2050.40.</i>		
	<i>Interior Radiation Shielding</i>		
	<i>Windows: C1020.50.</i>		
	<i>Interior Radiation Shielding Doors:</i>		
	<i>C1030.70.</i>		
	<i>Radiation Detection and Alarm:</i>		
	<i>D7050.20.</i>		
F1050	Special Facility Components		
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		
	<i>See Also:</i>		
	<i>Underwater Lighting: D5040.50.</i>		
	<i>Swimming Pool Equipment: F1050.</i>		
	<i>Special Activity Rooms: F1010.</i>		
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		
	<i>See Also:</i>		
	<i>Underwater Lighting: D5040.50.</i>		
	<i>Exterior Fountains: G2060.10.</i>		
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>		
F1060	Athletic and Recreational Special Construction	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>		
F1080	Special Instrumentation	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		
F20	FACILITY REMEDIATION		
F2010	Hazardous Materials Remediation	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	
F30	DEMOLITION		
	<i>See Also:</i>		
	<i>Site Elements Demolition: G1020.</i>		
F3010	Structure Demolition	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	
F3030	Selective Demolition	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>		
F3050	Structure Moving	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	

G SITEWORK

Site Construction Performance Requirements 01 89 00

NUMBER	TITLE	MF NUMBER	EXPLANATION
G10	SITE PREPARATION		
	Site Preparation Performance Requirements	01 89 13	
G1010	Site Clearing	31 10 00	Includes: Removal of vegetation from the site, including stripping of sod and soil, and tree pruning for site clearing.
G1010.10	Clearing and Grubbing	31 11 00	
G1010.30	Tree and Shrub Removal and Trimming	31 13 00	
	<i>See Also:</i>		
	<i>Shrub and Tree Transplanting:</i>		
	<i>G2080.</i>		
	<i>Temporary Tree and Plant</i>		
	<i>Protection: Z1050.</i>		
G1010.50	Earth Stripping and Stockpiling	31 14 00	
	Soil Stripping and Stockpiling	31 14 13	
	Sod Stripping and Stockpiling	31 14 16	
G1020	Site Elements Demolition		Includes: Removal of above and below grade site improvements.
	<i>See Also:</i>		
	<i>Demolition: F30.</i>		
G1020.10	Utility Demolition		
G1020.30	Infrastructure Demolition		
G1020.50	Selective Site Demolition	02 41 13	
G1030	Site Element Relocations		
	<i>See Also:</i>		
	<i>Structure Moving: F3050.</i>		
G1030.10	Utility Relocation		Includes: Relocation of utility systems.
G1050	Site Remediation	02 50 00	Includes: Remediation of contaminated sites.
	Site Remediation Performance Requirements	01 89 13	
	<i>See Also:</i>		
	<i>Decontamination Equipment:</i>		
	<i>E1090.60.</i>		
	<i>Facility Remediation: F20.</i>		
	<i>Contaminated Site Special</i>		
	<i>Procedures: Z1020.70.</i>		
G1050.10	Physical Decontamination	02 51 00	Includes: Soil decontamination by physical treatment processes.
	Coagulation and Flocculation Decontamination	02 51 13	
	Reverse-Osmosis Decontamination	02 51 16	
	Solidification and Stabilization Decontamination	02 51 19	
	Mechanical Filtration Decontamination	02 51 23	
	Radioactive Decontamination	02 51 26	
	Surface Cleaning Decontamination	02 51 29	
	Surface Removal Decontamination	02 51 33	
G1050.15	Chemical Decontamination	02 52 00	Includes: Soil decontamination by chemical treatment processes.
	Chemical Precipitation Decontamination	02 52 13	
	Ion Change Decontamination	02 52 16	
	Neutralization Decontamination	02 52 19	
G1050.20	Thermal Decontamination	02 53 00	Includes: Soil decontamination by thermal treatment processes.
	Incineration Decontamination	02 53 13	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Thermal Desorption Decontamination	02 53 16	
	Vitrification Decontamination	02 53 19	
G1050.25	Biological Decontamination	02 54 00	Includes: Soil decontamination by biological treatment processes.
	Aerobic Processes Decontamination	02 54 13	
	Anaerobic Processes Decontamination	02 54 16	
	Bioremediation Decontamination	02 54 19	
	Soil Washing through Separation/Solubilization	02 54 23	
	Organic Decontamination	02 54 26	
G1050.30	Remediation Soil Stabilization	02 55 00	Includes: Insitu and exsitu soil stabilization for remediation.
G1050.40	Site Containment	02 56 00	Includes: Containment of contaminated site materials.
	Waste Containment	02 56 13	
	Gas Containment	02 56 19	
G1050.45	Sinkhole Remediation	02 57 00	Includes: Remediation of underground voids in soluble rock created by groundwater.
	Sinkhole Remediation by Grouting	02 57 13	
	Sinkhole Remediation by Backfilling	02 57 16	
G1050.50	Hazardous Waste Drum Handling	02 86 00	Includes: The handling of drums containing material contaminated with toxic and hazardous materials.
G1050.60	Contaminated Site Material Removal	02 60 00	Includes: Removal and disposal of contaminated site materials.
	Removal and Disposal of Contaminated Soils	02 61 00	Includes: Removal of toxic and hazardous site materials including polychlorinate biphenyl, asbestos, and organically contaminated soils.
	Hazardous Waste Recovery Processes	02 62 00	Includes: Removal of hazardous and toxic materials from soil.
	<i>See Also:</i> <i>Transportation and Disposal of Hazardous Materials: F2010.10.</i>		
	Underground Storage Tank Removal	02 65 00	Includes: Removal of underground tanks and appurtenances which have been used to store toxic and hazardous materials.
	Landfill Construction and Storage	02 66 00	Includes: Construction of landfills and storage of hazardous materials.
G1050.80	Water Remediation	02 70 00	Includes: Remediation of contaminated water.
	Groundwater Treatment	02 71 00	
	Water Decontamination	02 72 00	
G1070	Site Earthwork	31 20 00	Includes: Moving earth to establish new contours and elevations.
	Site Earthwork Performance Requirements	01 89 13	
	Degree of Compaction	01 89 13	
G1070.10	Grading	31 22 00	Includes: Earthmoving to reshape contours.
	Rough Grading	31 22 13	
	Fine Grading	31 22 16	
	Finish Grading	31 22 19	
G1070.20	Excavation and Fill	31 23 00	Includes: Excavation and fill for foundations, structures, pavement, railways, ditches, channels, culverts, drains, and utilities.
	<i>See Also:</i> <i>Building Substructure Excavation: A9010.</i> <i>Building Backfill and Compaction: A9010.10.</i>		

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Excavation	31 23 16	
	Rock Removal	31 23 16.26	
	Fill	31 23 23	
	Backfill	31 23 23.13	
	Compaction	31 23 23.23	
	Flowable Fill	31 23 23.33	
	Geofoam	31 23 23.43	
G1070.30	Embankments	31 23 33	
		31 24 00	Includes: Soil and rock embankments for support or containment and protection purposes.
	Roadway Embankments	31 24 13	
	Railway Embankments	31 24 16	
G1070.35	Erosion and Sedimentation Controls	31 25 00	Includes: Construction of permanent erosion checks and controls.
	<i>See Also:</i>		
	<i>Temporary Erosion and Sediment Control: Z1050.50.</i>		
G1070.40	Soil Stabilization	31 32 00	Includes: Addition and integration of material in and on soil to stabilize and strengthen soil material and the construction of which it is a part. Includes fully grouted, passive (non-tensioned) soil nails used to resist failure forces on slopes.
	Soil Mixing Stabilization	31 32 13	
	Chemical Treatment Soil Stabilization	31 23 16	
	Geosynthetic Soil Stabilization	31 32 19	
	Pressure Grouting Soil Stabilization	31 32 23	
	Shotcrete Soil Slope Stabilization	31 32 33	
	Soil Nailing	31 32 36	
G1070.45	Rock Stabilization	31 33 00	Includes: Various technologies to make an unstable rock slope more stable.
	Rock Bolting and Grouting	31 33 13	
	Rock Slope Netting	31 33 23	
	Rock Slope Wire Mesh	31 33 26	
	Shotcrete Rock Slope Stabilization	31 33 33	
	Vegetated Rock Slope Stabilization	31 33 43	
G1070.50	Soil Reinforcement	31 34 00	Includes: Various technologies to reinforce the strength and stability of soils.
	Geosynthetic Soil Reinforcement	31 34 19	
	Fiber Soil Reinforcement	31 34 23	
	<i>See Also:</i>		
	<i>Reinforced Soil Retaining Walls: G2060.60</i>		
G1070.55	Slope Protection	31 35 00	Includes: Various technologies to protect slopes from erosion.
	Geosynthetic Slope Protection	31 35 19	
	Slope Protection with Slope Paving	31 35 23	
	Containment Barriers	31 35 26	
G1070.60	Gabions	31 36 00	Includes: Wire baskets filled with rock used for a variety of purposes.
	Gabion Boxes	31 36 13	
	Gabion Mattresses	31 36 19	
	<i>See Also:</i>		
	<i>Gabion Retaining Walls: G2060.60.</i>		
G1070.65	Riprap	31 37 00	Includes: Cover of rock used to stabilize slopes subject to water erosion intended to be permanent.

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NUMBER	TITLE	MF NUMBER	EXPLANATION
G1070.70	Wetlands	32 70 00	Includes: Construction and restoration of excavated basis with purposely placed wetland vegetation to enhance pollutant removal from stormwater runoff.
	Constructed Wetlands	32 71 00	
	Wetlands Restoration	32 72 00	
G1070.80	Earth Dams	35 73 13	Includes: Dams constructed of earth.
	<i>See Also:</i> <i>Storm Drainage Ponds and Reservoirs: G3030.70</i>		
G1070.90	Site Soil Treatment	31 31 00	Includes: Soil treatment to resist invasion of adjoining structure by pests and growth of vegetation.
	Rodent Control	31 31 13	
	Termite Control	31 31 16	
	Vegetation Control	31 31 19	
	<i>See Also:</i> <i>Soil Treatment: A9040.</i>		
G20	SITE IMPROVEMENTS		
	Site Improvements Performance Requirements	01 89 16	
	<i>See Also:</i> <i>Site Improvements Grounding: G4010.70.</i>		
G2010	Roadways		Includes: Pavement, curbs and gutters, appurtenances, lighting, and vehicle fare collection for roadways. May Include: Site earthwork.
	Roadways Performance Requirements	01 89 16	
	Live Load Capacity	01 89 16	
	Lighting Levels	01 89 16	
	<i>See Also:</i> <i>Site Earthwork: G1070.</i> <i>Parking Lots: G2020.</i> <i>Pedestrian Plazas and Walkways: G2030.</i> <i>Airfields: G2040.</i> <i>Athletic, Recreational, and Playfield Areas: G2050.</i> <i>Temporary Roads: Z1050.35.</i>		
G2010.10	Roadway Pavement	32 10 00	
	Roadway Base Courses	32 11 00	Includes: Prepared and compacted soil and granular layers placed before installation of roadway pavement.
	Flexible Roadway Pavement	32 12 00	Includes: Finished roadway pavement of granular and asphaltic materials. Seal coats and restoration of existing pavements.
	Rigid Roadway Pavement	32 13 00	Includes: Finished roadway pavement with high bending resistance, usually of concrete.
	Roadway Unit Pavement	32 14 00	Includes: Blocks or tiles used for roadway pavement. Includes unit pavers set in mastic, sand, or mortar.
	<i>See Also:</i> <i>Unit Pavers: B3040.</i>		
	Roadway Aggregate Surfacing	32 15 00	

NUMBER	TITLE	MF NUMBER	EXPLANATION
G2010.20	Roadway Curbs and Gutters	32 16 13	Includes: Construction at perimeter of roadway pavements to separate pavements from adjacent surfaces, provide vehicular restraint, and facilitate drainage.
G2010.40	Roadway Appurtenances	32 17 00	Includes: Accessories for roadway construction.
	Speed Bumps	32 17 16	
	Pavement Snow Melting Systems	32 17 43	
	See Also:		
	Snow Melting: D3070.10.		
	Roadway Construction	34 71 00	
	Vehicle Barriers	34 71 13	
	Impact Attenuating Devices	34 71 16	
	Vehicle Delineators	34 71 19	
	Traffic Signage	10 14 53	
	Roadway Signaling and Control Equipment	34 41 00	
	Traffic Signals	34 41 13	
	Traffic Control Equipment	34 41 16	
	Roadway Monitoring Equipment	34 41 23	
	Pavement Markings	32 17 23	
G2010.70	Roadway Lighting	26 56 19	
	See Also:		
	Site Lighting: G4050.		
G2010.80	Vehicle Fare Collection	34 52 00	Includes: Equipment associated with the control of movement of vehicles on roadways and is integral system with equipment to dispense tickets and collect fares for vehicles.
	Vehicle Ticketing Equipment	34 52 16	
	Vehicle Fare Collection Equipment	34 52 26	
	Vehicle Fare Gates	34 52 33	
G2020	Parking Lots		Includes: Pavement, curbs and gutters, appurtenances, lighting, and parking control equipment for parking lots. May Include: Site earthwork.
	Parking Lots Performance Requirements	01 89 16	
	Live Load Capacity	01 89 16	
	Lighting Levels	01 89 16	
	See Also:		
	Site Earthwork: G1070.		
	Roadways: G2010.		
	Pedestrian Plazas and Walkways: G2030.		
	Airfields: G2040.		
	Athletic, Recreational, and Playfield Areas: G2050.		
	Temporary Parking Areas: Z1050.35.		
G2020.10	Parking Lot Pavement	32 10 00	
	Parking Lot Base Courses	32 11 00	Includes: Prepared and compacted soil and granular layers placed prior to installation of parking lot pavement.
	Flexible Parking Lot Pavement	32 12 00	Includes: Finished parking lot pavement of granular and asphaltic materials.
	Rigid Parking Lot Pavement	32 13 00	Includes: Finished parking lot pavement with high bending resistance, usually of concrete.

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Parking Lot Unit Pavement	32 14 00	Includes: Blocks or tiles used for parking lot pavement. Unit pavers set in mastic, sand, or mortar.
	<i>See Also:</i> <i>Unit Pavers: B3040.</i>		
G2020.20	Parking Lot Aggregate Surfacing Parking Lot Curbs and Gutters	32 15 00 32 16 13	Includes: Construction at perimeter of parking lot pavement to separate pavement from adjacent surfaces, provide vehicular restraint, and facilitate drainage.
G2020.40	Parking Lot Appurtenances	32 17 00	Includes: Accessories for parking lot construction.
	<i>See Also:</i> <i>Bicycle Racks: G2060.</i>		
	Parking Bumpers	32 17 13	
	Pavement Snow Melting Systems	32 17 43	
	<i>See Also:</i> <i>Snow Melting: D3070.10.</i>		
	Parking Lot Traffic Signage	10 14 53	
	Parking Lot Pavement Markings	32 17 23	
G2020.70	Parking Lot Lighting	26 56 16	
	<i>See Also:</i> <i>Site Lighting: G4050.</i>		
G2020.80	Exterior Parking Control Equipment	11 12 00	Includes: Equipment associated with the control of movement of vehicle parking.
	Exterior Parking Key and Card Control Units	11 12 13	
	Exterior Parking Ticket Dispensers	11 12 16	
	Exterior Parking Meters	11 12 23	
	Exterior Parking Fee Collection Equipment	11 12 26.13	
	Exterior Parking Gates	11 12 33	
	<i>See Also:</i> <i>Interior Parking Control Equipment:</i> <i>E1010.30.</i>		
G2030	Pedestrian Plazas and Walkways		Includes: Pavement, curbs and gutters, appurtenances, lighting, and pedestrian control equipment for pedestrian plazas and walkways. Includes exterior steps and ramps. May Include: Site earthwork.
	Pedestrian Plazas and Walkways Performance	01 89 16	
	Lighting Levels	01 89 16	
	<i>See Also:</i> <i>Site Earthwork: G1070.</i> <i>Roadways: G2010.</i> <i>Parking Lots: G2020.</i> <i>Airfields: G2040.</i> <i>Athletic, Recreational, and Playfield Areas: G2050.</i>		
G2030.10	Pedestrian Pavement	32 10 00	Includes: Prepared and compacted soil and granular layers placed before installation of pedestrian pavement.
	Pedestrian Pavement Base Courses	32 11 00	
	Flexible Pedestrian Pavement	32 12 00	Includes: Finished pedestrian pavement of granular and asphaltic materials.
	Rigid Pedestrian Pavement	32 13 00	Includes: Finished pedestrian pavement with high bending resistance, usually of concrete.

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Pedestrian Unit Pavement	32 14 00	Includes: Blocks or tiles used for pedestrian pavement. Unit pavers which may be set in mastic, sand, or mortar.
	<i>See Also:</i> <i>Unit Pavers: B3040.</i>		
G2030.20	Pedestrian Aggregate Surfacing Pedestrian Pavement Curbs and Gutters	32 15 00 32 16 13	Includes: Construction at perimeter of pedestrian pavements to separate pavement from adjacent surfaces and facilitate drainage.
G2030.30	Exterior Steps and Ramps		Includes: Steps and ramps in exterior locations including applied finishes such as coatings and tile and railings.
	<i>See Also:</i> <i>Snow Melting: D3070.10.</i> <i>Stair: B1080.</i>		
G2030.40	Pedestrian Pavement Appurtenances	32 17 00	Includes: Accessories for pedestrian pavement construction.
	Pavement Markings	32 17 23	
	Tactile Warning Surfacing	32 17 26	
	Pavement Snow Melting Systems	32 17 43	
	<i>See Also:</i> <i>Snow Melting: D3070.10.</i>		
G2030.70	Plaza and Walkway Lighting	26 56 33	
	<i>See Also:</i> <i>Site Lighting: G4050.</i>		
G2030.80	Exterior Pedestrian Control Equipment	11 14 00	Includes: Equipment associated with the control of movement of pedestrians.
	Exterior Pedestrian Gates	11 14 13	
	Exterior Money-Changing Equipment	11 14 16	
	Exterior Pedestrian Fare Collection Equipment	11 14 26	
	Exterior Pedestrian Detection Equipment	11 14 43	
	Exterior Pedestrian Security Equipment	11 14 53	
	<i>See Also:</i> <i>Exterior Security Gates: B2050.70.</i> <i>Electronic Safety and Security: D70.</i> <i>Interior Pedestrian Security Equipment: E1010.70.</i> <i>Security Equipment: E1040.60.</i> <i>Security Procedures: Z1020.70.</i> <i>Temporary Security Barriers & Enclosures: Z1050.40.</i>		
G2040	Airfields		Includes: Pavement, curbs and gutters, appurtenances, lighting, and airfield signally and control equipment for airfields. May Include: Site earthwork.
	Airfields Performance Requirements	01 89 16	
	Live Load Capacity	01 89 16	
	Lighting Levels	01 89 16	
	<i>See Also:</i> <i>Site Earthwork: G1070.</i> <i>Roadways: G2010.</i> <i>Parking Lots: G2020.</i> <i>Pedestrian Plazas and Walkways: G2030.</i> <i>Athletic, Recreational, and Playfield Areas: G2050.</i> <i>Airport Special Procedures: Z1020.70.</i>		

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NUMBER	TITLE	MF NUMBER	EXPLANATION
G2040.10	Aviation Pavement	32 10 00	Includes: Prepared and compacted soil and granular layers placed before installation of airfield pavement.
	Aviation Pavement Base Courses	32 11 00	
	Flexible Aviation Pavement	32 12 00	
	Rigid Aviation Pavement	32 13 00	
	Aviation Aggregate Surfacing	32 15 00	
G2040.20	Aviation Pavement Curbs and Gutters	32 16 13	Includes: Construction at perimeter of airfield pavements to separate pavement from adjacent surfaces and facilitate drainage.
G2040.40	Aviation Pavement Appurtenances	32 17 00	Includes: Accessories for aviation pavement construction.
	Airfield Pavement Markings	32 17 23	
	Pavement Snow Melting Systems	32 17 43	
	See Also:		
	Snow Melting: D3070.10.		
	Airfield Traffic Signage	10 14 53	
G2040.70	Airfield Lighting	26 56 00	
	See Also:		
	Site Lighting: G4050.		
G2040.80	Airfield Signaling and Control Equipment	34 43 00	Includes equipment associated with airfield signaling, landing, and traffic control including weather observation equipment.
	Airfield Signals	34 43 13	
	Airfield Landing Equipment	34 43 16	
	Airfield Traffic Control Tower Equipment	34 43 19	
	Weather Observation Equipment	34 43 23	
	Airfield Control Equipment	34 43 26	
G2050	Athletic, Recreational, and Playfield Areas		Includes: Surfacing, fencing, equipment, grandstands and bleachers, and lighting for athletic, recreational, and playfield areas. May Include: Site earthwork.
	See Also:		
	Site Earthwork: G1070.		
	Roadways: G2010.		
	Parking Lots: G2020.		
	Pedestrian Plazas and Walkways: G2030.		
	Airfields: G2040.		
G2050.10	Athletic Areas		Includes: Exterior surfacing, fencing, equipment, and lighting for athletic areas.
	Athletic Areas Performance Requirements	01 89 16	
	Lighting Levels	01 89 16	
	Athletic Surfaces	32 18 00	
	Baseball Field Surfacing	32 18 23.13	
	Field Sport Surfacing	32 18 23.23	
	Running Track Surfacing	32 18 23.33	
	Tennis Court Surfacing	32 18 23.53	
	Athletic Court Fencing		
	Tennis Court Fences and Gates	32 31 13.26	
	Tennis Court Wind Breaker	32 31 13.29	
	Athletic Equipment		
	Athletic Field Equipment	11 68 33	
	Exterior Athletic Equipment	11 68 23	
	Exterior Scoreboards	11 68 43	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Exterior Athletic Lighting	26 56 68	
	<i>See Also:</i>		
	<i>Athletic Flooring: C2030.80.</i>		
	<i>Athletic Equipment: E1070.50.</i>		
	<i>Athletic Rooms: F1010.50.</i>		
	<i>Grandstands and Bleachers:</i>		
	<i>F1020.40.</i>		
	<i>Athletic & Recreational Special</i>		
	<i>Construction: F1060.</i>		
	<i>Site Lighting: G4050.</i>		
G2050.30	Recreational Areas		Includes: Exterior surfacing, fencing, equipment and structures, and lighting for recreational areas.
	Recreational Areas Performance Requirements	01 89 16	
	Lighting Levels	01 89 16	
	Recreational Surfaces	32 18 00	
	Recreational Court Surfacing	32 18 23.43	
	Recreational Court Fences and Gates	32 31 13.23	
	Recreational Area Lighting	26 56 00	
	<i>See Also:</i>		
	<i>Site Lighting: G4050.</i>		
G2050.50	Playfield Areas		Includes: Exterior surfacing, equipment and structure, and lighting for playfield areas.
	Play Areas Performance Requirements	01 89 16	
	Lighting Levels	01 89 16	
	Playfield Surfacing		
	Synthetic Resilient Surfacing	32 18 16	
	Playfield Equipment and Structures	11 68 00	
	Playground Equipment	11 68 13	
	Play Structures	11 68 16	
	Playfield Lighting	26 56 00	
	<i>See Also:</i>		
	<i>Site Lighting: G4050.</i>		
G2060	Site Development		
G2060.10	Exterior Fountains	13 12 13	Includes: Exterior decorative or functional manufactured fountains.
	Exterior Fountains Performance Requirements	01 89 16	
	Exterior Fountain Plumbing Systems	22 52 00	
	Exterior Fountain Equipment		
	Exterior Fountain Water Treatment	22 52 19	
	Exterior Fountain Pumps	22 52 16	
	Exterior Fountain Equipment Controls	22 52 23	
	Exterior Fountain Piping System	22 52 13	
	Exterior Fountain Specialties		
	<i>See Also:</i>		
	<i>Interior Fountains: F1050.20.</i>		
G2060.20	Fences and Gates	32 31 00	Includes: Exterior fences and gates. Also includes cattle guards.
	Fences and Gates Performance Requirements	01 89 16	
	Security Level		
	Gate Operators	32 31 11	
	Chain Link Fences and Gates	32 31 13	
	Welded Wire Fences and Gates	32 31 16	
	Decorative Metal Fences and Gates	32 31 19	
	Plastic Fences and Gates	32 31 23	
	Wire Fences and Gates	32 31 26	
	Wood Fences and Gates	32 31 29	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Cattle Guards	32 31 53	
	See Also:		
	Exterior Gates: B2050.70		
	Interior Gates: C1040.50		
	Temporary Fencing: Z1050.40.		
G2060.25	Site Furnishings	12 93 00	Includes: Manufactured site furniture and fixtures.
	See Also:		
	Planting Accessories: G2080.		
	Tree Grates: G2080.		
	Bicycle Racks	12 93 13	
	Trash and Litter Receptors	12 93 23	
	Planters	12 93 33	
	Site Seating and Tables	12 93 43	
G2060.30	Exterior Signage	10 14 00	Includes: Exterior signs with the exception of roadway and parking lot signage.
	See Also:		
	Traffic Signage: G2010.		
	Parking Lot Traffic Signage: G2020.		
	Temporary Project Signage: Z1050.70.		
G2060.35	Flagpoles	10 75 00	Includes: Flagpoles of metal, wood, and fiberglass, including concrete bases and accessories.
	Flagpoles Performance Requirements	01 89 16	
	Wind Load Capacity	01 89 16	
	Automatic Flagpoles	10 75 13	
	Ground-Set Flagpoles	10 75 16	
	Nautical Flagpoles	10 75 19	
	Wall-Mounted Flagpoles	10 75 23	
	See Also:		
	Interior Flags and Banners: C1090.90.		
G2060.40	Covers and Shelters	10 73 00	Includes: Manufactured covers and shelters.
	See Also:		
	Parking Lot Appurtenances: G2020.		
	Covers and Shelters Performance Requirements	01 89 16	
	Load Capacity	01 89 16	
	Attendant Booths		
	Site Constructed Attendant Booths		
	Manufactured Attendant Booths		
	Car Shelters	10 73 23	
	Walkway Coverings	10 73 26	
	Transportation Stop Shelters	10 73 43	
G2060.45	Exterior Gas Lighting	10 84 13	
	See Also:		
	Interior Gas Lighting: C1090.45.		
G2060.50	Site Equipment		Includes: Equipment located on the site, such as car washing, banking, theater equipment, and other freestanding equipment.
	Banking Equipment		
	Automatic Banking Systems	11 17 16	
G2060.60	Retaining Walls	32 32 00	Includes: Retaining walls associated with site construction. Includes Subdrainage.
	Retaining Walls Performance Requirements	01 89 16	
	Lateral Earth Pressures	01 89 16	
	Cast-In-Place Concrete Retaining Walls	32 32 13	
	Precast Concrete Retaining Walls	32 32 16	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Unit Masonry Retaining Walls	32 32 19	
	Segmental Retaining Walls	32 32 23	
	Metal Crib Retaining Walls	32 32 26	
	Timber Retaining Walls	32 32 29	
	Reinforced Soil Retaining Walls	32 32 34	
	<i>See Also:</i>		
	<i>Reinforced Soil: G1070.50.</i>		
	Gabion Retaining Walls	32 32 36	
	<i>See Also:</i>		
	<i>Gabions: G1070.60.</i>		
	Soldier-Beam Retaining Walls	32 32 43	
	Stone Retaining Walls	32 32 53	
	Retaining Wall Subdrainage	33 46 33	
	<i>See Also:</i>		
	<i>Subdrainage: G3030.60.</i>		
G2060.70	Site Bridges	32 34 00	Includes: Fabricated and constructed brides for foot and vehicular travel on a facility site.
	Site Bridges Performance Requirements	01 89 16	
	Live Load Capacity	01 89 16	
	Pedestrian Bridges	32 34 13	
	Vehicular Bridges	32 34 23	
	<i>See Also:</i>		
	<i>Temporary Bridges: Z1050.25.</i>		
G2060.80	Site Screening Devices	32 35 00	Includes: Self-supporting walls for noise control and privacy.
	Screens and Louvers	32 35 13	
	<i>See Also:</i>		
	<i>Louvered Equipment Screens:</i>		
	<i>B2010.60.</i>		
	<i>Exterior Door Louvers: B2050.90.</i>		
	<i>Exterior Fixed Grilles and Screens:</i>		
	<i>B2080.10.</i>		
	<i>Interior Louvers: C1090.15.</i>		
	<i>Interior Door Louvers: C2030.90.</i>		
	Sound Barriers	32 35 16	
G2060.85	Site Specialties	32 39 00	
	Metal Bollards	32 39 13	
G2080	Landscaping		
	<i>See:</i>		
	<i>Horticultural Equipment: E1090.40.</i>		
G2080.10	Planting Irrigation	32 84 00	Includes: Excavation and backfill, piping, equipment, and accessories.
	Planting Irrigation Performance Requirements	01 89 16	
	Irrigation Pumps	32 82 00	
	Drip Irrigation	32 84 13	
	Sprinkler Systems	32 84 23	
	<i>See Also:</i>		
	<i>Agricultural Irrigation: E1090.40.</i>		
	<i>Site Irrigation Water Distribution:</i>		
	<i>G3010.50.</i>		
G2080.20	Turf and Grasses	32 92 00	Includes: Lawns and grasses including seeding and sodding.
	Hydro-Mulching	32 92 13	
	Plugging	32 92 16	
	Seeding	32 92 19	
	Sodding	32 92 23	
	Sprigging	32 92 26	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
G2080.30	Plants	32 93 00	Includes: Ground covers, plants and bulbs, shrubs, and trees. Includes planting accessories such as tree grates and prefabricated planters.
	Ground Covers	32 93 13	
	Plants and Bulbs	32 93 23	
	Shrubs	32 93 33	
	Trees	32 93 43	
G2080.50	Planting Accessories	32 94 00	Includes: Accessories to separate and protect exterior plants.
	Landscape Edging	32 94 13	
	Landscape Timbers	32 94 16	
	Planters	32 94 33	
	Tree Grates	32 94 43	
	Tree Grids	32 94 46	
	Decorative Landscape Boulders		
	Vertical Planting Nets and Grids		
G2080.70	Landscape Lighting	26 56 26	
	<i>See Also:</i>		
	<i>Site Lighting: G4050.</i>		
G2080.80	Landscaping Activities		
	Planting Preparation	32 91 00	
	Transplanting	32 96 00	Includes: Relocation of existing shrubs and trees including excavation and replanting.
	<i>See Also:</i>		
	<i>Tree and Shrub Removal and Trimming: G1010.</i>		
	<i>Temporary Tree and Plant Protection : Z1050.</i>		
G30	LIQUID AND GAS SITE UTILITIES		
	Site Plumbing Utilities Performance	01 89 19	
	<i>See Also:</i>		
	<i>Utilities Grounding: G4010.70.</i>		
G3010	Water Utilities	33 10 00	Includes: Water distribution for domestic consumption, fire fighting, and irrigation for a facility site and for multiple facilities. Includes trenching and backfilling. Includes Liquid and Gas Site Utilities Supplementary Components as appropriate.
	<i>See Also:</i>		
	<i>Trenching and Backfilling: G1070.20.</i>		
	<i>Supplementary Components: G3090.10.</i>		
G3010.10	Site Domestic Water Distribution		Includes: Supply wells, piping, equipment, storage tanks, and water ponds and reservoirs.
	Site Domestic Water Distribution Performance Requirements	01 89 19	
	Water Utility Service		
	Water Supply Wells	33 21 00	
	Water Distribution Piping	33 11 00	
	Water Distribution Equipment	33 12 00	
	Water Service Connections	33 12 13	
	Water Distribution Valves	33 12 16	
	Fire Hydrants	33 12 19	
	Water Pumping Stations	33 12 23	
	Water Metering	33 12 33	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Disinfecting of Water Distribution	33 13 00	
	Water Storage Tanks	33 16 00	
	Water Distribution Ponds	33 47 19.13	
	Water Distribution Pond Liners	33 47 13.13	
	Water Distribution Pond Covers	33 47 16.13	
	<i>See Also:</i>		
	<i>Domestic Water Distribution:</i>		
	<i>D2010.</i>		
G3010.30	Site Fire Protection Water Distribution		Includes: Supply wells, piping, equipment, storage tanks, and water ponds and reservoirs.
	Site Fire Protection Water Distribution	01 89 19	
	Water Utility Service		
	Water Supply Wells	33 21 00	
	Water Distribution Piping	33 11 19	
	Water Distribution Equipment	33 12 00	Includes: Systems for transmission and distribution of fire protection water outside the building. Utility piping materials, utility structures, valves, hydrants, excavation, bedding, backfill, and compaction. Testing and flushing.
	Water Service Connections	33 12 13	
	Water Distribution Valves	33 12 16	
	Fire Hydrants	33 12 19	
	Water Pumping Stations	33 12 23	
	Water Metering	33 12 33	
	Water Storage Tanks	33 16 00	
	Fire Protection Water Ponds	33 47 19.33	
	Water Pond Liners	33 47 13.13	
	Water Pond Covers	33 47 16.13	
	<i>See Also:</i>		
	<i>Water Based Fire-Suppression:</i>		
	<i>D4010.10.</i>		
G3010.50	Site Irrigation Water Distribution		Includes: Supply wells, piping, equipment, storage tanks, and water ponds and reservoirs.
	Site Irrigation Water Distribution Performance	01 89 19	
	Water Utility Service		
	Irrigation Water Wells	33 21 16	
	Water Distribution Piping	33 11 00	
	Water Distribution Equipment	33 12 00	
	Water Service Connections	33 12 13	
	Water Distribution Valves	33 12 16	
	Water Pumping Stations	33 12 23	
	Water Metering	33 12 33	
	Water Storage Tanks	33 16 00	
	Water Ponds and Reservoirs	33 47 19	
	Water Pond and Reservoir Liners	33 47 13	
	Water Pond and Reservoir Covers	33 47 16	
	<i>See Also:</i>		
	<i>Planting Irrigation: G2080.10.</i>		
G3020	Sanitary Sewerage Utilities	33 30 00	Includes: Sanitary sewerage for a facility site and for multiple facilities. Includes piping, septic tanks that serve multiple facilities, structures, and lagoons. Includes trenching and backfilling. Includes Liquid and Gas Site Utilities Supplementary Components as appropriate.

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Sanitary Sewerage Utility Performance <i>See Also:</i> <i>Sanitary Drainage: D2020.</i> <i>Trenching and Backfilling:</i> <i>G1070.20.</i> <i>Supplementary Components:</i> <i>G3090.10.</i>	01 89 19	
G3020.10	Sanitary Sewerage Utility Connection		
G3020.20	Sanitary Sewerage Piping	33 31 00	
	Low Pressure Sanitary Sewerage	33 33 00	
	Sanitary Sewerage Force Mains	33 34 00	
G3020.40	Utility Septic Tanks	33 36 00	Includes: Systems for collecting sanitary waste on-site. Piping materials, excavation, bedding, backfill, compaction, and testing.
	Septic Tanks and Effluent Wet Wells	33 36 13	
	Septic Tank Effluent Pumps	33 36 16	
	Drainage Field <i>See Also:</i> <i>Facility Septic Tanks: D2020.10.</i>	33 36 33	
G3020.50	Sanitary Sewerage Structures	33 39 00	
	Sewerage Manholes, Frames, and Covers	33 39 13	
	Sewerage Cleanouts	33 39 23	
G3020.60	Sanitary Sewerage Lagoons	33 47 23	
G3030	Storm Drainage Utilities	33 40 00	Includes: Storm drainage for surface or combination of surface and subsurface water for a facility site or for multiple facilities. Includes piping, culverts, water drains, drainage pumps, Subdrainage, and storm drainage ponds and reservoirs. Includes trenching and backfilling. Includes Liquid and Gas Site Utilities Supplementary Components as appropriate.
	Storm Drainage Utility Performance <i>See Also:</i> <i>Trenching and Backfilling:</i> <i>G1070.20.</i> <i>Supplementary Components:</i> <i>G3090.10.</i>	01 89 19	
G3030.10	Storm Drainage Utility Connection		
G3030.20	Storm Drainage Piping	33 41 00	
G3030.30	Culverts	33 42 00	
	Pipe Culverts	33 42 13	
	Concrete Culverts	33 42 16	
G3030.40	Site Storm Water Drains	33 44 00	
	Area Drains	33 44 13	
	Trench Drains	33 44 16	
	Storm Water Treatment <i>See Also:</i> <i>Facility Stormwater Drains:</i> <i>D2030.30.</i>	33 44 19	
G3030.50	Storm Drainage Pumps	33 45 00	
G3030.60	Site Subdrainage	33 46 00	Includes: Subdrainage for interception and removal of water.
	Subdrainage Piping	33 46 16	
	Drainage Layers	33 46 23	

NUMBER	TITLE	MF NUMBER	EXPLANATION
	Geotextile Subsurface Drainage Filtration	33 46 26	
	See Also:		
	Foundation Drainage: A6010.10.		
	Underslab Drainage: A6010.20.		
	Retaining Wall Drainage: G2060.60.		
G3030.70	Storm Drainage Ponds and Reservoirs	33 47 26	
	Stabilization Ponds	33 47 26.13	
	Retention Basins	33 47 26.16	
	Leaching Pits	33 47 26.19	
	Water Pond and Reservoir Liners	33 47 13	
	See Also:		
	Earth Dams: G1070.		
G3050	Site Energy Distribution		Includes: Energy distribution for a facility site or multiple facilities. Includes hydronic heating, steam energy, and hydronic cooling distribution. Includes trenching and backfilling. Includes Liquid and Gas Site Utilities Supplementary Components as appropriate.
	See Also:		
	Facility Distribution Systems:		
	D3050.		
	Trenching and Backfilling:		
	G1070.20.		
	Supplementary Components:		
	G3090.10.		
G3050.10	Site Hydronic Heating Distribution	33 61 00	Includes: Hot water piping, valves, piping specialties, pumps, and other components serving a facility site or multiple facilities.
	Site Hydronic Heating Distribution Performance Requirements	01 89 23	
	Heating Utility Connection		
	Underground Heating Distribution	33 61 13	
	Aboveground Heating Distribution	33 61 23	
G3050.20	Site Steam Energy Distribution	33 63 00	Includes: Steam and condensate piping, valves, piping specialties, and other components serving a facility site or multiple facilities.
	Site Steam Distribution Performance Requirements	01 89 23	
	Steam Utility Connection		
	Underground Steam and Condensate	33 63 13	
	Aboveground Steam and Condensate	33 63 23	
G3050.40	Site Hydronic Cooling Distribution	33 61 00	Includes: Chilled condenser piping, valves, piping specialties, pumps, and other components serving a facility site or multiple facilities.
	Site Hydronic Cooling Distribution Performance Requirements	01 89 23	
	Cooling Utility Connection		
	Underground Cooling Distribution	33 61 13	
	Aboveground Cooling Distribution	33 61 23	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
G3060	Site Fuel Distribution		Includes: Gas, fuel-oil, gasoline, diesel fuel, and aviation fuel distribution for a facility site or multiple facilities. Includes trenching and backfilling. Includes Liquid and Gas Site Utilities Supplementary Components as appropriate.
	<i>See Also:</i> <i>Facility Fuel Systems: D3010.</i> <i>Trenching and Backfilling:</i> <i>G1070.20.</i> <i>Supplementary Components:</i> <i>G3090.10.</i>		
G3060.10	Site Gas Distribution	33 51 00	Includes: Gas piping, valves, piping specialties, pumps, storage tanks, and other components serving a facility site or multiple facilities.
	Site Gas Distribution Performance Requirements	01 89 23	
	Gas Utility Connection		
	Natural-Gas Distribution	33 51 00	
	Liquefied Petroleum Gas Distribution		
	Compressed Gases Storage Tanks	33 56 53	
	<i>See Also:</i> <i>Fuel-Gas Detection and Alarm:</i> <i>D7050.30.</i>		
G3060.20	Site Fuel-Oil Distribution	33 52 13	Includes: Fuel-oil water piping, valves, piping specialties, pumps, storage tanks, and other components serving a facility site or multiple facilities.
	Site Fuel-Oil Distribution Performance	01 89 23	
	Fuel-Oil Piping	33 52 13.13	
	Fuel-Oil Pumps	33 52 13.23	
	Fuel-Oil Storage Tanks	33 56 00	
	<i>See Also:</i> <i>Fuel-Oil Detection and Alarm:</i> <i>D7050.40.</i>		
G3060.30	Site Gasoline Distribution	33 52 16	Includes: Gasoline piping, valves, piping specialties, pumps, storage tanks, and other components serving a facility site or multiple facilities.
	Site Gasoline Distribution Performance	01 89 23	
	Gasoline Piping	33 52 16.13	
	Gasoline Pumps	33 52 16.23	
	Gasoline Storage Tanks	33 56 00	
G3060.40	Site Diesel Fuel Distribution	33 52 19	Includes: Diesel fuel piping, valves, piping specialties, pumps, storage tanks, and other components serving a facility site or multiple facilities.
	Site Diesel Fuel Distribution Performance	01 89 23	
	Diesel Fuel Piping	33 52 19.13	
	Diesel Fuel Pumps	33 52 19.23	
	Diesel Fuel Storage Tanks	33 56 00	
G3060.60	Site Aviation Fuel Distribution	33 52 43	Includes: Aviation fuel piping, valves, piping specialties, pumps, storage tanks, and other components serving a facility site or multiple facilities.
	Site Aviation Fuel Distribution Performance	01 89 23	
	Aviation Fuel Piping	33 52 43.13	
	Aviation Fuel Pumps	33 52 43.23	
	Aviation Fuel Grounding	33 52 43.19	
	Aviation Fuel Storage Tanks	33 56 43	

NUMBER	TITLE	MF NUMBER	EXPLANATION
G3090	Liquid and Gas Site Utilities Supplementary Components		Includes: Common work results for utilities and instrumentation and control to be included in liquid and gas utility elements above as appropriate.
G3090.10	Supplementary Components		
	Common Work Results for Utilities	33 05 00	
	Manholes and Structures	33 05 13	
	Utility Structures	33 05 16	
	Pressure Piping Tied Joint Restraint System	33 05 19	
	Trenchless Utility Installations	33 05 23	
	Utility Identification	33 05 26	
	Instrumentation and Control	33 09 00	
G40	ELECTRICAL SITE IMPROVEMENTS		
	Site Electrical Utilities Performance	01 89 26	
G4010	Site Electric Distribution Systems		Includes: Equipment and related facilities for site transformation from site service voltage to site distribution voltage, including unit substations, transformers, circuit breakers, interrupter switches, cutouts and fuses, associated switchgear and accessories, concrete foundations, metal framing, fence enclosures, line structures, surface pavement, insulators, lightning arrestors, and grounding systems.
	Site Electric Distribution System Performance Requirements	01 89 26	
	<i>See Also:</i>		
	<i>Building Electrical Service and Distribution: D5020.</i>		
	<i>Demonstration and Training: Z1070.</i>		
	<i>Startup and Adjusting: Z1070.</i>		
G4010.10	Electrical Utility Services	33 71 73	
G4010.20	Electric Transmission and Distribution	33 71 00	Includes: Structures and wiring to distribute electrical power to and across sites.
	Electrical Utility Towers	33 71 13	
	<i>See Also:</i>		
	<i>Towers: F1020.70</i>		
	<i>Towers Grounding: G4010.70.</i>		
	<i>Communications Towers: G5010.10.</i>		
	Electrical Utility Poles	33 71 16	
	<i>See Also:</i>		
	<i>Communications Utility Poles: G5010.10.</i>		
	Underground Ducts and Manholes	33 71 19	
	Insulators and Fittings	33 71 23	
	Transmission and Distribution Equipment	33 71 26	
	Wiring	33 71 39	
		33 71 49	
	Direct Current Transmission	33 71 53	
	Transmission and Distribution Specialties	33 71 83	
G4010.30	Electrical Substations	33 72 00	Includes: Assembly of structures, switches, circuit breakers, buses, and transformers to switch circuits and convert power from transmission voltages to distribution voltage.
	Deadend Structures	33 72 13	
	Structural Bus Supports	33 72 23	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Substation Bus Assemblies	33 72 26	
	Control House Equipment	33 72 33	
	Substation Control Wiring	33 72 43	
G4010.40	Electrical Transformers	33 73 00	Includes: Transformers for substation applications to transform transmission voltage to distribution voltage.
G4010.50	Electrical Switchgear and Protection Devices	33 75 00 33 77 00	
	Circuit Breakers		
	Fusible Interrupter Switchgear	33 77 26	
	Cutouts	33 77 33	
	Fuses		
	Surge Arresters		
	Shunt Arresters		
	Reclosers	33 77 53	
G4010.70	Site Grounding	33 79 00	Includes: Conducting connection between an element and a ground electrode placed in the earth to provide a safe path for the dissipation of fault currents, lightning strikes, static discharges, EMI and RFI signals and interference.
	<i>See Also:</i>		
	<i>Facility Grounding: D5020.70.</i>		
	Site Improvements Grounding	33 79 13	
	<i>See Also:</i>		
	<i>Site Improvements: G20.</i>		
	Tower Grounding	33 79 16	
	<i>See Also:</i>		
	<i>Towers: F1020.70.</i>		
	Utilities Grounding	33 79 19	
	<i>See Also:</i>		
	<i>Liquid and Gas Site Utilities: G30</i>		
	Utility Substation Grounding	33 79 23	
	<i>See Also:</i>		
	<i>Electrical Substations: G4010.20.</i>		
	Site Grounding Conductors	33 79 83	
	Site Lightning Protection	33 79 93	
	<i>See Also:</i>		
	<i>Lightning Protection: D5080.10.</i>		
G4010.90	Electrical Distribution System Instrumentation and	33 09 70	
G4050	Site Lighting	26 56 29	
G4050.10	Area Lighting	26 56 23	Includes: Underground and overhead electric feeders and branch circuits. Transformers, wire, conduits, ductbanks, manholes, poles, luminaries, controls, grounding system, excavation, backfilling, and compaction.
	Area Lighting Performance Requirements		
	Lighting Levels		
	<i>See Also:</i>		
	<i>Interior Lighting: D5040.</i>		
	<i>Roadway Lighting: G2010.70</i>		
	<i>Parking Lot Lighting: G2020.70.</i>		
	<i>Pedestrian Plaza and Walkway Lighting: G2030.70.</i>		
	<i>Airfield Lighting: G2040.70.</i>		
	<i>Athletic, Recreation, and Playfield Area Lighting: G2050.</i>		
	<i>Landscape Lighting: G2080.70.</i>		

NUMBER	TITLE	MF NUMBER	EXPLANATION
G4050.20	Flood Lighting	26 56 36	
G4050.50	Building Illumination		
G4050.90	Exterior Lighting Supplementary Components		
	Lighting Poles and Standards	26 56 13	
	Site Lighting Instrumentation and Controls	26 09 00	
G50	SITE COMMUNICATIONS		
G5010	Site Communications Systems	33 80 00	Includes: Communications distribution for a facility site or multiple facilities.
	<i>See Also:</i>		
	<i>Data Communications Systems:</i>		
	<i>D6010.</i>		
	<i>Voice Communications Systems:</i>		
	<i>D6020.</i>		
	<i>Audio-Video Communications:</i>		
	<i>D6030.</i>		
	<i>Distributed Communications and Monitoring: D6060.</i>		
G5010.10	Site Communications Structures	33 81 00	Includes: Structures for aboveground and underground distribution of communications cables and signals.
	Communications Transmission Towers	33 81 13	
	Antenna Towers	33 81 16	
	<i>See Also:</i>		
	<i>Towers: F1020.70</i>		
	<i>Electrical Utility Towers: G4010.20.</i>		
	<i>Towers Grounding: G4010.70.</i>		
	Communications Utility Poles	33 81 19	
	<i>See Also:</i>		
	<i>Electrical Utility Poles: G4010.20.</i>		
	Aerial Cable Installation Hardware	33 81 23	
	Communications Underground Ducts, Manholes, and Handholes	33 81 26	
	Communications Vaults, Pedestal, and Enclosures	33 81 29	
	Communications Blowers, Fans, and Ventilation	33 81 33	
G5010.30	Site Communications Distribution	33 82 00	Includes: Copper and optical fiber outside cable plant.
	Copper Communications Distribution Cabling	33 82 13	
	Optical Fiber Communications Distribution	33 82 23	
	Coaxial Communications Distribution Cabling	33 82 33	
	Grounding and Bonding for Communications	33 82 43	
	Cable Pressurization Equipment	33 82 46	
	Cleaning, Lubrication, and Restoration Chemicals	33 82 53	
G5010.50	Wireless Communications Distribution	33 83 00	Includes: External wireless communications systems.
	Laser Transmitter and Receivers	33 83 13	
	Microwave Transmitter and Receivers	33 83 16	
	Infrared Transmitter and Receivers	33 83 19	
	UHF/VHF Transmitter and Receivers	33 83 23	
	For Site Electronic Safety and Security Systems		
	<i>See Also:</i>		
	<i>Access Control and Intrusion Detection: D7010.</i>		
	<i>Electronic Surveillance: D7030.</i>		
	<i>Detection and Alarm: D7050.</i>		
	<i>Electronic Monitoring and Control: D7070.</i>		

G SITEWORK

NUMBER	TITLE	MF NUMBER	EXPLANATION
G90	MISCELLANEOUS SITE CONSTRUCTION		
	Other Site Construction Performance	01 89 29	
G9010	Tunnels	31 70 00	Includes: Vehicular, pedestrian, and service tunnels. Includes tunnel boring, bracing and jacking work, linings and casing, grouting support systems, boring machines, and control and spoil removal systems. Includes Tunnel Construction Related Activities as appropriate.
	Tunnel Performance Requirements	01 89 29	
G9010.10	Vehicular Tunnels		Includes: Tunnels to allow for movement of vehicles.
	Vehicular Tunnel Support Systems	31 72 00	
	Rock Reinforcement and Initial Support	31 72 13	
	Steel Ribs and Lagging	31 72 16	
	Vehicular Tunnel Grouting	31 73 00	
	Cement Tunnel Grouting	31 73 13	
	Chemical Tunnel Grouting	31 73 16	
	Vehicular Tunnel Construction	31 74 00	
	Cast-In-Place Concrete Tunnel Lining	31 74 13	
	Precast Concrete Tunnel Lining	31 74 16	
	Shotcrete Tunnel Lining	31 74 19	
	Shaft Construction	31 75 00	
	Cast-In-Place Concrete Shaft Lining	31 75 13	
	Precast Concrete Shaft Lining	31 75 16	
	Vehicular Submersible Tube Tunnels	31 77 00	
G9010.20	Pedestrian Tunnels		Includes: Tunnels to allow for the movement of pedestrians.
	Pedestrian Tunnel Support Systems	31 72 00	
	Rock Reinforcement and Initial Support	31 72 13	
	Steel Ribs and Lagging	31 72 16	
	Pedestrian Tunnel Grouting	31 73 00	
	Cement Tunnel Grouting	31 73 13	
	Chemical Tunnel Grouting	31 73 16	
	Pedestrian Tunnel Construction	31 74 00	
	Cast-In-Place Concrete Tunnel Lining	31 74 13	
	Precast Concrete Tunnel Lining	31 74 16	
	Shotcrete Tunnel Lining	31 74 19	
	Shaft Construction	31 75 00	
	Cast-In-Place Concrete Shaft Lining	31 75 13	
	Precast Concrete Shaft Lining	31 75 16	
	Pedestrian Submersible Tube Tunnels	31 77 00	
G9010.40	Service Tunnels		Includes: Tunnels to house utility systems and to connect different facilities on site.
	Service Tunnel Support Systems	31 72 00	
	Rock Reinforcement and Initial Support	31 72 13	
	Steel Ribs and Lagging	31 72 16	
	Service Tunnel Grouting	31 73 00	
	Cement Tunnel Grouting	31 73 13	
	Chemical Tunnel Grouting	31 73 16	
	Service Tunnel Construction	31 74 00	
	Cast-In-Place Concrete Tunnel Lining	31 74 13	
	Precast Concrete Tunnel Lining	31 74 16	
	Shotcrete Tunnel Lining	31 74 19	
	Shaft Construction	31 75 00	
	Cast-In-Place Concrete Shaft Lining	31 75 13	
	Precast Concrete Shaft Lining	31 75 16	
	Service Submersible Tube Tunnels	31 77 00	

NUMBER	TITLE	MF NUMBER	EXPLANATION
G9010.90	Tunnel Construction Related Activities		Includes: Tunnel excavation and other activities related to tunnel construction to be included with tunnel construction above as appropriate.
	Tunnel Excavation	31 71 00	
	Shield Driving Tunnel Excavation	31 71 13	
	Tunnel Drilling and Blasting	31 71 16	
	Tunnel Boring Machine	31 71 19	
	Tunnel Cut and Cover	31 71 23	

Z GENERAL

NUMBER	TITLE	MF NUMBER	EXPLANATION
Z10	GENERAL REQUIREMENTS	01 00 00	
	<i>See Also:</i>		
	<i>Project Summary: 1010.</i>		
	<i>Project Program: 1020.</i>		
	<i>Project Criteria: 1030.</i>		
	<i>Existing Conditions: 1040.</i>		
	<i>Owner's Work: 1050.</i>		
Z1010	Price and Payment Procedures	01 20 00	
Z1010.10	Allowances	01 21 00	Includes: Allowances included in the elemental estimate or the contract for systems or assemblies that are not defined at the time the estimate or contract is prepared.
	Cash Allowances	01 21 13	
	Contingency Allowances	01 21 16	
	Testing and Inspection Allowances	01 21 19	
	Installation Allowances	01 21 23	
	Product Allowances	01 21 26	
	Quantity Allowances	01 21 29	
	Time Allowances	01 21 43	
Z1010.20	Unit Prices	01 22 00	Includes: Unit prices included in the elemental estimate or the contract for portions of work with quantities that are not defined at the time the estimate or contract is prepared.
	Unit Price Measurement	01 22 13	
	Unit Price Payment	01 22 16	
Z1010.30	Alternates	01 23 00	Includes: Alternates included in the elemental estimate or the contract to add or delete work from the base project.
Z1010.40	Value Analysis	01 24 00	Includes: Analysis of components for elemental estimate or the contract on basis of value versus cost and time.
	Value Engineering	01 24 13	
Z1010.50	Substitution Procedures	01 25 00	Includes: Requirements for consideration of substitutions.
Z1010.60	Contract Modification Procedures	01 26 00	Includes: Requirements for making clarifications and proposals for change, and modifications to the contract documents.
	Requests for Interpretation	01 26 13	
	Clarification Notices	01 26 19	
	Minor Changes in the Work	01 26 33	
	Supplemental Instructions	01 26 36	
	Field Orders	01 26 39	
	Amendments	01 26 43	
	Construction Change Directives	01 26 46	
	Work Change Directives	01 26 49	
	Proposal Requests	01 26 53	
	Proposal Worksheet Summaries	01 26 54	
	Change Order Requests	01 26 57	
	Change Orders	01 26 63	
Z1010.70	Payment Procedures	01 29 00	Includes: Requirements for process or schedules of values, progress payments, and final payment.

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Schedule of Values	01 29 73	
	Progress Payment Procedures	01 29 76	
	Payment Procedures for Testing Laboratory Services	01 29 83	
Z1020	Administrative Requirements	01 30 00	
Z1020.10	Project Management and Coordination	01 31 00	Includes: Requirements for administration of construction contracts and coordination and scheduling of various parts of the work among the contractors and subcontractors. Includes coordination with separate contractors and the owner.
	Project Management	01 31 00	
	Field Supervision		
	Project Coordination	01 31 13	
	Facility Services Coordination	01 31 14	
	Multiple Contract Coordination	01 31 16	
	Project Meetings	01 31 19	
	Project Web Site	01 31 23	
	Electronic Communication Protocols	01 31 26	
Z1020.30	Construction Progress Documentation	01 32 00	Includes: Requirements for scheduling, recording, and reporting progress.
	Scheduling of Work	01 32 13	
	Construction Progress Schedule	01 32 16	
	Submittals Schedule	01 32 19	
	Survey and Layout Data	01 32 23	
	Construction Progress Reporting	01 32 26	
	Periodic Work Observation	01 32 29	
	Photographic Documentation	01 32 33	
	Video Monitoring and Documentation	01 32 36	
Z1020.50	Submittal Procedures	01 33 00	Includes: Requirements for processing of submittals during the construction stage.
	Certificates	01 33 13	
	Design Data	01 33 16	
	Field Test Reporting	01 33 19	
	Shop Drawings, Product Data, and Samples	01 33 23	
	Source Quality Control Reporting	01 33 26	
	Sustainable Design Reporting	01 33 29	
	<i>See Also:</i>		
	<i>Sustainable Design Requirements:</i>		
	<i>1030.50.</i>		
	<i>Sustainable Design Closeout</i>		
	<i>Documentation: Z1070.70.</i>		
Z1020.70	Special Procedures	01 35 00	Includes: Requirements for special project situations and specific facility types.
	Special Project Procedures	01 35 13	
	Airports	01 35 13.13	
	<i>See Also:</i>		
	<i>Airfields: G2040.</i>		
	Detention Facilities	01 35 13.16	
	<i>See Also:</i>		
	<i>Exterior Detention Windows:</i>		
	<i>B2020.50.</i>		
	<i>Exterior Detention Doors:</i>		
	<i>B2050.40.</i>		
	<i>Interior Detention Windows:</i>		
	<i>C1020.50.</i>		
	<i>Interior Detention Doors: C1030.70.</i>		

NUMBER	TITLE	MF NUMBER	EXPLANATION
	<i>Detention Lighting: D5040.50.</i>		
	<i>Detention Monitoring and Control: D7070.</i>		
	<i>Detention Equipment: E1040.70.</i>		
	<i>Detention Furniture: E2050.30.</i>		
	<i>Detention Cell Modules: F1010.10.</i>		
	Healthcare Facilities	01 35 13.19	
	See Also:		
	<i>Healthcare Plumbing Fixtures: D2010.60.</i>		
	<i>Process Support Plumbing Systems: D2060.</i>		
	<i>Healthcare Lighting: D5040.50.</i>		
	<i>Healthcare Communications & Monitoring: D6060.30.</i>		
	<i>Healthcare Equipment: E1040.20.</i>		
	<i>Healthcare Casework: E2010.30.</i>		
	<i>Healthcare Furniture: E2050.30.</i>		
	Clean Rooms	01 35 13.26	
	See Also:		
	<i>Clean Rooms: F1010.50.</i>		
	Contaminated Sites	01 35 13.43	
	See Also:		
	<i>Site Remediation: G1050.</i>		
	Alteration Project Procedures	01 35 16	
	Owner Safety Requirements	01 35 23	
	Governmental Safety Requirements	01 35 26	
	Health, Safety, and Emergency Response Procedures	01 35 29	
	Infection Control Procedures	01 35 33	
	Environmental Procedures	01 35 43	
	Indoor Air Quality Procedures	01 35 46	
	See Also:		
	<i>Indoor Air Quality Requirements: 1030.56.</i>		
	Security Procedures	01 35 53	
	See Also:		
	<i>Exterior Security Windows: B2020.50.</i>		
	<i>Exterior Security Doors: B2050.40.</i>		
	<i>Exterior Security Gates: B2050.70.</i>		
	<i>Interior Security Windows: C1020.50.</i>		
	<i>Interior Security Doors: C1030.70.</i>		
	<i>Interior Security Gates: C1040.50.</i>		
	<i>Security Ceiling Systems: C1070.70.</i>		
	<i>Security Mirrors and Domes: C1090.90.</i>		
	<i>Security Plumbing Fixtures: D2010.60.</i>		
	<i>Security Lighting: D5040.50.</i>		
	<i>Electronic Safety and Security: D70.</i>		
	<i>Interior Pedestrian Security Equipment: E1010.70.</i>		

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	<i>Security Equipment: E1040.60. Exterior Pedestrian Security Equipment: G2030.80. Temporary Security Barriers & Enclosures: Z1050.40.</i>		
	Sustainability Certification Project Procedures	01 35 66	
	Historic Treatment Procedures	01 35 91	
	<i>See Also: Historic Restoration Requirements: 1030.70. Selective Historic Demolition: F3030.70.</i>		
Z1040	Quality Requirements	01 40 00	Includes: Procedures to measure and report the quality and performance of construction. Qualifications for fabricators, installers, manufacturers testing agencies and others involved in the construction. Field and source quality control.
Z1040.10	Regulatory Requirements	01 41 00	Includes: Information require for conformance to regulatory requirements including building codes, mechanical codes, electrical codes, zoning, and other regulations.
	Codes	01 41 13	
	Laws	01 41 16	
	Rules	01 41 19	
	Fees	01 41 23	
	Permits	01 41 26	
Z1040.30	References	01 42 00	Includes: Reference standards applicable to the project.
	Abbreviations and Acronyms	01 42 13	
	Definitions	01 42 16	
	Reference Standards	01 42 19	
Z1040.40	Quality Assurance	01 43 00	Includes: Requirements for proactive activities to assure the quality of construction before and during the execution of the work.
	Manufacturer Qualifications	01 43 13	
	Supplier Qualifications	01 43 16	
	Fabricator Qualifications	01 43 19	
	Installer Qualifications	01 43 23	
	Testing and Inspecting Agency Qualifications	01 43 26	
	Code-Required Special Inspector Qualifications	01 43 29	
	Manufacturer's Field Services	01 43 33	
	Field Samples	01 43 36	
	Mockups	01 43 39	
Z1040.80	Quality Control	01 45 00	Includes: Requirement for reactive activities to evaluate completed activities and elements for conformance with the requirements.
	Source Quality Control Procedures	01 45 13	
	Field Quality Control Procedures	01 45 16	
	Testing and Inspecting Services	01 45 23	
	Plant Inspection Procedures	01 45 26	
	Testing Laboratory Services	01 45 29	
	Code-Required Special Inspections and Procedures	01 45 33	

NUMBER	TITLE	MF NUMBER	EXPLANATION
Z1050	Temporary Facilities and Controls	01 50 00	Includes: Requirements for installation, maintenance, and removal of temporary utilities, controls, and construction aids during construction.
Z1050.10	Temporary Utilities	01 51 00	Includes: Requirements for utilities used on site during construction.
	Temporary Electricity	01 51 13	
	Temporary Fire Protection	01 51 16	
	Temporary Fuel Oil	01 51 19	
	Temporary Heating, Cooling, and Ventilating	01 51 23	
	Temporary Lighting	01 51 26	
	Temporary Natural Gas	01 51 29	
	Temporary Telecommunications	01 51 33	
	Temporary Water	01 51 36	
Z1050.20	Construction Facilities	01 52 00	Includes: Requirements for facilities used on site during construction.
	Field Offices and Sheds	01 52 13	
	First Aid Facilities	01 52 16	
	Sanitary Facilities	01 52 19	
Z1050.25	Temporary Construction	01 53 00	Includes: Requirements for temporary access facilities required during construction.
	Temporary Bridges	01 53 13	
	<i>See Also:</i>		
	<i>Site Bridges: G2060.70.</i>		
	Temporary Decking	01 53 16	
	Temporary Overpasses	01 53 19	
	Temporary Ramps	01 53 23	
	Temporary Runarounds	01 53 26	
Z1050.30	Construction Aids	01 54 00	Includes: Requirements related to using tools and equipment during construction.
	Temporary Elevators	01 54 13	
	Temporary Hoists	01 54 16	
	Temporary Cranes	01 54 19	
	Temporary Scaffolding and Platforms	01 54 23	
	Temporary Swing Staging	01 54 26	
	<i>See Also:</i>		
	<i>Vertical Conveying Equipment:</i>		
	<i>D1010.</i>		
	<i>Material Handling Systems: D1050.</i>		
Z1050.35	Temporary Vehicular Access and Parking	01 55 00	Includes: Requirements for access and parking facilities required to accommodate construction of the owner's operations during construction.
	Temporary Access Roads	01 55 13	
	Haul Routes	01 55 16	
	Temporary Parking Areas	01 55 19	
	<i>See Also:</i>		
	<i>Parking Lots: G2020.</i>		
	Temporary Roads	01 55 23	
	<i>See Also:</i>		
	<i>Roadways: G2010.</i>		
	Traffic Control	01 55 26	
	Staging Areas	01 55 29	
Z1050.40	Temporary Barriers and Enclosures	01 56 00	Includes: Requirements and procedures for protection of public, occupants, and spaces during construction.
	Temporary Air Barriers	01 56 13	
	Temporary Dust Barriers	01 56 16	
	Temporary Noise Barriers	01 56 19	

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NUMBER	TITLE	MF NUMBER	EXPLANATION
	Temporary Barricades	01 56 23	
	Temporary Fencing	01 56 26	
	See Also:		
	<i>Fences and Gates: G2060.20.</i>		
	Temporary Protective Walkways	01 56 29	
	Temporary Security Barriers	01 56 33	
	Temporary Security Enclosures	01 56 36	
	See Also:		
	<i>Exterior Security Windows: B2020.50.</i>		
	<i>Exterior Security Doors: B2050.40.</i>		
	<i>Exterior Security Gates: B2050.70.</i>		
	<i>Interior Security Windows: C1020.50.</i>		
	<i>Interior Security Doors: C1030.70.</i>		
	<i>Interior Security Gates: C1040.50.</i>		
	<i>Security Ceiling Systems: C1070.70.</i>		
	<i>Electronic Safety and Security: D70.</i>		
	<i>Interior Pedestrian Security Equipment: E1010.70.</i>		
	<i>Security Equipment: E1040.60.</i>		
	<i>Security Procedures: Z1020.70.</i>		
	Temporary Tree and Plant Protection	01 56 39	
Z1050.50	Temporary Controls	01 57 00	Includes: Requirements for environment controls during construction.
	Temporary Erosion and Sediment Control	01 57 13	
	See Also:		
	<i>Erosion and Sedimentation Controls: G1070.35.</i>		
	Temporary Pest Control	01 57 16	
	See Also:		
	<i>Pest Control Devices: C1090.90.</i>		
	Temporary Environmental Controls	01 57 19	
	Temporary Storm Water Pollution Control	01 57 23	
Z1050.70	Project Identification	01 58 00	Includes: Signage identifying the project and the project team during construction.
	Temporary Project Signage	01 58 13	
	Temporary Interior Signage	01 58 16	
	See Also:		
	<i>Exterior Signage: G2060.30.</i>		
Z1060	Product Requirements	01 60 00	
Z1060.10	Common Product Requirements	01 61 00	Includes: General requirements for products used in construction.
Z1060.20	Product Options	01 62 00	Includes: General requirements for contractor's options in selecting products.
Z1060.30	Owner-Furnished Products	01 64 00	Includes: General requirements for products that are furnished by the owner.
Z1060.40	Product Delivery Requirements	01 65 00	Includes: General requirements for packing, shipping, delivery, and acceptance of products.
Z1060.50	Product Storage and Handling Requirements	01 66 00	Includes: General requirements for storage and handling of products.
	Hazardous Materials	01 66 13	
	Toxic Materials	01 66 16	
Z1070	Execution and Closeout Requirements	01 70 00	Includes: Requirements for final acceptance of project by the Owner.

NUMBER	TITLE	MF NUMBER	EXPLANATION
Z1070.10	Examination and Preparation	01 71 00	Includes: General requirements for determining acceptable conditions for installation. Includes general requirements for preparing to install, erect, or apply products.
	Mobilization	01 71 13	
	Acceptance of Conditions	01 71 16	
	Field Engineering	01 71 23	
	Protection of Adjacent Construction	01 71 33	
Z1070.20	Execution	01 73 00	Includes: General requirements of installing, applying, or erecting projects.
	Application	01 73 13	
	Erection	01 73 16	
	Installation	01 73 19	
	Bracing and Anchoring	01 73 23	
	Existing Products	01 73 26	
	Cutting and Patching	01 73 29	
	Construction Equipment Costs		
	Small Tools and Consumable Costs		
Z1070.30	Cleaning and Waste Management	01 74 00	Includes: Requirements for maintaining site in clean and neat condition during construction. Includes final cleaning prior to turning the project over to the owner.
	Progress Cleaning	01 74 13	
	Site Maintenance	01 74 16	
	Construction Waste Management and Disposal	01 74 19	
	Final Cleaning	01 74 23	
Z1070.40	Starting and Adjusting	01 75 00	Includes: Requirements for checkout, startup, and adjusting procedures to ensure safe operation during acceptance testing and commissioning.
	Checkout Procedures	01 75 13	
	Startup Procedures	01 75 16	
Z1070.50	Protecting Installed Construction	01 76 00	Includes: General requirements for protecting installed construction.
Z1070.60	Closeout Procedures	01 77 00	Includes: Requirements for completion of the project including substantial and final completion steps.
	Preliminary Closeout Reviews	01 77 13	
	Final Closeout Review	01 77 16	
	Closeout Requirements	01 77 19	
	Demobilization		
Z1070.70	Closeout Submittals	01 78 00	Includes: Requirements for the processing closeout submittals at completion of the project.
	Completion and Correction List	01 78 13	
	Maintenance Contracts	01 78 19	
	Operation and Maintenance Data	01 78 23	
	Final Site Survey	01 78 29	
	Bonds	01 78 33	
	Warranties	01 78 36	
	Project Record Documents	01 78 39	
	Spare Parts	01 78 43	
	Extra Stock Materials	01 78 46	
	Sustainable Design Closeout Documentation	01 78 53	
	See Also:		
	Sustainable Design Requirements:		
	1030.50.		
	Sustainable Design Reporting:		
	Z1020.50.		

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NUMBER	TITLE	MF NUMBER	EXPLANATION
Z1070.80	Demonstration and Training	01 79 00	Includes: Requirements and procedures for demonstration of the products and systems of the facility and training the owner's operating and maintenance personnel.
Z1090	Life Cycle Activities	01 90 00	
Z1090.10	Commissioning	01 91 00	Includes: Requirements for commissioning facilities and facility systems.
	General Commissioning Requirements	01 91 13	
	Facility Substructure Commissioning	01 91 16	
	Facility Shell Commissioning	01 91 19	
	Interiors Commissioning	01 91 23	
Z1090.30	Facility Operation	01 92 00	Includes: Requirements for operating facility after commissioning.
	Facility Operation Procedures	01 92 13	
Z1090.50	Facility Maintenance	01 93 00	Includes: Requirements for maintaining facility after commissioning.
	Facility Maintenance Procedures	01 93 13	
	Recycling Programs	01 93 16	
Z1090.80	Facility Decommissioning	01 94 00	Includes: Requirement for deactivating a facility or portion of it from operation.
	Facility Decommissioning Procedures	01 94 13	
Z70	TAXES, PERMITS, INSURANCE AND BONDS		
Z7010	Taxes		Includes: Cost of taxes on project construction.
Z7030	License Fees		Includes: Cost of license fees required for the construction of the project.
Z7050	Permit Costs		Includes: Cost of permits required for the construction of the project.
	<i>See Also:</i>		
	<i>Permits: 2020.</i>		
Z7070	Bond Fees		Includes: Cost of bonds required for construction of the project.
Z90	FEES AND CONTINGENCIES		
Z9010	Overhead		Includes: Contractor's office and field overhead costs in construction the project. Includes definition of overhead costs.
Z9030	Profit		Includes: Contractor's profit for constructing the project. Includes definition of profit.
Z9050	Construction Contingencies	01 21 16	
	<i>See Also:</i>		
	<i>Budget Construction Contingencies:</i>		
	<i>2080.20.</i>		
Z9050.10	Design Contingencies	01 21 16	Includes: Risk factor applied to the project budget, cost estimate, or contract to compensate for extent of available design definition.
	<i>See Also:</i>		
	<i>Budget Design Contingencies:</i>		
	<i>2080.10.</i>		
Z9050.30	Bidding Contingencies	01 21 16	Includes: Risk factor applied to the project budget, cost estimate, or contract to compensate for the results of the bidding process.

NUMBER	TITLE	MF NUMBER	EXPLANATION
Z9050.50	Escalation Contingencies	01 21 16	Includes: Risk factor applied to the project budget, cost estimate, or contract to compensate for the change in monetary value during time between the preparation of the estimate and the scheduled start of construction.
Z9090	Financing Costs		Includes: Summary of the owner's project financing costs.
	<i>See Also:</i>		
	<i>Budget Financing: 2090.</i>		

KEY WORD INDEX

INFORMATION

The alphabetical subject list on the following pages will enable the user of *UniFormat*™ to find the proper location for most subjects for a building construction project.

Each page of the index is divided into two main columns and subdivided into three smaller columns. The alphabetical subject list in the first smaller column was created using terms taken from the *UniFormat* Level 1-4 titles and the detailed listings under them.

The second smaller column contains the *UniFormat* Level 1-4 numbers related to the subject. There are some more general categorization terms created to help organize the index that often do not have *UniFormat* numbers associated with them.

The third smaller column contains *MasterFormat*™ numbers from the 2010 edition related to each subject. Not all of the subject terms have related *MasterFormat* numbers.

It should be noted that subject relationships are drawn to the highest level appropriate *MasterFormat* number. The user should reference the complete *MasterFormat* listing for more detailed titles that may occur under the *MasterFormat* number referenced.

For example:

- The key word index refers to 04 20 00 Unit Masonry, but does not include references to the lower level listings of 04 21 00 Clay Unit Masonry, 04 22 00 Concrete Unit Masonry, 04 23 00 Glass Unit Masonry, and 04 24 00 Adobe Unit Masonry.
- The key word index refers to 08 50 00 Windows, but does not include references to the lower level listings of 08 51 00 Metal Windows, 08 52 00 Wood Windows, 08 53 00 Plastic Windows, and 08 54 00 Composite Windows.

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			Ducts and Casings	D3060.40	23 31 00
			HVAC Fans	D3060.40	23 34 00
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			Plenums and Chases	D3060.40	23 32 00
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