



John Wayne Airport Building Information Modeling (BIM) Standards

Version 2.1

April 17, 2015

Revisions to JWA BIM Standards V2.1

1. JWA provided model is to be used a background only. Modeling will NOT be done directly to JWA's model.
2. JWA provided model is not accurate and is being updated on a project by project basis. AE must field verify conditions to ensure design is situated properly and reflects actual conditions.
3. Phases must include:
 - a. Existing – Model geometry representing the facility prior to the subject project usually provided by JWA. In certain cases, existing geometry may not exist and will need to be modeled where required (e.g. lighting that is part of an existing ceiling).
 - b. New – Model geometry representing new construction by the subject project
 - c. Demolished – Model geometry representing demolished portions of the facility by the subject project
 - d. Altered – Model geometry representing alterations of any existing part of the facility by the subject project
4. Projects will no longer be required to create two separate models for each trade (one for GEOMETRY [geometry, facilities management family data] and one for ANNOTATION [sheets, schedules]). Larger projects, especially those with multiple sites, may be required to provide separate models for each site per discipline. All references to GEOM file or ANNO file in the standards are to be removed.
5. Worksets are used to separate out elements in a system. For example, Elements on Level 1 are on the 01 LEVEL workset or in Building Engineering in which a Lighting, HVAC, Plumbing, Fire Protection systems need to be divided for ease of use.
6. Subdivision of models will be completed by discipline.
 - a. General (Cover, Index, etc.)
 - b. Architectural
 - c. Structural
 - d. Mechanical
 - e. Plumbing
 - f. Electrical
 - g. Fire Protection
 - h. Audio/Visual
 - i. Security
 - j. Telecommunication
 - k. Baggage Handling
 - l. Other (As necessary)
7. All view shall fit into one of the following categories for better organization:
 - a. Management Views
 - b. Coordination Views
 - c. Working Views
 - d. Sheet Views
 - e. Presentation Views
 - f. Other (As necessary)
8. COBie fields will no longer be utilized for facilities management family data because JWA is now utilizing MAXIMO for Facilities Management. Instead, the information will be embedded into the

families, under both instance and type parameters. Parameters shall include, but are not limited to:

- a. Project Number
 - b. Project ID
 - c. Project Name
 - d. Building Name
 - e. Building Zone
 - f. Building Floor
 - g. Room/Space
 - h. CSI Masterformat Division
 - i. Description
 - j. Manufacturer
 - k. Model Name
 - l. Model Number
 - m. Serial Number
 - n. Warranty Start Date
 - o. Asset ID
 - p. Component Tag Number
 - q. Creation Company
 - r. Date Placed in Model
 - s. General utility infrastructure must identify the source and the equipment/location served. If sourced from an existing utility, the point of connection shall be modeled (e.g. a tee or valve for plumbing, coupling or j-box for electrical, or a generic sphere geometry in some cases) and indicate source and service information in the parameters (e.g. (Electrical) DBTR2-12, EF-12 (exhaust fan-12)).
9. All trade models must be linked to the architectural model. As such, models should never contain representative or duplicate families from other trades for the purposes of keynoting (e.g. creating a sink in the architectural model while also having one in the plumbing model in order to produce a keynote on the architectural sheets).
 10. Always check for room number assignment, especially if creating a new space. Families within the space will need to show the room number they reside in as an instance parameter.
 11. The “industry standard” of only modeling anything 1” or larger does not apply here at JWA. Everything must be modeled, regardless of size, if it is new or modified (e.g. existing piece of equipment was relocated, utility line was rerouted, etc.). Simple rule is “if you touch it, you model it.” This includes anything demolished and relocated.
 12. Accurate and up to date redline as-builts are required to check models as a project progresses. Inability to produce accurate and up to date field redlines will result in progress payment deductions. Redline as-builts are defined in the JWA Construction Standards. Redlined As-builts must be transmitted on a weekly basis to JWA, the CM (if utilized), and the AE on a weekly basis. AE must then update model on a weekly (or monthly) basis to reflect as-built conditions. Information shall be transmitted through the submittals process for review, acceptance, and incorporation.
 13. Level of detail requirements may require some clarification and coordination. While JWA does not require modeling down to nuts and bolts, the representation of the family must accurately

represent what is modeled so as to be easily recognizable and identifiable. Generic representations are prohibited.

14. Models must be hosted on BIM360 and access provided to JWA or to be hosted on JWA's BIM360 server (if available). Weekly uploads of models to Unifier are still required. BIM360 will also be utilized to run punch lists.
15. The BIM Execution Plan is a living document and must be updated by the Contractor's BIM Manager throughout the life of the project as information in it changes.
16. Revit version to be used must not be older than the three (3) versions from the most current version. All disciplines must be upgraded together.
17. Clash detection will be required of all disciplines with all other disciplines, not just those listed in the standards.
18. OmniClass information to be removed from the Standards. CSI Masterformat will be the only specification system utilized.
19. New BIM Execution Plan Template to be developed.
20. New BIM Template File to be created.



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1. BIM Standards Manual Overview

The John Wayne Airport (JWA) Building Information Model (BIM) Standards document defines the scope of work, deliverables, processes, and procedures associated with use and submission of BIM on JWA projects. The following objectives and references are in place to describe the purpose of this document and help our consultants and team members in understanding what JWA requires for current and future BIM projects to come.

JWA is implementing BIM to efficiently and effectively deliver design and construction projects. These BIM Standards define the use of computer-aided design software using building information modeling methods for many beneficial reasons. The main items include; consistency of process and realism of design, providing an efficient workflow and effective collaboration, and finally to provide an overall uniform product and subsequent best possible outcome for our projects. JWA's primary goals are:

- Avoid errors through inconsistencies in the documents and reduce change orders;
- To provide stakeholders with a comprehensive 3D view of projects, allowing for more efficient and effective reviews;
- To coordinate and manage clash detections and simulations virtually during pre-construction;
- To incorporate schedules into the BIM for tracking work-in-place; and
- To populate the BIM with systems and component data to be utilized for facilities management.

1.1. Purpose

These standards describe the intent and consistent development of BIM throughout all disciplines and governing agencies. This document considers the entire project team from the initial programming phase to the end-use facilities management of JWA, providing a foundation to facilitate our ongoing building operation and maintenance protocols.

Although there are many factors involved, from building type to municipal agencies, these standards ensure uniformity in the use of BIM for all JWA projects. In addition to these BIM Standards, other documents must also be recognized and in sync with this one, including the BIM Execution Plan, and all specific contractual documentation.

JWA also recognizes that as BIM toolsets and uses continue to evolve, these BIM Standards will continue to be reviewed and updated to reflect advances in industry technology, methodology and trends, as deemed appropriate for JWA and its partners.



1.2. Definitions

The following terms define the concepts of BIM and references found within these standards.

BIM	Building Information Modeling (BIM): The creation and use of coordinated, internally consistent, computable information about a building project in design and construction.
Element	An Element corresponds to a single building or drawing component, such as a door, a wall, or a dimension. In addition, an Element can be a door type, a view, or a material definition. Elements have Instance and Type Parameters to allow relationships with other elements.
Parameter	Parameters store and communicate information about all elements in a model. Parameters are used to define and modify elements, as well as to communicate model information in tags and schedules.
Instance vs. Type Parameters	Elements have two kinds of parameters; Instance (for individual differences of a family, like wall height), and Type (for overall settings of an element, like wall thickness). Each option is required for its own reasons.
Family	A class of elements in a category. A family groups elements with a common set of parameters (properties), identical use, and similar graphical representation. Different elements in a family may have different values for some or all properties, but the set of properties—their names and meaning—is the same.
Parametric	The term parametric refers to the relationships among all elements of the model that enable the coordination and change management that Revit provides. These relationships are created either automatically by the software or by you as you work.
View	Views are images produced from a Revit model with privileged access to the data stored in the documents. They can be graphics, such as plans, or text, such as schedules.
Worksharing	Worksharing is a design method that allows multiple team members to work on the same project model at the same time. When worksharing is enabled, a Revit document can be subdivided into worksets, which are collections of elements in the project.
Worksets	Worksets are a way to divide a set of elements in the Revit document into subsets for worksharing. There may be one or many in a document.



1.3. Methodology

To achieve technical excellence and a successful outcome to a project, it is essential that BIM workflow and subsequent drawing production output is carefully planned. This must involve explicit attention to management, display and quality of the design data. Below are a number of best practice key principles that will aid these efforts:

- A Project BIM Execution Plan shall be put in place that identifies key project configuration.
- BIM Project Coordination Reviews must take place weekly or bi-weekly, based on project needs, to ensure model integrity and project workflow is maintained.
- Develop clear standards for internal and external collaborative working which maintain the integrity of electronic data.
- Identify clear ownership of model elements through the life of the project.
- Understand and clearly document what is to be modeled and to what level of detail, as defined within the LOD Section of this document.
- Sub-divide models, between disciplines, and within single disciplines to avoid file sizes exceeding 300MB. These lead to unstable and potentially unrecoverable files.
- Sub-divide these models into two files; one consisting of geometry only, and the other containing all annotation information of that geometry, including sheets and schedules.
- Each Discipline is only allowed one geometry file per project, for consistency/clarity
- All modifications (besides 2D details) shall be carried out as 3D modifications, rather than 2D “patch work” to maintain maximum model integrity.
- Avoidance of view duplication is essential to ensure drawings maintain their integrity as the iterative design process progresses and amendments are made.
- Outstanding warnings shall be reviewed weekly and important issues resolved as soon as possible. No warnings shall remain within a project for over 30 days.



1.4. Acknowledgments

JWA wishes to thank and acknowledge many sources working to standardize the industry with Building Information Modeling. This document was prepared by USCAD Inc. for JWA with references to various sources of information gathered from its own experience, JWA's past CAD Standards, and updated regularly by the coordinated personal efforts of the following:

- John Wayne Airport - Facilities
- BIM Services Inc. – Brian Andresen
- IDS Group – Jared Ferini, Doug Francisco

Included within this document is data derived specifically from Government agencies with nationally recognized standards already in place and accepted. We also acknowledge that all information gathered was done legally and from open-source locations, and used primarily for reference and conceptualization. Such sources include:

- National CAD Standards
- American Institute of Architects E202 (2008)
- Construction Specifications Institute
- Autodesk AEC (UK) BIM Standard for Autodesk Revit
- Harvard University CAD Standards
- University of Southern California for their BIM Guidelines Version 1.6
- New York City Department of Design + Construction (July 2012)
- BIM Forum Level of Development Specification (August, 22 2013)
- Indiana University for their BIM Guidelines and Standards (July 2, 2012)
- State of Ohio for their Building Information Modeling Protocol
- Massachusetts Institute of Technology for their CAD & BIM Guidelines (April 5, 2012)

We thank these sources listed and appreciate their continued efforts in standardizing Building Information Modeling throughout. We also are doing our best to play a part in that role and provide a leadership path for others to follow, providing the best possible standards available.

All technical questions and comments related to these standards should be addressed in writing and directed to:

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2. Team Collaboration

Team coordination is vital to the overall BIM process and is highly involved, from roles and responsibilities, to coordination review meetings, to the file upload and download procedure required to keep everyone in sync and informed. Below are those standards for the best possible workflow and coordination between all teams involved.

2.1. BIM Roles & Responsibilities

Due to the extensive coordination opportunities that BIM provides, it is important to note the key BIM roles and responsibilities for the overall process. This will also be listing Roles and Responsibilities for all project types, including Design-Build, Design-Bid-Build, and Bridging Design Teams. Only apply the specific teams to the specific project, meaning not all apply to every project.

Some of these roles can be accomplished by the same person, but it is highly recommended that each role is assigned to a separate user for best results. Any project specific BIM roles and responsibilities are defined in detail within the BIM Execution Plan.

These roles include:

- **A-E BIM Manager:** Individual assigned to serve as the main point of contact for the A-E Team for BIM related issues. This individual shall have sufficient BIM experience required for the size and complexity of the project and shall have relevant proficiency in the BIM authoring and coordination software. Responsibilities include:
 1. Overall development, including delivering and updating the BIM(s) according to schedule.
 2. Monitor compliance with the BIM Execution Plan, all of the requirements as defined in this document, including COBie data requirements.
 3. Coordinate the file management procedures and protocols for the BIM as described later in this document.
 4. Coordinate and set-up shared file servers to be utilized for the Building Information Model, including related access, permissions, protocols, etc.
 5. Serve as a point-of-contact for all internal and external BIM collaboration with JWA and the G-C/D-B (If applicable).
 6. Facilitate design coordination meetings and ensuring all necessary stakeholders are in attendance or are informed of discussions.
 7. Coordinate and facilitate clash detection and coordination efforts among all design disciplines (if applicable).
 8. Provide design coordination and constructability feedback.
 9. Ensure that BIM(s) are used appropriately to test design requirements/criteria.
 10. Determine the project BIM geo-reference point(s), and ensure that the models from all design disciplines are properly referenced and coordinated with the geo-reference point(s).



- **D-B BIM Manager:** Individual assigned to serve as the main point of contact for the D-B Team for BIM related issues. This individual shall have sufficient BIM experience required for the size and complexity of the project and shall have relevant proficiency in the BIM authoring and coordination software. Responsibilities include:
 1. Overall development, including delivering and updating the BIM(s) according to schedule.
 2. Monitor compliance with the BIM Execution Plan, all of the requirements as defined in this document, including COBie data requirements.
 3. Coordinate the file management procedures and protocols for the BIM as described later in this document.
 4. Coordinate and set-up shared file servers to be utilized for the Building Information Model, including related access, permissions, protocols, etc.
 5. Serve as a point-of-contact for all internal and external BIM collaboration with JWA.
 6. Facilitate design coordination meetings and ensure all necessary stakeholders are in attendance or are informed of discussions.
 7. Provide design coordination and constructability feedback.
 8. Ensure that BIM(s) are used appropriately to test design requirements/criteria.
 9. Determine the project BIM geo-reference point(s), and ensure that the models from all design disciplines are properly referenced and coordinated with the geo-reference point(s).
 10. Overall development of BIM content and information that is developed from construction operations.
 11. Serve as the main point of contact for BIM related issues between D-B Team members.
 12. Ensure that the D-B Team has the necessary hardware, BIM authoring and analysis software, and adequate training to facilitate the use of the BIM as a tool during construction.
 13. Integrate and/or coordinate the construction schedule with the BIM.
 14. Facilitate the use of trade models for the purpose of trade coordination and clash detection (when available or provided by trade contractors).
 15. Provide timely updates to the BIM for design changes that may occur after construction has commenced and all construction phase changes.
 16. Coordinate updates to the BIM as necessary to reflect the “as-built” or “as-constructed” conditions in the final As-Built BIM.

- **G-C BIM Manager:** Individual assigned to serve as the main point of contact for the G-C Team for BIM related issues. This individual shall have sufficient BIM experience required for the size and complexity of the project and shall have relevant proficiency in the BIM authoring and coordination software. Responsibilities include:
 1. Overall development of BIM content and information that is developed from construction operations.



2. Serve as the main point of contact for BIM related issues between the G-C Team, Subcontractors, Suppliers, and the A-E Team.
 3. Ensure that the G-C Team has the necessary hardware, BIM authoring and analysis software, and adequate training to facilitate the use of the BIM as a tool during construction.
 4. Integrate and/or coordinate the construction schedule with the G-C BIM.
 5. Facilitate the use of trade models for the purpose of trade coordination and clash detection (when available or provided by trade contractors).
 6. Coordinate with the A-E Team to facilitate timely updates to the G-C BIM for design changes that may occur after construction has commenced.
 7. Coordinate updates to the BIM as necessary to reflect the “as-built” or “as-constructed” conditions in the final As-Built BIM.
- **Bridging Design A-E Team Responsibilities:**
 1. Manage and update the Revit model(s) through the end of the bridging design phase, incorporating all updates and/or revisions to the model(s) as necessary to reflect design changes initiated by A-E, Owner, or coordination with existing conditions.
 - **A-E Team Responsibilities:**
 1. Manage and update the Revit model(s) through the end of the construction phase, incorporating all updates and/or revisions to the model(s) as necessary to reflect design changes initiated by RFI, Owner Changes, or coordination with existing conditions.
 2. The A-E Team shall complete all model updates during construction and provide JWA with As-Built Record Drawings (digital BIM file (RVT, IFC, PDFs, and other formats as requested) reflecting all constructed conditions, including but not limited to; change orders, RFIs, and field orders prior to their application for final payment. Timeframe for submission of As-Built Record Drawings shall be discussed with JWA and approved prior to the completion of construction.
 - **D-B Team Responsibilities:**
 1. Manage and update the Revit model(s) through the end of the design, incorporating all updates and/or revisions to the model(s) as necessary to reflect design changes initiated by design/coordination meetings.
 2. Manage and update the Revit model(s) through the end of the construction, incorporating all updates and/or revisions to the model(s) as necessary to reflect changes occurring in the construction phase.
 3. Coordination of the model within the D-B Team, and provide all design and construction related updates to the model(s). This time frame is defined within the BIM Execution Plan.



- **Overall G-C Team Responsibilities:**

1. During the construction phase, the G-C Team will maintain “red-line” as-built drawings as directed by JWA and/or the A-E Team.
2. At cessation of construction, the G-C Team will transmit the “red-line” as-built drawings to the A-E Team, who will then incorporate the following updates and/or revisions into the model(s):
 - a. All updates and/or revisions to the Revit model(s) as necessary to reflect the as-built information obtained from the “red-line” as-built drawings.
 - b. Final updates to material/equipment data where installations differ from the “basis of design” included in the A-E Team Model(s).
 - c. Incorporation or linking of certain close-out documents to the Revit Model(s) (TBD – examples: Submittal Information, O&M Manuals, Documentation, Photos, if applicable).

2.2. BIM Kickoff Meeting

Within 30 calendar days of execution of agreement, the A-E Team and G-C Team shall provide a BIM Standards and BEP Orientation to JWA and team staff. Items to include:

- With the approval of JWA, this meeting may be combined with the General Project Kickoff Meeting.
- All members of the A-E and G-C Team are required to attend the initial BIM kick-off meeting in person at a designated JWA location. There must be at least one representative from each trade. The G-C Team will provide the details of the meeting date, time and place.
- Completed BIM Execution Plans (BEP) must be included in the meeting. This document defines how the project BIM will be executed, monitored, and controlled. The A-E Team and G-C Team must submit BEPs with proposals/bid submissions detailing their processes and procedures for complying with the requirements in this document. JWA will subsequently review BEPs and any changes required shall be completed within 14 calendar days of receipt of submitted final BEP.
- In addition, the Design-Bid-Build A-E Team must provide an updated BEP as part of the Schematic Design Phase Deliverables incorporating lessons learned and procedural changes from the initial design efforts. The “Bridging Document” A-E Team must provide an updated BEP incorporating lessons learned and procedural changes as part of the 50% Design Deliverable.



2.3. Coordination Process

When coordination is being outlined, there are specific requirements for the process to run smoothly and efficiently. The outline below describes this coordination process:

- The G-C Team's BEP will confirm the actual intended procedures to be implemented.
- A BIM folder will be created in Unifier for uploading the 3D models produced by the A-E Team and G-C Team. These models will be accessible to authorized team members for individual coordination purposes on a trade by trade basis.
- All models used for coordination must be the geometry only models, labeled "GEOM". The alternate files used for documentation, labeled "ANNO", are to be kept current for other purposes such as individual annotation and sheet sets, outside of BIM Coordination.
- The G-C Team's BIM Manager shall be responsible for integrating all of the 3D "GEOM" models into a single consolidated Navisworks NWF and NWD per floor, running clash detection and creating viewpoints of identified issues.
- The MEPF detailers are required to submit models that are clash free from any structural components that are included in the structural model provided.
- One integrated BIM per floor or zone shall be published in a Navisworks NWD file format and shall include numbered and labeled view sets of clashes and/or other design/constructability issues that the G-C Team uncovers during this process. Each Team will be responsible for reviewing the saved views one by one prior to the next coordination meeting. To this end, all Teams must have at their disposal one copy of Navisworks Manage.
- The G-C Team shall create a 3D grid for incorporation into the Navisworks file. A minimum of one copy of the 3D grid should be placed at each floor level and should be named according to the level that it is placed, e.g. 3D grid_L01. This will provide the viewer with a quick point of reference when navigating through the model.
- All 3D detailers and associated foremen shall be required to attend regularly scheduled interactive coordination sessions facilitated by the G-C Team's BIM Manager. The A-E Team should be available upon request and should expect to attend a number of these sessions as well. During these sessions, all parties shall review the consolidated model and the saved viewpoints on a floor by floor basis and find solutions to identified issues. Attendance via webcast is an option.
- The BEP shall include a description of the methodology to be used for tracking and ensuring the timely resolution of clashes and/or constructability issues.
- A clash matrix must be provided by the G-C Team's BIM Manager with numbered viewpoints and with a description of the trades that are affected, matching the viewpoint numbers and labels in the associated Navisworks file. This matrix can be used by all parties to identify the agreed upon party(ies) responsible for resolving the clashes and to add personal notes.
- The G-C Team must provide a method for BIM coordination, either within a conference room or web-based video conferencing system for regularly scheduled 3D coordination meetings.



- The G-C Team must be vigilant about engaging the A-E Team on a regular basis to review, assess and provide feedback on any design related issues **as they arise**.
- Shear wall and slab penetration location information must be provided to the Structural Engineer as soon as a set location for said penetrations has been determined as a result of the 3D coordination effort. Initial locations of suggested penetrations can be provided by means of 3D viewpoints saved as jpegs, with dimensional information and grid references (if one or more of the 3D grid intersections can be seen in the view, that is sufficient) and/or in the form of 2D elevations with dimensions and grid references.

Typical BIM Design Review project milestones for JWA:

- **Design-Bid-Build:** Includes the following phases:
 - Pre-Design
 - Schematic Design
 - Design Development
 - Construction Documents
 - Services During Construction
 - Close-out
- **Design-Build “Bridging Document”:** Includes the following phases:
 - 30% Bridging Design
 - 60% Bridging Design
 - 90% Bridging Design
 - 100% Bridging Design
 - These stages represent the completion of the “bridging document” design phase and NOT the completion of systems design, as “bridging documents” may not possess complete designs for all systems.
- **Design-Build:** Includes the following phases:
 - 30% Design
 - 60% Design
 - 90% Design
 - 100% Design
 - Services During Design-Build (as required)
 - Close-out



2.4. Interoperability

Interoperability between software products is of paramount importance for successful BIM working. The same applies to BIM data, communication, and collaboration. Access to Oracle Primavera Unifier will be provided by JWA upon receipt of Access Request Forms for each individual requiring access to Unifier. Unifier provides the following capabilities:

- Web-based—so all relevant, authorized project team members can remotely access it.
- Accommodates different permissions profiles for different project team members.
- Allows communication through either internal messaging or system-generated email.
- For all e-mail communications on this project, preface the subject line with the acronym for this project: PROJECTNAMEACRONYM.
- Includes document management capability that lets the project team create a customized and permission-based folder structure which offers upload, download, and version control capabilities.
- Includes a viewer that allows the project team to view most universal document types (e.g. pictures, word documents, spreadsheets) or allows for native viewing.
- Includes construction management capabilities for the tracking of requests for information (RFIs), submittals, design review, meeting minutes, daily reports, issues, correspondence, and transmittals.
- Able to interact with the file folder structure in the document management section.
- Allows the project team to post the contract drawings and specifications for viewing in the form of a presentation. Specifics can be found within the BIM Execution Plan.
- Allows for the workflow and routing throughout the document, construction and cost management components of the solution.



3. Model Coordination

Once the standards are in place, and the project information is distributed and understood, and the team is organized and structured, the model will begin to need coordination. From oversight, to maintenance, to level of detail, this is the time when the project goes from conceptual to virtual. The thoughts from the A-E Team are built up and these standards will assist in the process greatly.

3.1. Model Requirements

The following items are requirements of best practices for model coordination and collaboration:

- All files must be exported to Navisworks NWC or NWD format. In addition, IFC files are required and all subcontractors are required to have the capability of saving BIMs in the most current version of IFC.
- All objects must be modeled as 3D solids, not wire frame or lines.
- Models must be created on a floor by floor basis from top of slab to top of slab. If this is impractical for certain trades, alternate solutions may be considered.
- When exporting Revit files to Navisworks, use local coordinates.
- All clearances and access to equipment, valves, etc. required by code or requested by JWA for the purposes of operations and maintenance must be modeled in 3D and kept in a separate layer and labeled correspondingly. These may be reviewed and coordinated by JWA at approximately 80% coordination completion of each floor to verify the adequacy and practicality of the assigned space reservations and signed off at 95% to 100% coordination of each floor.
- Each trade shall be identifiable by a single color within Navisworks with the exception of architectural and structural elements as follows:
 - HVAC Pipe: Lime Green
 - Electrical: Cyan
 - Lights: Yellow
 - HVAC Duct: Blue
 - Fire Sprinklers: Red
 - Plumbing: Magenta
 - Ceilings: Orange
 - Framing: Purple
 - Steel: Maroon
 - Concrete: Grey
 - Methane: Forest Green
- Once established, every trade must use the same agreed upon reference point or global coordinate system. The 2D reference grid, located accordingly, shall be provided by the Architects.



- The Navisworks models submitted, must contain only relevant 3D data and no extraneous 2D data, nor should it contain any x-referenced files. Utilizing the two model system, this process is done automatically by only submitting the “GEOM” file into Navisworks.
- A file naming schema is provided by JWA within the DELIVERABLES Section, and this must be adhered to for all BIM uploads to Unifier.
- All teams must list the BIM software and versions they and their subcontractors/consultants will be using for this project.
- List any exceptions to this document or alternate processes/methodologies that you would like to suggest subject to approval by JWA and prior to submitting your BEP.

3.2. Model Management

Parametric modeling shall be utilized for all JWA BIM projects. Parametric modeling uses real-world parameters and attributes to define a model, its behavior, and the relationships between components. All views shall reference 3D geometry only, except for 2D details not a part of the BIM. Non-parametric designs, such as shop drawings, sketches, and other design elements shall be parametrically modeled into the BIM during all stages of design and construction.

All JWA building projects requiring facilities management shall be modeled. JWA may, as needed, require other projects to be modeled. This document shall be the requirements for all projects to be modeled and is subject to revisions at any time. All firms contracted by JWA shall comply with the most current revision of this document. JWA may, at any time, alter the requirements of this document based upon the requirements of each project. Requests for Exceptions from specific requirements of this document shall be formally submitted to JWA for approval.

JWA utilizes the CSI Masterformat for organization of assets during design and construction. BIM projects will need to follow the Omniclass Table 23 (Products) for classifying objects within the BIM after construction for facilities management. All BIM files, CAD files, facility data, drawings, specifications, and other materials, including all electronic files used to create them, developed by, or with the cooperation of, the Architect-Engineer Team (A-E), the General Contractor (G-C), the Design-Builder (D-B), or any Consultant pursuant to Agreements with JWA, are, from the moment of creation, the property of JWA, whether or not the project for which they are prepared is commenced or completed. JWA alone owns every right, title, and interest therein.

3.3. Level of Development

A detailed modeling plan shall be developed for each phase of the project and shall clearly describe the desired model maturity and “Level of Development” (LOD) necessary for the various phases.

At each design phase, the model maturity shall be developed to the extent that it will generate the drawing document deliverables with the content, level of detail, and format as required by JWA and



shall be consistent with the level of development as described by the desired phase below. The resulting output, depicted in traditional two-dimensional drawing format with drawing sheets organized by discipline, dimensioned and detailed, shall serve as validation of the accuracy and completeness contained within the building information model(s).

The following is a portion taken directly from the AIA E202 Document we are using to help define each projects LOD structure. This information can be found in its entirety within the AIA LOD Section of the ATTACHMENTS Chapter of this document.

LOD 100:

- **Model Content Requirements:** Overall building massing indicative of area, height, volume, location, and orientation may be modeled in three (3) dimensions or represented by other data.
- **Analysis:** The model may be analyzed based on volume, area and orientation by application of generalized performance criteria assigned to the representative Model Elements.
- **Cost Estimating:** The Model may be used to develop a cost estimate based on current area, volume, or similar conceptual estimating techniques.
- **Schedule:** The Model may be used for project phasing and overall duration.

LOD 200:

- **Model Content Requirements:** Model Elements are modeled as generalized systems or assemblies with approximate quantities, size, shape, location, and orientation. Non-geometric information may also be attached to Model Elements.
- **Analysis:** The Model may be analyzed for performance of selected systems by application of generalized performance criteria assigned to the representative Model Elements.
- **Cost Estimating:** The Model may be used to develop cost estimates based on the approximate data provided and conceptual estimating techniques.
- **Schedule:** The Model may be used to show ordered, time-scaled appearance of major elements and systems.

LOD 300:

- **Model Content Requirements:** Model Elements are modeled as specific assemblies accurate in terms of quantities, size, shape, location, and orientation. Non-geometric information may also be attached to Model Elements.
- **Construction:** Suitable for the generation of traditional construction documents and shop drawings.
- **Analysis:** The Model may be analyzed for performance of selected systems by application of specific performance criteria assigned to the representative Model Elements.



- **Cost Estimating:** The Model may be used to develop cost estimates based on the specific data provided and conceptual estimating techniques.
- **Schedule:** The Model may be used to show ordered, time-scaled appearance of detailed elements and systems.

LOD 400:

- **Model Content Requirements:** Model Elements are modeled as specific assemblies that are accurate in terms of size, shape, location, quantity, and orientation with complete fabrication, assembly, and detailing information. Non-geometric information may also be attached to Model Elements.
- **Construction:** Model Elements are virtual representation of the proposed element and are suitable for construction.
- **Analysis:** The Model may be analyzed for performance of selected systems based on specific Model Elements.
- **Cost Estimating:** Costs are based on the actual cost of specific elements at buyout.
- **Schedule:** The Model may be used to show ordered, time-scaled appearance of detailed specific elements and systems including construction means and methods.

LOD 500:

- **Model Content Requirements:** Model Elements are modeled as constructed assemblies actual and accurate in terms of size, shape, location, quantity, and orientation. Non-geometric information may also be attached to Model Elements.
- **Analysis:** This LOD must allow for the owner to use it as a basis for future Facilities Management processes including, but not limited to; maintenance and operations, model numbers or manufacturer information, URL listings, PDF documentation of reference guides, owner/instruction manual, product guide, or other valuable resources related to the item.
- **General Usage:** The Model may be utilized for maintaining, altering, and adding to the Project, but only to the extent consistent with any license granted in the Agreement or in a separate licensing agreement.

3.4. Quality Assurance/Control

BIM allows for a virtual model to be constructed saving time, energy, and resources, but what happens when that same model is not kept up to a certain standard? Quality Assurance and Quality Control is what allows reliability from the model. This is very important as we greatly rely on the data we collect from this model.



JWA understands the importance of this topic and requires the following QA & QC items:

- The A-E Team shall set up the required parameters and fields in Revit to meet an LOD 500 type model. Reference the previous section for detailed information regarding LOD 500.
- All Teams shall review their Revit files collection of warnings, a minimum of once a month, throughout the entire design process and correct any significant modeling issues. Teams will be required to submit these warning logs each month through Unifier.
- All interior walls shall be modeled to their correct heights and the corresponding Revit families must represent the entire wall assembly accurately.
- Acoustic tile and hard lid ceilings may be represented as a plane with a thickness representing the total construction thickness.
- All hard conduits shall be modeled and made available for clash detection reporting.
- All Teams shall clean up their perspective files within Revit on a regular basis by purging unused components, deleting unused views, and removing any unnecessary information.
- Archived BIMs shall be made on a consistent basis using the required methods on the last chapter of this document.
- The A-E Team shall assign the following worksets to the project:
 - a. RVT LINKS: All perspective linked files
 - b. SITE: Site data either from a Civil consultant or modeled in 3D itself
- All Teams shall then copy the workset formatting from the A-E Team's BIM for consistency and clear understanding of the project workflow.



4. Model Requirements

When working with BIM, there are multiple parts to acknowledge, from the modeling to the software used, and to the collaboration process in between. This section covers all of that and prepares the project for understanding the best practices and procedures to be as efficient and productive as possible.

4.1. BIM Setup

For all JWA projects utilizing BIM, there is a JWA Template that will be provided at the start of the project and is required to be used as the starting point for all disciplines. This template file will already provide all the information within this section, so use this as only a reference to what is included. From Font types and sizes, to drawing scales, and more.

Text Fonts and Sizes

The text options found within the JWA Template files are a mandatory format for all text fonts and sizes (styles). Since all drawings are created full size and scaled within the sheets, it is important to place text at an appropriate height and width within the drawing based on the intended scale of the plotted drawing.

Drawing Model Scales

JWA has adopted the concept of maintaining all site and facilities features in model design files. It is a mandatory procedure that all plan information drawings be prepared full size with the following scale options:

- Buildings:
 - $1/4'' = 1'-0''$ Enlarged Plans
 - $1/8'' = 1'-0''$ Floor Plans
 - $1/16'' = 1'-0''$ Overall Floor Plans
- Site:
 - $1'' = 20'-0''$ Enlarged Plans
 - $1'' = 50'-0''$ Site Plans
 - $1'' = 100'-0''$ Overall Project Site
 - $1'' = 400'-0''$ Airport Layout with Surrounding Areas

The majority of features will be incorporated into the two generalized model scales:

- Buildings: $1/8'' = 1'-0''$
- Site: $1'' = 50'-0''$



4.2. Nomenclature

This section establishes the basic naming conventions and standards required to be used when developing a project using BIM technology for JWA. Drawings and files must conform to the naming convention scheme established by JWA in order to ensure a smooth transition into the JWA operating environment.

File Name

AutoCAD drawings must be named with the following designations:

- **Project ID:** See Project Listing Prefix Index
- **Drawing Category:** Defines the type of use
- **Discipline Designator:** Defines the source location
- **Floor Level:** Defines the floor level of the file
- **Sheet Number:** If applicable
- **File Extension:** .dwg

Revit files must be named with the following designations:

- **Project ID:** See Project Listing Prefix Index
- **Discipline Designator:** Defines the source location
- **Zone Area:** See Zone Area Prefix Index
- **Building Identity:** For Identification purposes (usually a description)
- **Revit File Type Designator:** Defines the Revit file type
- **Model Type Designator:** Defines which option for the two model system
- **File Extension:** .rvt

AutoCAD details must be named with the following designations:

- **Project ID:** See Project Listing Prefix Index
- **Discipline Designator:** Defines the source location
- **CSI Division:** Two digits (using the 50 CSI Format)
- **Drawing Number:** Standard numbering issue
- **File Extension:** .dwg

Revit details live within detail division files. These require the following designations:

Revit Detail Project Number (housing the details):

- **CSI Division Number:** Using the 50 CSI Format, must include “Division” in front of it
- **File Extension:** .rvt

Revit Detail Number (housed inside the above file):

- **CSI Number:** Using the 50 CSI Format
- **Description:** Simple, clean, organized, and descriptive
- **File Extension:** .rvt



Sheets (Drawing/Detail)

The current standard for drawing sheet naming includes the following designations:

- **Drawing Category:** Defines the type of use
- **Discipline Designator:** Defines the source location
- **Building Identity:** For Identification purposes (usually a description)
- **Drawing Number:** Standard numbering issue

The current standard for Detail sheet naming includes the following designations:

- **CSI Division Number:** Using the 50 CSI Format
- **Drawing Number:** Standard numbering issue

Linking/Worksets

All Project central files and model files shall have a consistent naming convention as established by these JWA BIM Standards. The A-E BIM Manager shall coordinate this activity with all sub-consultants and design disciplines. These naming conventions include:

- **Linking:** The Discipline Prefix within the file name takes care of the Linking Information
- **Worksets:** Allows all parties to be consistent with Revit file management
 - Building Identity: Use a Building Number or Letter
 - Section Identifier: Description of section (Floor number, wing elevation, etc.)

Nomenclature Indexes

Project ID Prefix Index:

AA = Airport Administration	PA = Parking Structure A
AT = Air Traffic Control Tower	PB = Parking Structure B
EM = Eddie Martin Terminal	PC = Parking Structure C
EV = Electrical Vault	PS = Paint Storage Building
ES = Electrical Substation	RC = Rental Car Storage
F1 = Fire Station No. 33	RT = Remote Transmitter
F2 = Fire Station No. 27	RW = Restroom Westside
FB = FBO Facilities	TH = Tee Hangers
FF = Fuel Farm	TR = Thomas Riley Terminal
MT = Maintenance Building	

Drawing Category Prefix Index:

B = Base Building	T = Tenant Buildout	P = Property Management
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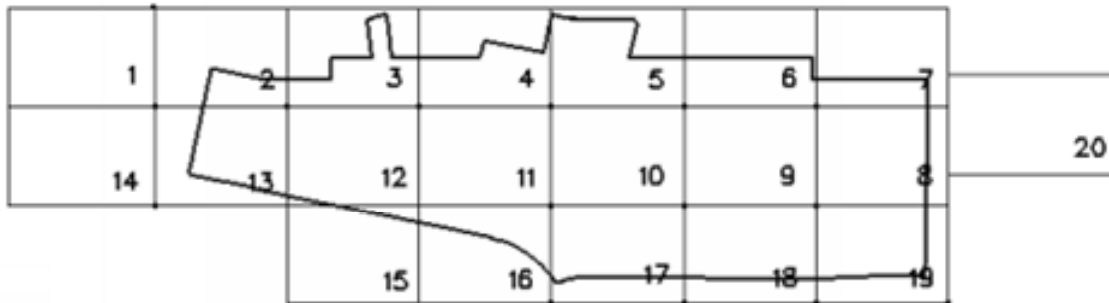
Drawing Discipline Prefix Index:

AR = Architecture	1/8" = 1'-0"	MS = Miscellaneous	Varies
AU = Audio	1/8" = 1'-0"	OC = Occupancy	1/16" = 1'-0"
CM = Communications	1/4" = 1'-0"	P = Plumbing	1/4" = 1'-0"
CN = Contours	1" = 50'-0"	PH = Phone System	1" = 50'-0"
CS = Comm. & Security	1" = 50'-0"	PL = Property Boundaries	1" = 50'-0"



EL = Electrical	1" = 50'-0"	PW = Power	1/4" = 1'-0"
FP = Fire Protection	1/8" = 1'-0"	RC = Reflected Ceiling	1/8" = 1'-0"
FU = Fuel System	1" = 50'-0"	S = Structural	1/8" = 1'-0"
LA = Landscaping	1/8" = 1'-0"	SD = Storm Drain	1" = 50'-0"
LD = Legal Descriptions	Varies	ST = Site Topography	1" = 50'-0"
LT = Lighting	1/8" = 1'-0"	SW = Sewer System	1" = 50'-0"
ME = Mechanical	1/4" = 1'-0"	TP = Tenant Placement	1/16" = 1'-0"
		WT = Water System	1" = 50'-0"

Zone Area Prefix Index:



The above index only represents the airfield. The A-E Team must coordinate with JWA prior to the commencement of design for an agreement on the zoning of structures.

Revit File Type Prefix Index:

PRO = Project File	CEN = Central File	"XX" = Local File (User Initials)
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Model Type Designator Index:

GEOM = Coordination File with Geometry Only	ANNO = Annotation File with Sheet Set Only
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Element File Naming

The current standard for JWA element file naming includes the following designations:

- **Revit Element Category:** Defines the type of Revit category
- **Omniclass 23 Name:** This requires the exact name from the official Omniclass Table 23
- **Major Description:** Must choose from the U.S. National CAD Standards Abbreviations*

*=If no abbreviation exists from the U.S. National CAD Standard, use an industry understood option

Element Parameter Naming

The current standard for JWA component parameter naming includes the following designations:

- **Type Parameter:** Extended descriptions providing further detail
 - **Type Name:** Typical information used for tags/schedules (Size or Model No.)
 - **Type Description:** Used to define "Type Name" (Description or Manufacturer)
- **Instance Parameters:** Unique identifiers to that item for equipment/component schedule
 - **Instance Name:** JWA Shared Parameter created to organize/schedule items*
 - **Instance Description:** JWA Shared Parameter created for scheduling*



*=JWA Shared Parameter file will be issued with the initial BIM Execution Plan Document

Revit Component Category Prefix Index:

AR = Architecture	1/8" = 1'-0"	MS = Miscellaneous	Varies
AU = Audio	1/8" = 1'-0"	OC = Occupancy	1/16" = 1'-0"
CM = Communications	1/4" = 1'-0"	P = Plumbing	1/4" = 1'-0"
CN = Contours	1" = 50'-0"	PH = Phone System	1" = 50'-0"
CS = Comm. & Security	1" = 50'-0"	PL = Property Boundaries	1" = 50'-0"
EL = Electrical	1" = 50'-0"	PW = Power	1/4" = 1'-0"
FP = Fire Protection	1/8" = 1'-0"	RC = Reflected Ceiling	1/8" = 1'-0"
FU = Fuel System	1" = 50'-0"	S = Structural	1/8" = 1'-0"
LA = Landscaping	1/8" = 1'-0"	SD = Storm Drain	1" = 50'-0"
LD = Legal Descriptions	Varies	ST = Site Topography	1" = 50'-0"
LT = Lighting	1/8" = 1'-0"	SW = Sewer System	1" = 50'-0"
ME = Mechanical	1/4" = 1'-0"	TP = Tenant Placement	1/16" = 1'-0"
		WT = Water System	1" = 50'-0"

Omniclass Table 23 Name Index:

You can find this index within the ATTACHMENTS portion of this document.

4.3. Internal File Organization

There are two main parts of Revit and file organization and collaboration; Linking and Worksharing. Both are considered vital when managing large and/or complex projects and providing standards help ensure consistency and efficiency.

Autodesk Revit Linking

When linking files in Revit, there are certain requirements that must be met to ensure proper coordination workflow. These allow for a smoother process, more efficient file management, easier for updates, and best form of understanding the overall project setup.

Linking requirements include:

- The file name must align with these standards for consistency and clarity. This is what user's reference when updating linked files, and more importantly, what objects read when being referenced in Navisworks coordination.
- Only include the date in the file name when being archived, not with the live working file.
- When dividing the project up, only use areas with physical separation. Views cannot be easily referenced for items such as callouts, sections, detail references, etc.



- Printing is also done with multiple files, therefore, when a project uses linking, the following must be maintained between ALL Revit files:
 - Project Title Blocks
 - Line Weights
 - Object Styles
 - Text and Dimension Styles
 - Note: All of these are included in the JWA Template file

Autodesk Revit Worksharing

Coordinating worksets is necessary from the start of a project, especially when multiple disciplines and companies are involved, and working together with BIM. This process can be utilized along-side linking to provide the most opportunity and options available for visibility settings, project coordination, and overall workflow processes.

Worksharing requirements include:

- Separate worksets created in Revit by the A-E Team for each MEPF trade
- It is the responsibility of the A-E BIM Manager to determine the initial worksharing organization, including project division into worksets, along with the naming convention.
- It is the responsibility of the Team BIM Manager to ensure the correct and necessary visibility of the items in the designated views for each discipline/consultant.
- Workset collaboration is not for the file or program, but for the users understanding when working with multiple disciplines. JWA requires all parties to adhere to the workset organization established by the A-E BIM Manager.

4.4. Cost Estimation

The A-E Team shall produce construction cost estimates utilizing accurate quantity take-offs from the BIM at the completion of each design deliverable stage. This process will allow JWA and the A-E Team to track quantities, identify cost effects of changes, explore options within budgets, and maintain compliance with the design-to-budget.



5. Infrastructure Requirements

Technology Infrastructure includes many aspects of BIM including software, hardware, content transfer, and communication setup. All of these items are addressed here and defined per JWA standards.

5.1. External File Organization

There are two main parts of Revit and file organization and collaboration; Linking and Worksharing. Both are considered vital when managing large and/or complex projects and providing standards help ensure consistency and efficiency.

Autodesk Revit Versioning

The BIM must be modeled in Autodesk Revit during design, and coordinated in Autodesk Navisworks during construction. All subcontractors must either use Revit, or provide a workflow, method, and/or clear understanding of how their alternative software/product will adhere to the final BIM. The version number of each software used must be documented within the JWA BIM EXECUTION PLAN, and submitted to JWA for approval at the beginning of the project.

Most often the project will remain in the same version it started in for simplicity purposes. But there are times when upgrading the software during the project is recommended. These choices can typically including one of the following:

- **Upgrade:** New features provide extra opportunities for the project
- **Upgrade:** Old software has become unstable/too slow
- **Do not upgrade:** Not all teams have the upgrade available to them
- **Do not upgrade:** New software has not gone through enough testing

In recent years, BIM software platforms have incorporated substantial changes and/or advancements in their programs, technologies, capabilities, features, interoperability, etc. through annual software upgrades. It has also become understood that some BIM software tools are not backwards compatible and must be carefully monitored and synchronized.

It shall be each Teams responsibility to evaluate the advantages and disadvantages of software upgrades during the project, and reach an agreement if/when that may become available.

Written requests to use alternative BIM authoring software may be considered for approval by JWA prior to the submission of the BEP. JWA encourages use of software based on or using open standards for greatest interoperability between consultants and JWA facility management systems.



5.2. Coordinate Systems

Before commencing design, the A-E Team shall be required to geo-reference BIMs, site plans, and associated drawings to provide projection and coordinate system information necessary to ensure interoperability with existing structures and site conditions.

These site coordinates shall be accurately geo-referenced as they relate to a specific JWA GPS Control Point. The A-E Team shall coordinate with JWA prior to the commencement of the design work to establish the correct Control Point and its coordinates.

The A-E Team must coordinate with JWA to determine these coordinates. The A-E Team shall be responsible for verifying the accuracy of the coordinates and provide a grid intersection of 0,0,0 for all team members. MEPF systems must be defined within Revit such that each system can be isolated and viewed separately.

Other items include:

- A building line will be created by the A-E Team with a minimum of 5' from the building up to which all underground utilities should be extended
- There shall be no overlapping of utilities within the building line
- All civil utilities will be taken precisely up to that line where they will meet with the corresponding building utilities
- The Architectural model must contain areas, such as occupancy or departmental, as required by the program design.
- The Mechanical model must contain MEPF zones, such as air circulation zones or others as required by the program.

5.3. Information Extraction

The G-C Team can extract any required 2D background, such as floor plans or reflected ceiling plans from the most current Revit files.

It is the G-C Team's responsibility to export the individual trades and systems from Revit in an appropriate file format (.dwg OR .nwc, for example) for the corresponding subcontractors if necessary.

5.4. Collaboration Tools

As more and more software becomes available, JWA encourages the implementation and adoption of anything to help with accuracy, efficiency, stability, and productivity as BIM moves forward in the industry. Currently JWA includes the following:



Revit

This is the foundational tool for the entire BIM project and process. Revit allows for a model to be constructed virtually and gives designers and architects the ability to understand their building before it is even built. This process saves time, money, prevents design flaws, prevents coordination issues, and also gives the client a better understanding of their project.

As the program continues to improve, more and more become possible for everyone involved. Some of the latest options allow for lighting analysis, energy analysis, easy workflow between other Autodesk BIM Software, and more.

Unifier

All parties are required to use Oracle Primavera Unifier (Unifier) for document management, file sharing, submissions, and project communication. All BIM files shall be uploaded on Unifier in respective projects folders and updated on a weekly basis using the file naming convention established within this document.

Random audits of weekly updates may occur and failure to comply will result in withholding of full payment until satisfactory compliance has been attained. Models shall be accessible in both their native formats and in DWG, IFC, and/or NWD/NWC (as requested) formats.

In addition to being stored in respective project folders, BIMs must also be formally submitted to JWA via the AE Deliverable business process (if submitted by the A-E Team) or the Submittals/Submittal Packages business process.

COBie

This data schema for information exchange is also recognized as a staple in JWA's process. There are many references to this throughout the document and some overall items are as follows:

- The A-E Team shall submit the design data to JWA as a COBie-compliant Excel file
- This file should contain the following:
 - Be in the current version at the time of the submission
 - Contain the fields: ExtSystem, ExtObject, ExtIdentifier properly populated for all provided elements in order to establish a relationship between the authoring BIM/CAD or project management software and corresponding elements
- Other Third Party applications may be used to automate the extraction of the COBie data from the Revit models – if so this will be shared on a per project basis and explained in the BIM Execution Plan.



JWA, or their designee, will check the quality of the data against the requirements provided by JWA and detailed herein. If the requirements are not met, the A-E Team shall resubmit the data within two weeks after JWA provides a report of inaccurate or missing data. If the second submission does not satisfy JWA's requirements the A-E Team shall resubmit the data within one week after JWA provides a report on found errors.

Navisworks

Used primarily for clash detection and overall coordination, Navisworks provides many advantages to its use during the project lifecycle including:

- 4D Time line information able to be synced with project schedules
- Easy to walk-through visual coordination tools
- Lightweight model geometry and yet still able to include specific component data
- Clash detection reporting, hard or soft clash options

Use this program for clash detection throughout the entire project schedule. See the specific project's BIM EXECUTION PLAN for detail on how often and what exactly is required for this process.



6. Quality Control

When collaboration is needed among multiple disciplines and BIM is being provided, the best opportunity all parties involved have to make sure coordination is being maintained, is by

6.1. Clash Detection Process

BIM-based clash detection allows automatically geometry-based clashes to be detected and displayed for each discipline to examine and review. There are two types of clash detection available, hard and soft, and the descriptions are listed below.

Detection Type	Description of Process
Hard Clash	Whenever objects occupy the same space within a BIM
Soft Clash, or Clearance Clash	Whenever objects occupy space too close to each other depending on specific parameters applied to the BIM

The A-E Team must supply each consultant with their own list of clashes, and provide a hierarchy of which system is responsible for working around which system. Below you will find that list in order from left to right:

Architecture > Structural > Mechanical > Plumbing > Electrical

Below shows a breakdown of each report type, reviewer responsible, and description

Type	Reviewer	Description
A vs. S	Structural	<p>All reports are to be using the Architecture provided report given each Monday afternoon.</p> <p>These items are to be reviewed by the following parties and given three ways to respond:</p> <ol style="list-style-type: none"> 1) Fixed=Clash has been resolved by reviewer 2) Escalated=Sent to opposite clash party for resolution 3) Accepted=Clash has been reviewed and is OK as is <p>It is required all are reviewed before the following week, so clashes are not reoccurrences</p>
A vs. M	Mechanical	
A vs. P	Plumbing	
A vs. E	Electrical	
S vs. M	Mechanical	
S vs. P	Plumbing	
S vs. E	Electrical	
M vs. P	Plumbing	
M vs. E	Electrical	
P vs. E	Electrical	



6.2. Clash Detection Reports

At each design deliverable stage, clash detection reports will be required from the A-E/D-B Team utilizing a single consolidated model to determine and resolve conflicts (see Section 5.3 for Level Of Development). JWA’s goals for clash detections are the following:

- Reduce and eliminate field conflicts, thereby reducing and eliminating Requests for Information (RFI), Change Orders, and construction delays.
- Visualize the construction sequences, staging, and logistics.
- Increase overall field productivity.
- Procure more accurate as-built drawings.

6.3. Clash Reporting Schedule

On top of defining the Clash Detection Process, it is important to also agree upon a detailed schedule for clash detection reporting. This gives the opportunity for all parties to agree to and understand the entire process broken down into the most basic steps, as described below, including the procedure step, frequency, day, time, and description. This is only an example taken from the BIM Execution Plan, but it does need to be discussed and agreed upon during the kickoff meeting.

Procedure	Frequency	Day	Time	Description
Upload	Weekly	Monday	9:00 AM	All model holders to upload their current version
Download	Weekly	Monday	12:00 PM	All model holders to download all other current BIM versions
Clash Report	Weekly	Monday	5:00 PM	Architect to update all model clashes and send revised reports
Clash Response	ASAP	Entire Week	9:00 AM	Responses are to be handled ASAP by the procedure below
Major Change	As Needed	As Needed	As Needed	Any major changes are to be noted and sent to all parties ASAP

Coordination discrepancies discovered during the collaboration review process shall be logged and managed. These issues shall be communicated to the relevant parties in a report which provides the following as a minimum:

- Specific location of any clash, including 2D and 3D images where possible
- Element ID’s of the objects in question, where relevant
- A detailed description of the problem including the date/revision/link origin (“GEOM” File)
- Suggested solutions or actions to be taken, by whom and by what date
- Author of the issue and the distribution list for information or resolution
- Confirmation that the resolution has been tested in the model
- Issue status – pending response / overdue / unsuitable response / closed



Items with an unsuitable response shall be re-logged as a new issue to avoid confusion over whether the issue has been resolved. The original issue shall then refer to a new issue number.

Outstanding issues shall be discussed at the project coordination meetings. This process may be aided by using Navisworks on larger projects to keep the 3D information manageable.

6.4. Model Update Procedure

All subcontractors shall update their models regularly during construction to reflect the A-E Model as the most accurate and up-to-date as possible. This shall not be left until the end of the project. The G-C Team's BIM Manager will be responsible for ensuring that this process is in place and for verifying compliance. Where installation differs from the coordinated model, a log of adjusted installations will be kept detailing what the change was, the reason for the change and confirming that the 3D model has been updated accordingly.

The GEOM file during this time will be maintained and coordinated regularly, but it is up to each party involved to also update and keep their ANNO file maintained as well, so that in the end, they are able to turn over not only a model of the project, but also a set of documents with tag, schedule, and sheet information included.



7. Submission Requirements

JWA requires the delivery of the BIM in multiple stages by electronic versions of hardcopy submissions. These stages are divided by each phase of the Design and Construction process. This deliver will often require not only the BIM, but also any other files that support the intent of the project.

These requirements, listed on the following pages, describe the types of models and other files expected at each submission. This information is intended to assist the consultants and contractors with the requirements of each phase, and the relationship of each LOD to the BIM in detail.

Through each BIM, description references to terminology and processes are made to both BIM Uses and Model Requirements already defined in previous sections of this document.

The final BIMs and associated data delivered to JWA at the completion of the following phases shall be composed of the following:

Design-Bid-Build:

- Pre-Schematic Design (PSD) Phase
- Schematic Design (SD) Phase
- Design Development (DD) Phase
- Construction Documents (CD) Phase
- As- Built Record Documents/Close-out

Bridging Design:

- 30% Bridging Documents Completion
- 60% Bridging Documents Completion
- 90% Bridging Documents Completion
- 100% Bridging Documents Completion
- These percentages represent typical completion phases. Projects may vary depending upon requirements.

Design-Build:

- 30% Documents Completion
- 60% Documents Completion
- 90% Documents Completion
- 100% Documents Completion
- These percentages represent typical completion phases. Projects may vary depending upon requirements, including completion by packages.
- As- Built Record Documents/Close-out



7.1. Submission Schedule

The following schedule displays the specific Milestone, typically the Phase, and what Deliverables are required to be submitted by the end of that Milestone.

For Design-Build projects, a Bridging Designer must specify their LOD inclusion, and clearly define the moment of transfer to the Design-Builders to complete the LOD process up to LOD 500.

Milestone	Deliverable
Contract Award	BIM Execution Plan
Schematic Design (LOD 100)	Required BIM with the following information: -Existing Conditions, Site Analysis, Space Program, Volumetric, Zoning, Orientation, and Preliminary
	Revit Parameters: JWA Naming Standards listed within Section 4.2 to apply to all Components during this deliverable
	Documentation (Reports) of the following: - Existing Conditions, Site Analysis, and Space Program
Design Development (LOD 200)	Required BIM: Architectural, Site/Civil, and initial MEFP
	Revit Parameters: JWA Shared Parameters file inclusion
	COBie Design Data: Contact, Facility, Floor, Space, and Zone
	Documentation: -BEP Update and Initial Clash Detection Report
Construction Documents (LOD 300)	Required BIM: -Architectural, Structural, Site/Civil, MEFP, and any Other Systems
	Revit Parameters: JWA Shared Parameters file inclusion
	COBie Design Data: Contact, Facility, Floor, Space, Type, and Component
	Documentation: Detailed Clash Detection Report and Initial Code Validation Report
Fabrication Model (LOD 400)	Required BIM: -Architectural, Structural, Site/Civil, MEFP, and any Other Systems
	Revit Parameters: All listed within Section 4.2 of this document
	COBie Design Data: Contact, Facility, Floor, Space, Type, Component, System, Document, and Attribute
	Documentation: -Detailed Clash Detection Report (including issues and resolutions) and Final Code Validation Report
	2D CAD files ready for bidding and construction
As- Built Record Documents/Close-out (LOD 500)	As-Built Record Models (with all field changes and as-built conditions) of the following: -Architectural, Structural, Site/Civil, MEFP, and any other systems
	Revit Parameters: All listed within Section 4.2 of this document
	COBie Design Data: Contact, Facility, Floor, Space, Type, Component, System, Document, and Attribute
	2D CAD files and PDFs of as-built record conditions



7.2. Deliverables (By Process)

JWA projects consist of two different and distinct methods of process; Design-Bid-Build and Design-Build. Each have their own set of phases and deliverables for those perspective phases. These deliverables, or tasks, must be completed to ensure the project is being developed and delivered on time to JWA standards. Use this as a reference and keep this in mind whenever completing one phase and moving onto the next.

Design-Bid-Build

Schematic Design

This phase requires fully coordinated BIMs from all disciplines at completion of SD by the A-E Team. The following line items listed provide further detail of those requirements. Make sure to reference the BIM Execution Plan for any possible additional or more specific requirements per project. Items include:

- Project Type information including:
 - The A-E Team shall provide the aforementioned fully coordinated BIMs at the completion of 100% Construction Documents.
 - Control Points will be provided by the A-E Team as a reference for developing the project gridlines and location
 - The A-E Team shall model all existing conditions as needed
- Multiple discipline Models with the following elements:
 - Site Model with existing conditions and topography
 - Survey deliverables managed by JWA in consultation with the A-E Team on a project-by-project basis
 - Surveys shall be provided in electronic format and minimally include 3D topographic information including paving and retaining walls and all civil utilities
 - Architecture Model with Interior and Exterior Walls, Doors and Windows, Stair and Ramps, Ceilings, Roofs, and Bounded Rooms with Names and Numbers
 - Structure Model with Foundations, Columns, Beams, Bracing, and Floors
 - Mechanical Model with initial equipment and Main Duct Lines
 - Fire Protection Model with initial equipment and Main Pipe Lines
- Space programming is expected to be incorporated into the BIM, including:
 - Program Function, Room Name, and Room Number
 - Assignable Areas measured to inside face of wall objects
 - Non-Assignable Areas from designated boundaries of areas
 - Clearances and access zones should be modeled on separate layers, per system
 - Gross Area measured to the outside face of wall objects
- Design phases should be defined at this stage and shall be consistent throughout
- Preliminary Cost Estimates including:
 - Utilizing extracted square footage information directly from the BIM



- Integrated tools to support comparative costs analysis of options studied
- Outputs as spreadsheets and submitted as part of the design solution justification
- COBie Design Data in spread sheet format, documenting the following:
 - Compliance with the most current version of COBie
 - Worksheet provided by the A-E Team with the following Schematic Design Set:
 - **Contact** (all fields)
 - **Facility** – Facility(ies) referenced in the file (all fields)
 - **Floor** – Description of vertical levels (all fields)
 - **Space** – Spaces referenced in the project (all fields)
 - **Zone** (all fields)
- Collision reporting including the following:
 - The A-E Team is to assemble all of the models into a single consolidated model
 - Performing a visual walk through of the model from various perspectives
 - Analyze cross sections to detect any constructability issues that would not necessarily be detected automatically
 - Clearances and access zones should be verified either by clash detection or visual inspection to be clear of any unacceptable obstructions
 - Preliminary coordination at this stage should, at a minimum, be performed within the major systems of these pairs of elements:
 - Architectural Systems vs. Structural, then Mechanical
 - Structural Systems vs. Mechanical

Design Development

Once in the design development phase, the A-E Team shall continue developing their BIMs, but now with more detailed specifics. This phase requires that all systems shall be defined at this stage with the appropriate shapes and sizes along with the proper documentation to support the analysis. The following line items listed provide further detail of those requirements.

Make sure to reference the BIM Execution Plan for any possible additional or more specific requirements per project. Items include:

- Further refined Model evolving from the previous phase
- Better defining elements to ensure the appropriate effort within this phase
- Additional elements and objects may need to be added from the previous stage Design Authoring – Preliminary Model to represent new features of the project.
- Program requirements should be compared and validated with the actual design solution through reports and charts generated automatically from the BIM.
- This model shall be detailed and finalized enough to use as an indicator of approximate building energy use after occupancy. This model shall also serve as a baseline for future comparisons.
- Custom parameters may be created to associate LEED information to the different elements within the BIM.



- This model shall be used as a tool to facilitate post-occupancy commissioning should discrepancies between modeled and actual energy use arise.
- All elements or objects included within the Model should be automatically extracted and quantified for estimating purposes.
- COBie Design Data provided by the A-E Team, including the following:
 - Design data in conformance with the most current version of COBie
 - Data set including the COBie worksheets related to the architectural program
 - The A-E Team shall specifically identify spatial and systems zoning to reflect the space circulation zones and building service zones that are reflected in the design drawings and specifications. The following COBie Design worksheets shall be provided in the Schematic Design Set:
 - **Contact, Facility, Floor, Space, Zone, and System** (All fields)
 - **Type** (Name, CreatedBy, CreatedOn, Category, Description, AssetType, ExtSystem, ExtObject, ExtIdentifier)
 - **Component** (Name, CreatedBy, CreatedOn, TypeName, Space, Description, ExtSystem, ExtObject, ExtIdentifier)
- Coordination at this stage should be performed within the major and minor systems based on these pair of elements:
 - Architectural vs. Structural, then HVAC, Plumbing, Fire Protection, Electrical
 - Structural Systems vs. HVAC, then Plumbing, Fire Protection, Electrical Systems
 - HVAC Systems vs. Plumbing, then Fire Protection, Electrical
 - Plumbing Systems vs. Fire Protection Systems
 - Plumbing Systems vs. Electrical Systems
 - Fire Protection Systems vs. Electrical Systems
 - Other systems, as required

Construction Documents

When in the construction documents phase, the A-E Team shall continue development of the models created in the previous Design Development Phase. Parametric links shall be maintained within the models, but enhanced to include more data and information required for this phase. Refinement of the model content from the design development phase will occur, as whatever content was not known at that time should be accurately represented in this phase.

Items include:

- 3D coordination validation should evolve from the previous phase. All conflicts previously found should be resolved at the end of this phase by running a final clash detection report to validate the absence of conflicts.
- Quantity takeoffs should be automatically extracted from the model. Cost should be validated by integrating applications with quantity tools or exported as spreadsheets for traditional methods.



- All LEED documentation and reports should be completed at this stage and should be ready to be submitted as part of the project deliverables.
- These documents and reports will use the previously defined custom parameters in which LEED information have been associated to the different elements within the BIM.
- Analyzed BIM with software that interacts with the model to refine load calculations, daylighting, natural ventilation, acoustics, and code issues and design issues in addition to reviewing and correcting any relevant issues arising out of the Revit warnings in both Revit Architecture and Revit MEP. This process shall be done by the A-E Team within this phase
- COBie Design Data provided by the A-E Team, including the following:
 - Design data in conformance with the most current version of COBie
 - The A-E Team shall re-submit the design data that was further refined from the Design Development phase, to JWA in conformance with the most current version of COBie, including the following:
 - **Contact, Facility, Floor, Space, Zone, and System** (All fields)
 - **Type** (Name, Created By, Created On, Category, Description, Asset Type, Ext System, ExtObject, ExtIdentifier)
 - **Component** (Name, Space, Typename, CreatedBy, CreatedOn, Category, Description, ExtSystem, ExtObject, ExtIdentifier)
 - **Document** (all fields, submittals and similar documents, ApprovalBy = “Information Only”, Stage = “Requirement”)
 - **Attribute** (all fields, design-intent attributes, Category = “Requirement”)
- COBie Construction Data provided by the G-C Team including the following:
 - The G-C Team is responsible for updating and adding additional data as it becomes available from the subcontractors, including:
 - **Contact, Facility, Floor, Space, Zone, Type, Component, System, Spare, Resource, and Job** (All fields)
 - **Document** (all fields, installed equipment documentation, ApprovalBy = “Owner Approval”, Stage = “As-Built”)
 - **Attribute** (all fields, manufacturer-provided attributes, Category = “As-Built”)
 - Quality of the COBie data will be checked against the requirements provided by JWA and detailed herein. Options for response include:
 - If the requirements are not met, the G-C Team shall resubmit the data within two weeks after JWA provides a report of inaccurate or missing data
 - If the second submission does not satisfy JWA's requirements, the G-C Team shall resubmit the data within one week JWA provides a report on found errors
 - Failure of the second submission to satisfy JWA’s requirements may result in withholding of full payment until requirements are met
 - The COBie compliant data will be verified and feedback provided by JWA at a minimum at the following construction stages:
 - 75% Substantial Completion
 - Commissioning Complete



- Project Close-Out
- Facility Data specifics include the following:
 - Can be used for COBie compliance checking and data input
 - Will be used by JWA for linking all of the associated data in the 3D models to JWA's Facility Management and Maintenance systems
 - Essential that the required fields and file naming conventions be followed

BID, Award, and Registration

After completion and approval of the Construction Document phase, the A-E Team's BIMs shall be archived and provided to JWA. All deliverables including archived BIMs, hardcopies, DWFs and PDFs derived from such BIMs shall be identical to the desired design conditions at the time bids are received.

During the bidding phases through Award, the model may be provided for informational purposes. Refer to the project specific JWA BEP for BIM use and model availability.

At the completion of Construction Documents, the 100% CD design BIMs will be archived in Unifier and designated "Construction Documents". This phase has many specific items to include regarding BIM, the deliverables, BEP, and more, including:

- Level of detail at the AIA standard minimum of LOD 500. This is expected to be an As-Built model that can be used not only by the Contractor but also by JWA for Operations and Maintenance.
- The CD BIMs and associated documentation will be made available to prospective G-C Teams and their subcontractors for bidding purposes. The A-E BIM Manager will provide the G-C Team with access to the BIM files. It will be the responsibility of the G-C Team to distribute models as they deem necessary to bidding subcontractors. It should be noted however, that access to the BIMs is provided for reference, clarification and design intent only and if used for estimating or any other purpose, is done so at the sole risk of the G-C Team and its subcontractors.
- BIM Execution Plan submitted by the G-C Team to JWA with their proposal/bid describing processes and procedures in place within their organization to coordinate and deliver the BIM's and associated data according to the standards contained herein. See Section 10.3 of the ATTACHMENTS Chapter for the BEP template to be used.
- While co-location of the A-E Team and the G-C Team during construction is desirable and highly encouraged, JWA recognizes that there are often space limitations which preclude this type of interactive engagement. It is imperative that all project team members remain pro-actively engaged and responsive for the duration of the construction phase. Collaboration procedures shall be detailed in the BEP.
- All design model updates from the A-E Team will continue to develop and update the design models throughout the entire construction process. For any design changes that have a direct and immediate effect on construction coordination, the A-E Team must update and re-upload their design models to the project BIM folder in Unifier within 3 work days if there is any other



question that is answered by the A-E Team that requires a design change or a change order that affects coordination or that is driven by coordination (such as ceiling elevation changes or a change in the size of a shaft opening).

- The MEP Engineers will not be uploading changes to the MEPF models but will be updating their MEPF design models immediately following the subcontractor sign off of a given floor on a floor by floor basis. Model mash-ups can be used as a check to ensure that the design model mimics the fabrication models.
- The A-E Team will publish a monthly bulletin summarizing all questions, resolutions and model changes/updates, and all decisions for design or for value engineering that have been made and will post the bulletins to the server as a non-editable file along with the updated models.
- All of the above described bulletin items shall be recorded in the model with labeled bubbles around the affected area with reference to the bulletin item number.
- The Structural Designer will be updating the design model in parallel with the steel fabricator. In some cases, the Designer's structural model may be the only model used throughout.
- Model Mash Ups shall be performed for all MEPF trades in Navisworks. The mash-ups are overlays of the final as constructed fabrication models with the most up-to-date MEPF design models. This provides the A-E Team with a visual comparison of the two model types – design vs. fabrication -to assist them in making any required adjustments to their design model to match the “as built” condition. Model mash-ups will be created as each floor's coordination is complete and is signed off by all of the trade subcontractors.

Design-Bid-Build

Schematic Design

This phase requires fully coordinated BIMs from all disciplines at completion of SD by the D-B Team. The following line items listed provide further detail of those requirements. Make sure to reference the BIM Execution Plan for any possible additional or more specific requirements per project. Items include:

- Project Type information including:
 - Design-Build delivery: the “Bridging Document” A-E Team (D-B) shall propose to JWA the level of completion of individual disciplines at which the A-E Team will provide fully coordinated BIMs. The A-E Team shall then provide the fully coordinated BIMs at the level of completion approved by JWA at the completion of the “Bridging Document” design.
 - Control Points will be provided by the D-B Team as a reference for developing the project gridlines and location
 - The D-B Team shall model all existing conditions as needed
- Multiple discipline Models with the following elements:
 - Site Model with existing conditions and topography
 - Survey deliverables managed by JWA in consultation with the D-B Team on a project-by-project basis



- Surveys shall be provided in electronic format and minimally include 3D topographic information including paving and retaining walls and all civil utilities
- Architecture Model with Interior and Exterior Walls, Doors and Windows, Stair and Ramps, Ceilings, Roofs, and Bounded Rooms with Names and Numbers
- Structure Model with Foundations, Columns, Beams, Bracing, and Floors
- Mechanical Model with Equipment and Main Duct Lines
- Fire Protection Model with Equipment and Main Pipe Lines Plumbing
- Space programming is expected to be incorporated into the BIM, including:
 - Program Function, Room Name, and Room Number
 - Assignable Areas measured to inside face of wall objects
 - Non-Assignable Areas from designated boundaries of areas
 - Clearances and access zones should be modeled on separate layers, per system
 - Gross Area measured to the outside face of wall objects
- Design phases should be defined at this stage and shall be consistent throughout
- Preliminary Cost Estimates including:
 - Utilizing extracted square footage information directly from the BIM
 - Integrated tools to support comparative costs analysis of options studied
 - Outputs as spreadsheets and submitted as part of the design solution justification
- COBie Design Data in spread sheet format, documenting the following:
 - Compliance with the most current version of COBie
 - Worksheet provided by the D-B Team with the following Schematic Design Set:
 - **Contact** (all fields)
 - **Facility** – Facility(ies) referenced in the file (all fields)
 - **Floor** – Description of vertical levels (all fields)
 - **Space** – Spaces referenced in the project (all fields)
 - **Zone** (all fields)
- Collision reporting including the following:
 - The D-B Team is to assemble all of the models into a single consolidated model
 - Performing a visual walk through of the model from various perspectives
 - Analyze cross sections to detect any constructability issues that would not necessarily be detected automatically
 - Clearances and access zones should be verified either by clash detection or visual inspection to be clear of any unacceptable obstructions
 - Preliminary coordination at this stage should, at a minimum, be performed within the major systems of these pairs of elements:
 - Architectural Systems vs.: Structural, then Mechanical
 - Structural Systems vs. Mechanical

Design Development

Once in the design development phase, the D-B Team shall continue developing their BIMs, but now with more detailed specifics. It is also possible that during this phase, the A-E Team may begin to get



involved for coordination and collaboration. See the Project Specific BIM Execution Plan for detailed information regarding the process defined. Also make sure to reference the BIM Execution Plan for any possible additional or more specific requirements per project.

This phase requires that all systems shall be defined at this stage with the appropriate shapes and sizes along with the proper documentation to support the analysis. The following line items listed provide further detail of those requirements. Items include:

- Further refined Model evolving from the previous phase
- Better defining elements to ensure the appropriate effort within this phase
- Additional elements and objects may need to be added from the previous stage Design Authoring – Preliminary Model to represent new features of the project.
- Program requirements should be compared and validated with the actual design solution through reports and charts generated automatically from the BIM.
- This model shall be detailed and finalized enough to use as an indicator of approximate building energy use after occupancy. This model shall also serve as a baseline for future comparisons.
- Custom parameters may be created to associate LEED information to the different elements within the BIM.
- This model shall be used as a tool to facilitate post-occupancy commissioning should discrepancies between modeled and actual energy use arise.
- All elements or objects included within the Model should be automatically extracted and quantified for estimating purposes.
- COBie Design Data provided by the D-B Team, including the following:
 - Design data in conformance with the most current version of COBie
 - Data set including the COBie worksheets related to the architectural program
 - The A-E Team shall specifically identify spatial and systems zoning to reflect the space circulation zones and building service zones that are reflected in the design drawings and specifications. The following COBie Design worksheets shall be provided in the Schematic Design Set:
 - **Contact, Facility, Floor, Space, Zone, and System** (All fields)
 - **Type** (Name, CreatedBy, CreatedOn, Category, Description, AssetType, ExtSystem, ExtObject, ExtIdentifier)
 - **Component** (Name, CreatedBy, CreatedOn, TypeName, Space, Description, ExtSystem, ExtObject, ExtIdentifier)
- Coordination at this stage should be performed within the major and minor systems based on these pair of elements:
 - Architectural Systems vs. Structural, then HVAC, Plumbing, Fire Protection, Electrical
 - Structural Systems vs. HVAC, then Plumbing, Fire Protection, Electrical Systems
 - HVAC Systems vs. Plumbing, then Fire Protection, Electrical
 - Plumbing Systems vs. Fire Protection Systems
 - Plumbing Systems vs. Electrical Systems



- Fire Protection Systems vs. Electrical Systems
- Other systems, as required

Construction Documents

When in the construction documents phase, the A-E Team shall continue development of the models created in the previous Design Development Phase by the D-B Team. Parametric links shall be maintained within the models, but enhanced to include more data and information required for this phase. Refinement of the model content from the design development phase will occur, as whatever content was not known at that time should be accurately represented in this phase.

Items include:

- 3D coordination validation should evolve from the previous phase. All conflicts previously found should be resolved at the end of this phase by running a final clash detection report to validate the absence of conflicts.
- Quantity takeoffs should be automatically extracted from the model. Cost should be validated by integrating applications with quantity tools or exported as spreadsheets for traditional methods.
- All LEED documentation and reports should be completed at this stage and should be ready to be submitted as part of the project deliverables.
- These documents and reports will use the previously defined custom parameters in which LEED information have been associated to the different elements within the BIM.
- Analyzed BIM with software that interacts with the model to refine load calculations, daylighting, natural ventilation, acoustics, and code issues and design issues in addition to reviewing and correcting any relevant issues arising out of the Revit warnings in both Revit Architecture and Revit MEP. This process shall be done by the A-E Team within this phase
- COBie Design Data provided by the A-E Team, including the following:
 - Design data in conformance with the most current version of COBie
 - The A-E Team shall re-submit the design data that was further refined from the Design Development phase, to JWA in conformance with the most current version of COBie, including the following:
 - **Contact, Facility, Floor, Space, Zone, and System** (All fields)
 - **Type** (Name, Created By, Created On, Category, Description, Asset Type, Ext System, ExtObject, ExtIdentifier)
 - **Component** (Name, Space, Typename, CreatedBy, CreatedOn, Category, Description, ExtSystem, ExtObject, ExtIdentifier)
 - **Document** (all fields, submittals and similar documents, ApprovalBy = “Information Only”, Stage = “Requirement”)
 - **Attribute** (all fields, design-intent attributes, Category = “Requirement”)
- COBie Construction Data provided by the G-C Team including the following:



- The G-C Team is responsible for updating and adding additional data as it becomes available from the subcontractors, including:
 - **Contact, Facility, Floor, Space, Zone, Type, Component, System, Spare, Resource, and Job** (All fields)
 - **Document** (all fields, installed equipment documentation, ApprovalBy = “Owner Approval”, Stage = “As-Built”)
 - **Attribute** (all fields, manufacturer-provided attributes, Category = “As-Built”)
- Quality of the COBie data will be checked against the requirements provided by JWA and detailed herein. Options for response include:
 - If the requirements are not met, the G-C Team shall resubmit the data within two weeks after JWA provides a report of inaccurate or missing data
 - If the second submission does not satisfy JWA's requirements, the G-C Team shall resubmit the data within one week JWA provides a report on found errors
 - Failure of the second submission to satisfy JWA’s requirements may result in withholding of full payment until requirements are met
- The COBie compliant data will be verified and feedback provided by JWA at a minimum at the following construction stages:
 - 75% Substantial Completion
 - Commissioning Complete
 - Project Close-Out
- Facility Data specifics include the following:
 - Can be used for COBie compliance checking and data input
 - Will be used by JWA for linking all of the associated data in the 3D models to JWA’s Facility Management and Maintenance systems
 - Essential that the required fields and file naming conventions be followed

Construction Administration

At the completion of Construction Documents, the 100% CD design BIMs will be archived in Unifier and designated “Construction Documents”. This includes:

- Level of detail at the AIA standard minimum of LOD 500. This is expected to be an As-Built model that can be used not only by the Contractor but also by JWA for Operations and Maintenance.
- The CD BIMs and associated documentation will be made available to prospective G-C Teams and their subcontractors for bidding purposes. The A-E BIM Manager will provide the G-C Team with access to the BIM files. It will be the responsibility of the G-C Team to distribute models as they deem necessary to bidding subcontractors. It should be noted however, that access to the BIMs is provided for reference, clarification and design intent only and if used for estimating or any other purpose, is done so at the sole risk of the G-C Team and its subcontractors.



- BIM Execution Plan submitted by the G-C Team to JWA with their proposal/bid describing processes and procedures in place within their organization to coordinate and deliver the BIM's and associated data according to the standards contained herein. See Section 10.3 of the ATTACHMENTS Chapter for the BEP template to be used.
- While co-location of the A-E Team and the G-C Team during construction is desirable and highly encouraged, JWA recognizes that there are often space limitations which preclude this type of interactive engagement. It is imperative that all project team members remain pro-actively engaged and responsive for the duration of the construction phase. Collaboration procedures shall be detailed in the BEP.
- All design model updates from the A-E Team will continue to develop and update the design models throughout the entire construction process. For any design changes that have a direct and immediate effect on construction coordination, the A-E Team must update and re-upload their design models to the project BIM folder in Unifier within 3 work days if there is any other question that is answered by the A-E Team that requires a design change or a change order that affects coordination or that is driven by coordination (such as ceiling elevation changes or a change in the size of a shaft opening).
- The MEP Engineers will not be uploading changes to the MEPF models but will be updating their MEPF design models immediately following the subcontractor sign off of a given floor on a floor by floor basis. Model mash-ups can be used as a check to ensure that the design model mimics the fabrication models.
- The A-E Team will publish a monthly bulletin summarizing all questions, resolutions and model changes/updates, and all decisions for design or for value engineering that have been made and will post the bulletins to the server as a non-editable file along with the updated models.
- All of the above described bulletin items shall be recorded in the model with labeled bubbles around the affected area with reference to the bulletin item number.
- The Structural Designer will be updating the design model in parallel with the steel fabricator. In some cases, the Designer's structural model may be the only model used throughout.
- Model Mash Ups shall be performed for all MEPF trades in Navisworks. The mash-ups are overlays of the final as constructed fabrication models with the most up-to-date MEPF design models. This provides the A-E Team with a visual comparison of the two model types – design vs. fabrication -to assist them in making any required adjustments to their design model to match the "as built" condition. Model mash-ups will be created as each floor's coordination is complete and is signed off by all of the trade subcontractors.

7.3. Services During Construction

The design BIM will be provided by JWA as an assembled BIM in a format appropriate for collaboration, including with Autodesk Navisworks (or another similar software). The G-C BIM Manager and/or the G-C Team shall use the A-E BIM as a basis for creating a construction model to achieve the desired BIM uses are outlined in this area:



- Phase during construction is:
 - Defined after the design phase is completed
 - Before the project is handed over for construction
 - Implemented to improve constructability through the use of tools that will allow linking the BIM to a construction scheduling application, such as Primavera and/or Microsoft Project
- Virtual Mock-ups that allow the BIM to be used for the following:
 - To better understand how complex elements of the project can get built on the site
 - To replace the on-site mock-ups
 - Facilitate or expedite construction with tools linking BIM sequencing, take-offs, etc.
 - Enable the trial of alternate options before construction begins allowing the contractor to select the best one that fits the project needs
- Scheduling and sequencing requirements allowing the BIM to provide the following:
 - To analyze and perform construction sequencing to avoid conflicts once construction starts and therefore improve the constructability process
 - To be linked to the schedule by the G-C Team for the purpose of 4D scheduling
 - To be linked to the specific task in the schedule for the purpose of informing critical planning decisions and construction methods, site space utilization, resource allocation, activity sequencing, visualization and communication. Primary elements of the model listed below shall be linked to the schedule to achieve desired results.
 - Structural system-structural framing: foundations, grade beams, columns, load bearing walls, floor and roof decks and support
 - Exterior building envelope: stud wall, exterior panels and assemblies, curtain walls, openings, and glazing
 - Interior partitions: main interior walls, plumbing walls, and wall assemblies.
 - Mechanical systems: main ductwork and equipment, separated by floors.
 - Roof systems: roof assemblies, major equipment, and openings.
 - Site work: excavation work, footings, foundations, and slabs on grade.
 - Plumbing systems: main connection lines from site and main plumbing lines.
- Additional considerations made to specific construction activities, including:
 - Tasks where detailed construction planning is required
 - Virtual test installations and logistics planning
- 3D coordination to assist with the following:
 - Ongoing process of overall coordination, which should start at the early stages of the design phase and evolve and mature as the project progresses
 - To assist and to support the creation of the “as-built” model once construction is completed so a conflict-free model can be provided for the operations and maintenance of the building.
- BIM to provide Pre-fabrication extracted information of elements such as:
 - Pipes, ducts, structural members, etc.



- A list of intended objects that will be part of this effort shall be defined at the construction phase so they cannot be modeled using the characteristic defined within their construction specifications
- As-Built opportunities including:
 - As construction progresses, the BIM shall be updated if changes occur on site due to conflicts and/or changes in scope, this way at the completion of the project the BIM becomes the “as-built” and can be leveraged beyond construction
 - Leveraged using fields (or parameters) to manage and operate the building once construction is completed. These fields may vary from project to project and, therefore, should be defined within the BIM Execution Plan. Other items include:
 - In the case of Design-Bid-Build delivery; the A-E Team shall provide this incorporating all G-C Team “As built” information and conforming to JWA FMS requirements.
 - In the case of Design-Build delivery; the D-B shall provide this incorporating all “As-built” information into the BIM(s) and conforming to JWA FMS requirements.
 - The following COBie standard worksheets, submitted by the G-C/D-B:
 - Contact, Facility, Floor, Space, Zone, Type, Component, Spare, Resource, Job, Document, and Attribute

Code Validation Reports

If required, the A-E Team may be required to provide Code Validation Reports at each stage of development, showing compliance with specific codes (e.g. International Building Code, California Building Code, local code, Americans with Disabilities Act guidelines, Title 24, Orange County Public Works – OCPW, Orange County Planning Association – OCPA, Orange County Fire Authority – OCFA, Orange County Water District – OCWD and other project related codes).

7.4. Services Post Construction

The design BIM will be provided by JWA as an assembled BIM in a format appropriate for collaboration, including with Autodesk Navisworks (or another similar software). The G-C BIM Manager and/or the G-C Team shall use the A-E BIM as a basis for creating a construction model to achieve the desired BIM uses are outlined in this area:

- “As built” native format models of all disciplines
 - In the case of Design-Bid-Build delivery, the G-C Team shall provide this at the completion of construction activities to JWA and the A-E Team
 - In the case of Design-Build delivery, the D-B shall provide this at the completion of construction activities and before commencement of the “As- Built Record Set” BIM.



8. Project Deliverables

This section defines the file management, to folder management, from naming conventions to network location information.

8.1. Formatting

Electronic file formats are defined per file type. The following are separated by BIM files, and CAD files:

- BIM(s) submitted by all teams shall be in the native format (.RVT), IFC format, and/or other formats as requested by JWA. When dealing with the AV system, telecomm, and any other specialty disciplines (e.g. Baggage Handling), separate Revit files shall be required and shall reflect the overall BIM standards defined within this document.
- Each discipline shall include two models; GEOM containing only the geometry content, and ANNO containing only the annotation and sheet information. These are to remain coordinated and complete, while keeping a clear separation for JWA purposes.
- 2D DWG and PDF documents shall be produced from the BIM files. All files shall adhere to the JWA BIM Standards and the JWA CAD Standards.

Cross-referencing

Files in the folders that are defined in this standard should not cross-reference files in other standard folders. This includes Revit and AutoCAD Files, Revit Project Files, Revit Central Files, Revit and AutoCAD Details, and all links and x-refs within the JWA Network.

If graphic files are referenced or used within a Revit project, they should be copied to the folder containing the host model and files they are attached to. The same applies to components used from other sources, or worked on locally.

Creation of project-specific content is encouraged but shall be coordinated by each team BIM Manager, ensuring content is developed in accordance with this standard and the associated best practice standards, listed below:

- No content shall be stored on users own hard-drives, but shall be shared in a controlled manner within the project folder on the company network to provide access across the project team.
- Within the specific Discipline folder for each phase, please save all components created for the project within a “Components” Folder.



Validation

Sheets from the BIM shall be published to DWG, PDF (preferred) or other non-editable format, where they can be checked, approved, issued and archived as traditional documents.

Validation of the BIM data prior to sharing shall check that:

- All extraneous views shall be removed from the BIM
- Model file has been audited, purged and compressed
- File format and naming conventions conform to JWA standards
- Data segregation conforms to the agreed project BIM methodology
- Model files are up-to-date, containing all users local modifications
- Model files are detached from central file
- Any linked reference files have been removed and any other associated data required to load the model file is made available
- Model is correctly assembled through visual inspection
- Any changes since the last issue are communicated to the project team

8.2. Plot Process

Each drawing submitted is to be plotted at an appropriate scale for legibility and submitted with the electronic submittal. All plots submitted must have the design file name and/or border stamp represented physically.

Two complete sets of reproducible plots are to be included, one at full size and the second at half size. All plots are to have the design file name annotated on the lower right side. Note these plots are for use by the JWA CAD Division. The consultant shall also coordinate additional plot submittals with Project Management.

Paper Size

The JWA Template file includes all JWA approved format sheet size for project use. Teams shall coordinate with JWA on the specific sizes required prior to submission of documents.

Drawing File Log

Consultants are to document all reference files attachments on a Drawing File Log sheet. In addition, the same information should be recorded within each drawing file, located in each design file just outside the border. This is essential to facilitate the process of retrieving project drawings from storage. A drawing is not complete if the reference files do not appear with the original drawing file. Refer to the ATTACHMENTS Chapter for a sample of the Drawing File Log.



8.3. Export Settings

When a project is completed or to the point of being able to be exported, certain procedures must be taken to allow for the correct output and results. These settings and methods are available for all users and should be utilized as best as possible.

Overview

There are many ways to export items from a Revit file. See the chart below for most common options and to understand what would work best, depending on the scenario.

Export Type	Type Description	File Type
AutoCAD	Most common file type exchange for plans	DWG, ACIS
DWF	Common solution for 3D Viewing	DWF
PDF	Common solution for 2D Viewing	PDF
Images	Saved images of a projects viewpoint	JPEG
Walkthroughs	Recorded walkthrough by predetermined points	AVI
Solar Studies	Recorded video displaying the sun path over time	AVI
Reports (Schedule, Room/Area)	Creates Excel files for documentation or reference	XLSX
IFC	Creates a solid formed object for referencing	IFC
Family Types	Creates a new family outside the project	RFA

8.4. Archive Procedure

Any and all archiving of projects being done utilizing Unifier protocols specific to JWA. These procedures may be found within the ATTACHMENTS Chapter as a separate document updated on a regular basis to include JWA standards and any other requirements.



9. Attachments

There are many times throughout this document, references are made to other documentation, some from JWA themselves, and others that are not. This Chapter covers the four most commonly referred to documents relating to these BIM Standards. These items include:

- **AIA Standards:** E202 LOD Table
- **Industry Standards:** Omniclass Table 23 Naming Standards
- **JWA Standards:** BIM Execution Plan & Existing CAD Standards
- **JWA Template Files:** Revit Template & Shared Parameters

Since these are being referenced multiple times, JWA felt it would be best to supply the latest version of each of these within the last chapter of these standards. Please note although these references are available here, and JWA will do their best to keep them current to the originals, always verify with the original source document for any potential updates or changes that may have been made, as not all of these are from JWA and under JWA's control.

9.1. AIA Standards

AIA E202-2008 document available at <http://www.aia.org/>

9.2. Industry Standards

OmniClass 23 Industry Standards included in pages following.

9.3. JWA Standards

BIM Execution Plan Template included in pages following. JWA CAD Standards included in this contract section.

9.4. JWA Template Files

See References.

JWA Required Shared Parameters

When modeling a project for John Wayne Airport, there are specific requirements that must be met regarding the object information within the model. These requirements often include extra information to be included either by individual element, or group of elements, and these can only be applied by using parameters.

JWA has created these parameters ahead of time, and the file has been made available to all consultants and sub-consultants involved in the modeling process. These must be utilized when working with a BIM project. Download and save the file: **JWA_Shared-Parameters.txt** to a centralized location on your server. (Best Practices include placement within the same folder as the projects Central file).

Now within your Revit project file, Open **Project Parameters**, and add the following parameters listed. These are first grouped by **Parameter Group** as found within the Shared Parameters file, and then by **Parameter** itself. Add the parameter, and then use the following directions for each:

Asset Organization:

- **Instance Name:** Group: Text, Parameter Type: Instance, Categories: Check All
- **Instance Description:** Group: Text, Parameter Type: Instance, Categories: Check All
- **CSI Masterformat:** Group: Text, Parameter Type: Type, Categories: Check All
- **Omniclass Table 23:** Group: Text, Parameter Type: Type, Categories: Check All

COBie Organization:

- **CreatedBy:** Group: Text, Parameter Type: Instance, Categories: Check All
- **CreatedOn:** Group: Text, Parameter Type: Instance, Categories: Check All
- **AssetType:** Group: Text, Parameter Type: Type, Categories: Check All
- **Space:** Group: Text, Parameter Type: Instance, Categories: Check All
- **ExtSystem:** Group: Text, Parameter Type: Type, Categories: Check All
- **ExtObject:** Group: Text, Parameter Type: Instance, Categories: Check All
- **ExtIdentifierproperly:** Group: Text, Parameter Type: Type, Categories: Check All



Table 23 – Products

Table 23 - Products

Definition

Products are components or assemblies of components intended for permanent incorporation into construction entities.

Discussion

Products are the basic building blocks used for construction. A product may be a single manufactured item, a manufactured assembly consisting of many parts, or a manufactured operational stand-alone system.

This table provides a means to identify product classes without regard for their application. In comparison, Table 22 – Work Results provides multiple potential classifications for many products, depending upon the applications to which they may be put. For example, a panel of glass can be used in a window, as cabinet shelving, or in an interior sidelight to a door opening. All of those applications are different work results.

Examples

Concrete, Common Brick, Door, Metal Window, Electrical Junction Boxes, Pipe Culverts, Fire Tube Boiler, Curtain Walls, Textured Paints, Vinyl Coated Fabric Wall Covering, Demountable Partitions, Pre Engineered Structures

Table Uses

Classifying construction product classes by their appearance or unique functional information, and storing, analyzing, and retrieving product information.

Table Users

Product information providers, product manufacturers and their literature representing product information, product suppliers, product distributors, cost estimators, constructors, facility managers, software developers and vendors.

Reference Sources

- Construction Project Information Committee. *Uniclass: Unified Classification for the Construction Industry*, Table L, Products. RIBA Publications, 1997.
- Construction Specifications Institute (CSI), Construction Specifications Canada (CSC) MasterFormat: Master List of Numbers and Titles for the Construction Industry. Alexandria, VA: CSI, 2010.
- International Organization for Standardization (ISO). ISO 12006-2, *Table 4.13, Construction Products (by function)*. Geneva: ISO, 2001.
- General Services Administration equipment and asset management lists
- Department of Veterans Affairs medical equipment lists
- Department of State equipment and asset management lists
- Department of Homeland Security equipment and asset management lists
- Autodesk Seek <http://seek.autodesk.com/>
- McGraw Hill Construction Sweets Network <http://products.construction.com/>
- Reed Construction Data SmartBuilding Index <http://www.reedconstructiondata.com/smartbuildingindex/>

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Table 23		Products									
OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples	
23-11 00 00	Site Products								Products used on the project grounds and site.	Includes bricks, blocks, basic materials, concrete mixtures, landscaping and horticulture products, planting equipment, ground anchorages, ground improvement products, sheeting and revetments, retention structures. Also includes temporary site products.	
23-11 11 00		Ground Anchorages							Plates or augers imbedded in the soil that limit lateral building movement to prevent structure failure.		
23-11 11 11			Retaining Stabilizing Ground Anchors								
23-11 11 11 11				Retaining Stabilizing Ground Components							
23-11 11 11 11 11					Stabilizing Ground Anchor Heads						
23-11 11 11 11 13					Stabilizing Ground Tendons						
23-11 11 11 13				Stabilizing Ground Grouted Anchors							
23-11 11 11 15				Stabilizing Ground Plate Anchors							
23-11 11 11 17				Stabilizing Ground Rock Bolts							
23-11 11 11 19				Stabilizing Ground Rock Anchors							
23-11 11 11 21				Stabilizing Ground Anchor Tiebacks							
23-11 11 13			Earth Reinforcement Anchors								
23-11 11 13 11				Earth Reinforcement Soil Nails							
23-11 13 00		Ground Improvement Products							These products generally aim to increase the bearing capacity of the soil and to reduce or to speed up settlement.		
23-11 13 11			Soil Stabilization Products								
23-11 13 11 11				Soil Stabilization Injectable Chemicals							
23-11 13 11 13				Soil Stabilization Pressure Grouting							
23-11 13 11 15				Ground Freezing Soil Stabilization							
23-11 13 11 17				Soil Stabilization Fills							
23-11 13 11 17 11					Soil Stabilization Fill Blocks						
23-11 13 11 17 13					Soil Stabilization Compressible Fill						
23-11 13 11 19				Other Soil Stabilizations							
23-11 13 11 21				Piped Field Drainage							
23-11 13 11 21 11					Field Drainage Land Drainage Pipes						
23-11 13 11 23				Field Drainage Blocks							
23-11 13 11 25				Field Drainage Geocomposite Drains							
23-11 13 11 25 11					Field Drainage Geocomposite Edge Drains						
23-11 13 11 25 13					Field Drainage Geocomposite In Place Wall Drains						
23-11 13 11 27				Geotextile Subsurface Drainage Filtration							
23-11 15 00		Sheeting and Revetments							Preserves or protects an area against erosion and are used to hold up the face of an excavation.		
23-11 15 11			Sheeting Geosynthetics								
23-11 15 11 11				Sheeting Geotextiles							
23-11 15 11 13				Sheeting Geogrids							
23-11 15 11 15				Sheeting Geomembranes							
23-11 15 11 17				Sheeting Geocomposites							
23-11 15 11 19				Sheeting Mulch Control Netting							
23-11 15 11 21				Sheeting Synthetic Erosion Controls							
23-11 15 11 23				Sheeting Re vegetation Mats							
23-11 15 11 25				Sheeting Turf Reinforcement Mats							
23-11 15 13			Revetments								
23-11 15 13 11				Revetment Soil Blankets							
23-11 15 13 13				Pool Revetments							
23-11 15 13 15				Trench Revetments							
23-11 15 13 17				Revetment Rock Linings							
23-11 15 13 19				Revetment Ripraps							
23-11 17 00		Retention Structures							Structures built to control erosion or the advance of a mass of earth or water.		
23-11 17 11			Sheet Piles								
23-11 17 13			Retaining Walls								
23-11 17 13 11				Retaining Diaphragm Walls							
23-11 17 13 11 11					Retaining Slurry Wall Membranes						
23-11 17 13 13				Continuous Retaining Walls							
23-11 17 13 15				Retaining Crib Walls							
23-11 17 15			Gabions								
23-11 17 17			Fascines								
23-11 19 00		Slide and Avalanche Protection							Products which assist in the protection of the site from avalanches or landslides.		

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-11 19 11			Bolt Down Snow Fences							
23-11 19 13			Clamp on Equipment							
23-11 21 00		Pavements							Durable surfaces which usually include a public area or thoroughfare that will bear travel	
23-11 21 11			Porous Paving						Includes Grasscrete Sheets	Not a precast concrete block.
23-11 21 13			Roadways							
23-11 21 13 11				Portable Roadways						
23-11 21 13 13				Roadway Surfacing						
23-11 21 13 13 11					Roadway Antiskid Texturing					
23-11 21 13 15				Detectable Warning Surfaces for Roadways						
23-11 21 13 15 11					Crosswalks			Crosswalks		
23-11 21 13 15 13					Warning Tiles			Warning Tiles		
23-11 21 15			Runways							
23-11 21 15 11				Portable Runway						
23-11 21 15 13				Helicopter Landing Pads						
23-11 21 15 15				Runway Surfacing						
23-11 21 15 15 11					Runway Antiskid Texturing					
23-11 21 17			Paving Blocks							
23-11 21 17 11				Unit Pavers						
23-11 21 17 11 11					Asphalt Block Pavers					
23-11 21 17 11 13					Brick Pavers					
23-11 21 17 11 15					Interlocking Precast Concrete Pavers					
23-11 21 17 11 17					Precast Concrete Pavers					
23-11 21 17 11 19					Pressed Pavers					
23-11 21 17 11 21					Stone Pavers					
23-11 21 19			Pavement Slabs							
23-11 21 21			Pavement Drainage							
23-11 21 21 11				Culverts						
23-11 21 21 11 11					Pipe Culverts					
23-11 21 21 11 11 11						Metal Pipe Arch Culverts				
23-11 21 21 11 13					Concrete Culverts					
23-11 21 21 11 13 11						Concrete Arch Buried Bridge Culverts				
23-11 21 21 11 13 13						Concrete Arch Culverts				
23-11 21 21 11 13 15						Concrete Box Culverts				
23-11 21 21 11 13 17						Concrete Rigid Frame Culverts				
23-11 21 21 13				Catch Basins						
23-11 21 21 15				Channels						
23-11 21 21 17				Cleanouts						
23-11 23 00		Parking Controls							Products which control the flow and access of traffic within a given parking area.	
23-11 23 11			Parking Meters							
23-11 23 13			Parking Ticket Dispensers							
23-11 23 15			Parking Coin Machine Units							
23-11 23 17			Parking Key and Card Control Units							
23-11 23 19			Parking Gates							
23-11 23 21			Parking Dividers							
23-11 23 23			Parking Signs							
23-11 23 23 11				Handicap Parking Signs						
23-11 23 23 13				Parking Time Zone Signs						
23-11 23 23 15				Parking Tow Away Signs						
23-11 25 00		Site Barrier Products							Products which divide and or protect a given site.	
23-11 25 11			Perimeter Entry Devices					Access Control Device		
23-11 25 11 11				Anti Ram Wedge Barriers				Delta Barrier		
23-11 25 13			Perimeter Walls							
23-11 25 13 11				Precast Perimeter Concrete Panel Perimeter Walls						
23-11 25 13 13				Precast Perimeter Post Perimeter Walls						
23-11 25 15			Perimeter Gates							
23-11 25 15 11				Drop Arm Gates						
23-11 25 15 11 11					Anti Ram Drop Arm Gates					
23-11 25 15 13				Rolling Gates						
23-11 25 15 15				Sliding Gates				Horizontally rolling gate		
23-11 25 15 15 11					Anti Ram Sliding Gates			Horizontally rolling gate		
23-11 25 15 15 13					Anti Climb Sliding Gates			Horizontally rolling gate		

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-11 25 15 17				Swinging Gates						
23-11 25 15 19				Folding Gates						
23-11 25 17			Gate Hardware							
23-11 25 19			Fences							
23-11 25 19 11				Barbed Wire Fences						
23-11 25 19 13				Concertina Wire Fences						
23-11 25 19 15				Composite Fences						
23-11 25 19 17				Ornamental Metal Fences						
23-11 25 19 19				Chain Link Metal Fences						
23-11 25 19 21				Panel Fences						
23-11 25 19 23				Plastic Fences						
23-11 25 19 25				Post Fences						
23-11 25 19 27				Rail Fences						
23-11 25 19 29				Razor Wire Fences						
23-11 25 19 31				Wood Fences						
23-11 25 19 33				Fencing Fabrics						
23-11 25 19 35				Fencing Accessories						
23-11 25 19 35 11					Barbed Wire					
23-11 25 19 35 13					Concertina Wire					
23-11 25 19 35 15					Fence Posts					
23-11 27 00		Landscaping							horticulture - The science or art of cultivating fruits, vegetables, flowers, or ornamental plants, caring for gardens etc. Landscaping refers to any activity that modifies the visible features of an area of land, including but not limited to: # living e	When a site is prepared, the land is modified thus referring to landscaping. Horticulture is broader but doesn't seem fulfill the role of what happens when we are talking about site preparations.
23-11 27 11			Plant Maintenance and Preparation Products							
23-11 27 11 11				Topsoil						
23-11 27 11 11 11					Loam					
23-11 27 11 11 13					Peat Soil					
23-11 27 11 13				Soil Fertilizers						
23-11 27 11 15				Soil Herbicides						
23-11 27 11 15 11					Combined Soil Fertilizer and Herbicides					
23-11 27 11 17				Mulch						
23-11 27 11 19				Soil Mats						
23-11 27 11 21				Plant Netting						
23-11 27 11 23				Landscaping Stakes						
23-11 27 11 25				Landscaping Blankets						
23-11 27 11 27				Landscaping Ground Covers						
23-11 27 11 29				Landscaping Forms						Sand.
23-11 27 11 31				Landscaping Stabilizers						Sand.
23-11 27 11 33				Lime						
23-11 27 11 35				Mowing Equipment						
23-11 27 11 35 11					Lawnmowers					
23-11 27 11 35 13					Garden Tractors					
23-11 27 11 37				Pruning Equipment						
23-11 27 11 39				Watering Equipment						
23-11 27 13			Planting Accessories							
23-11 27 13 11				Landscaping Edging						
23-11 27 13 13				Landscape Timbers						
23-11 27 13 15				Landscape Stone						
23-11 27 13 15 11					Boulders					
23-11 27 13 17				Planters						
23-11 27 13 19				Tree Grates						
23-11 27 13 21				Tree Grids						
23-11 27 13 23				Tree Guards						
23-11 27 13 25				Plant Tubs						
23-11 27 15			Irrigation Equipment							
23-11 27 15 11				Irrigation Sprinklers						
23-11 27 15 11 11					Installed Sprinkler Heads					
23-11 27 15 11 13					Portable Lawn Sprinklers					
23-11 27 15 13				Irrigation Hoses						
23-11 27 15 13 11					Irrigation Weep Hoses					
23-11 27 17			Lawns and Grasses							
23-11 27 17 11				Hydro Mulch						
23-11 27 17 13				Grass Plugs						
23-11 27 17 15				Grass Seeds and Soil Supplements						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-11 27 17 17				Sod						
23-11 27 19			Plants							
23-11 27 19 11				Shrubs						
23-11 27 19 13				Trees						
23-11 27 19 15				Plants						
23-11 27 19 17				Plant Bulbs						
23-11 27 19 19				Floral Plant						
23-11 27 19 21				Non Flowering Plant						
23-11 27 21			Pond Equipment							
23-11 27 21 11				Pond Liners						
23-11 27 21 13				Pond Filters						
23-11 29 00		Site Furnishings							(Includes: Street Furniture) Permanently installed furnishings to the construction site.	
23-11 29 11			Bicycle Racks and Shelters							
23-11 29 11 11				Bicycle Racks						
23-11 29 11 13				Bicycle Shelters						
23-11 29 11 15				Bicycle Lockers						
23-11 29 13			Exterior Seating							12 93 43 precast concrete picnic tables (like the one's at McDonalds outside), yes they are permanent & outdoors. Also, recycled plastic products i.e.: permanent benches for outdoors.
23-11 29 13 11				Exterior Benches					Exterior benches are outdoor commercial grade benches that are usually permanently installed such as park benches, monument benches, etc. For Example concrete bench.	
23-11 29 13 13				Exterior Chairs					Exterior chairs are outdoor commercial grade chairs that are usually permanently installed such as park seating, monument seating, etc. For example: Concrete chair.	
23-11 29 15			Exterior Tables						Exterior tables are outdoor commercial grade tables that are usually permanently installed such as park tables, monument tables, etc. For Example concrete table.	
23-11 29 17			Patio Furniture						Patio furniture is residential grade exterior furniture that is typically not permanently installed.	
23-11 29 17 11				Patio Seating						
23-11 29 17 11 11					Patio Chairs					
23-11 29 17 11 13					Patio Benches					
23-11 29 17 11 15					Patio Chaise Lounges					
23-11 29 17 11 17					Patio Sofas					
23-11 29 17 13				Patio Tables						
23-11 29 17 13 11					Patio Dining Tables					
23-11 29 17 13 13					Patio Sofa Tables					
23-11 29 19			Exterior Trash Receptacles							
23-11 29 19 11				Exterior Wood Trash Receptacles						
23-11 29 19 13				Exterior Concrete Trash Receptacles						
23-11 29 19 15				Exterior Metal Trash Receptacles						
23-11 29 21			Exterior Specialties							
23-11 29 21 11				Sundials						
23-11 29 21 13				Garden Ornaments						
23-11 29 21 15				Bird Houses						
23-11 29 21 17				Bird Feeders						
23-11 29 21 19				Bird Baths						
23-11 29 23			Exterior Storage Structures							
23-11 29 23 11				Storage Sheds						
23-11 29 23 13				Barns						
23-11 29 25			Flagpoles							
23-11 29 25 11				Automatic Flagpoles						
23-11 29 25 13				Ground Set Flagpoles						
23-11 29 25 15				Nautical Flagpoles						
23-11 29 25 17				Wall Mounted Flagpoles						
23-11 29 27			Exterior Fountains							
23-11 29 27 11				Exterior Ornamental Fountains					(See: Interior Ornamental Fountains #2590)	
23-11 29 29			Memorials and Statuary							
23-11 29 31			Monuments							
23-11 29 33			Exterior Directional Signs						See: Manufactured Exterior Specialties	
23-11 29 33 11				Finger Post Signs						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-11 29 33 13				Street Nameplates						
23-11 29 33 15				Illuminated Directional Signs						
23-11 29 33 17				Directional Sign Markers						
23-11 29 35			Bollards						See Facility and Occupant Protection Products	
23-11 29 35 11				Active Anti Ram Bollards					Pneumatic or Hydraulic	
23-11 29 35 13				Passive Anti Ram Bollards					Embedded in concrete	
23-11 29 35 15				Architectural Bollards						
23-11 29 37			Public Lighting Columns							
23-11 31 00		Athletic and Recreational Surfaces							Exterior surfacing which can be used for athletic or recreational activities.	
23-11 31 11			Sports Field Surfacing							
23-11 31 13			Playground Surfaces							
23-13 00 00	Structural and Exterior Enclosure Products								Products used to provide the facility's structure or to enclose the facility or provide protection from the elements.	Includes exterior finishes, foundations, structural concrete products, envelop enclosure products, structural framing products, roofing products, and thermal and moisture protection.
23-13 11 00		Loose Granular Fills, Aggregates, Chips, and Fibers							Products used to level or fill an area of the site.	
23-13 11 11			Powder Fillers							
23-13 11 11 11				Mineral Powder Fillers						
23-13 11 11 13				Metal Powder Fillers						
23-13 11 11 15				Synthetic Powder Fillers						
23-13 11 11 17				Residue Powder Fillers						
23-13 11 13			Aggregates							
23-13 11 13 11				Dense Fills and Aggregates						
23-13 11 13 13				Lightweight Fills and Aggregates						
23-13 11 13 15				Heavyweight Fills and Aggregates						
23-13 11 15			Fibers and Shavings							
23-13 11 15 11				Mineral Fibers and Shavings						
23-13 11 15 13				Vegetable Fibers and Shavings						
23-13 11 15 15				Synthetic Fibers and Shavings						
23-13 11 15 17				Other Fibers and Shavings						
23-13 13 00		Binding Agents and Admixtures							Specially formulated products which modify the properties of either paint or concrete to give it certain characteristics not obtainable with plain mixes.	
23-13 13 11			Binding Agents						Portion of paint that solidifies as it dries and is able to bind the pigment.	
23-13 13 11 11				Cement						
23-13 13 11 11 11					Standard Cement					
23-13 13 11 11 13					Specialized Cement					
23-13 13 11 11 13 11						High Sulfate Resistant Cement				
23-13 13 11 11 13 13						Low Alkali Cement				
23-13 13 11 11 13 15						Low Heat Cement				
23-13 13 11 11 13 17						Alumina Cement				
23-13 13 11 13				Lime						
23-13 13 11 13 11					Hydraulic Lime					
23-13 13 11 13 13					Air Hardening Lime					
23-13 13 11 15				Bitumen Asphalt						
23-13 13 11 17				Resinous Binders						
23-13 13 11 19				Gypsum						
23-13 13 13			Cement Admixtures						Admixtures are specially formulated products that are added to concrete, mortar or grout during the mixing process in order to modify the concrete properties in the plastic and / or hardened state.	
23-13 13 13 11				Cement Plasticizing Agents						
23-13 13 13 13				Cement Water Retaining Agents						
23-13 13 13 15				Cement Air Entraining Agents						
23-13 13 13 17				Cement Gas Generating Agents						
23-13 13 13 19				Cement Setting Retarders						
23-13 13 13 21				Cement Setting Accelerators						
23-13 13 13 23				Cement Frostproofing Agents						
23-13 13 13 25				Cement Waterproofing Agents						
23-13 13 13 27				Cement Coloring Agents						
23-13 13 13 29				Cement Admixtures for Injections						
23-13 13 13 31				Cement Admixtures for Projections						
23-13 13 13 33				Cement Adherence Proofing Agents						
23-13 13 13 35				Cement Bonding Agents						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-13 13 13 37				Cement Replacements						
23-13 13 13 39				Other Cement Admixtures						
23-13 13 15			Gypsum Admixtures							
23-13 15 00		Mixtures							The assembled, blended, commingled ingredients of mortar, concrete or the like.	
23-13 15 11			Concretes							
23-13 15 11 11				Cementitious Concretes						
23-13 15 11 13				Resinous Concretes						
23-13 15 11 15				Hydrocarbon Concretes						
23-13 15 11 17				Low Density Concretes						
23-13 15 13			Mortars							
23-13 15 13 11				Portland Cement Lime Mortars				Abbreviation: PCL		
23-13 15 13 13				Masonry Cement Mortars						
23-13 15 13 15				Mortar Cements						
23-13 15 13 17				Gypsum Based Mortars						
23-13 15 13 19				Resinous Mortar						
23-13 15 13 21				Chemical Resistant Mortar						
23-13 15 13 23				Refractory Mortar						
23-13 15 13 25				Premixed Mortar						
23-13 15 13 27				Surface Bonding Mortar						
23-13 15 13 29				Mortar Pigments						
23-13 15 15			Grouts							
23-13 15 15 11				Concrete Grouts						
23-13 15 15 11 11					Shrink Resistant Concrete Grouts					
23-13 15 15 11 13					Catalyzed Metallic Concrete Grouts					
23-13 15 15 11 15					Epoxy Concrete Grouts					
23-13 15 15 11 17					Nonmetallic Concrete Grouts					
23-13 15 15 13				Masonry Grouts						
23-13 15 15 13 11					Chemical Resistant Masonry Grouts					
23-13 17 00		Profiles							Products or materials involved with supporting the structural and exterior enclosure.	
23-13 17 11			Rigid Profiles							
23-13 17 11 11				Ferrous Metal Rigid Profiles						
23-13 17 11 13				Non Ferrous Metal Rigid Profiles						
23-13 17 11 15				Wood Rigid Profiles						
23-13 17 11 15 11					Lumber Rigid Profiles					
23-13 17 11 15 11 11						Hardwood Rigid Profiles				
23-13 17 11 15 11 13						Softwood Rigid Profiles				
23-13 17 11 15 11 15						Laminated Rigid Profiles				
23-13 17 11 15 13					Non Structural Heavy Timber Rigid Profiles					
23-13 17 11 17				Plastic Rigid Profiles						
23-13 17 11 19				Composite Rigid Profiles						
23-13 17 13			Flexible Profiles							
23-13 17 13 11				Plastic Flexible Profiles						
23-13 17 13 13				Rubber Flexible Profiles						
23-13 17 13 13 11					Natural Rubber Flexible Profiles					
23-13 17 13 13 13					Butyl Flexible Profiles					
23-13 17 13 13 15					Neoprene Flexible Profiles					
23-13 17 13 13 17					Silicone Flexible Profiles					
23-13 17 13 13 19					Polysulfide Flexible Profiles					
23-13 17 15			Precast Profiles							
23-13 17 15 11				Precast Hollow Core Sheets					Prefabricated concrete slabs used to support the structure, can be used in parking garages or apartment buildings.	
23-13 17 15 13				Precast Tees					Slab with a single leg in the middle of it.	
23-13 17 15 15				Precast Double Tees					Two legs beneath a slab to span a long distance.	
23-13 17 17			Lath							
23-13 17 17 11				Gypsum Lath					See: Fixed partitions.	
23-13 17 17 13				Lead Lined Lath						
23-13 17 17 15				Metal Lath						
23-13 17 17 17				Veneer Plaster Base Lath						
23-13 17 17 19				Wood Lath						
23-13 19 00		Sheets, Boards, and Slabs							Products or materials involved with supporting the structural and exterior enclosure.	
23-13 19 11			Thin Flexible Sheets						(Includes: Textiles, Mesh)	
23-13 19 11 11				Thin Sheets						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-13 19 11 11 11					Thin Metal Sheets					
23-13 19 11 11 13					Thin Wood Sheets				(Includes: Veneers)	
23-13 19 11 11 15					Building Papers					
23-13 19 11 11 17					Thin Plastic Sheets					
23-13 19 11 11 19					Thin Rubber Sheets					
23-13 19 11 13				Textiles						
23-13 19 11 15				Mesh for General Use						
23-13 19 13			Rigid Sheets, Slabs, Plates							
23-13 19 13 11				Solid Sheets						
23-13 19 13 11 11					Solid Stone Sheets					
23-13 19 13 11 13					Solid Cementitious Sheets					
23-13 19 13 11 15					Solid Mineral Sheets				(Excludes: Cementitious Sheets)	
23-13 19 13 11 17					Solid Glass Sheets					
23-13 19 13 11 19					Solid Metal Sheets					
23-13 19 13 11 21					Solid Wood Based Sheets					
23-13 19 13 11 23					Solid Plastic Sheets					
23-13 19 13 11 25					Solid Resin Sheets					
23-13 19 13 11 27					Solid Fiberglass Sheets					
23-13 19 13 13				Hollow Core Sheets						
23-13 19 13 13 11					Wood Based Hollow Core Sheets					
23-13 19 13 13 13					Mineral Hollow Core Sheets				(Excludes: Cementitious Hollow Core Sheets)	
23-13 19 13 13 15					Metal Hollow Core Sheets					
23-13 19 13 13 17					Plastic Hollow Core Sheets					
23-13 19 15			Gratings							
23-13 19 17			Blankets, Quilts							
23-13 21 00		Blocks and Bricks							Any block or brick units involved with supporting the structural and exterior enclosure. See: Simulated Stone	
23-13 21 11			Concrete Masonry Units							
23-13 21 11 11				Concrete Blocks						
23-13 21 11 13				Exposed Aggregate Concrete Masonry Units						
23-13 21 11 15				Fluted Concrete Masonry Units						
23-13 21 11 17				Interlocking Concrete Masonry Units						
23-13 21 11 19				Molded Face Concrete Masonry Units						
23-13 21 11 21				Prefaced Concrete Masonry Units						
23-13 21 11 23				Preinsulated Concrete Masonry Units						
23-13 21 11 25				Sound Absorbing Concrete Masonry Units						
23-13 21 11 27				Split Face Concrete Masonry Units						
23-13 21 13			Calcium Silicate Masonry Units							
23-13 21 15			Glass Masonry Units							
23-13 21 17			Adobe Masonry Units							
23-13 21 19			Clay Masonry Units							
23-13 21 19 11				Common Bricks						
23-13 21 19 13				Face Bricks						
23-13 21 19 15				Fire Bricks						
23-13 21 19 17				Glazed Bricks						
23-13 21 19 19				Ceramic Glazed Clay Masonry Units						
23-13 21 19 21				Clay Tile						
23-13 21 19 23				Structural Clay Tiles						
23-13 21 19 25				Clay Flue Linings						
23-13 21 19 27				Terra Cotta Units						
23-13 21 21			Masonry Anchorage and Reinforcement							
23-13 21 21 11				Masonry Reinforcing						
23-13 21 21 11 11					Continuous Joint Reinforcing					
23-13 21 21 11 13					Reinforcing Bars					
23-13 21 21 13				Masonry Ties						
23-13 21 21 13 11					Flexible Masonry Ties					
23-13 21 21 13 13					Masonry Veneer Ties					
23-13 21 21 13 15					Rigid Masonry Ties					
23-13 21 21 15				Masonry Anchors						
23-13 21 21 15 11					Masonry Veneer Anchors					
23-13 21 21 15 13					Stone Masonry Anchors					
23-13 21 23			Special Profiles for Masonry							
23-13 21 23 11				Special Masonry Shapes						
23-13 21 23 13				Masonry Sills and Thresholds						
23-13 21 23 15				Masonry Moldings						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-13 21 23 17				Masonry Copings						
23-13 21 23 19				Masonry Quoins						
23-13 21 23 21				Masonry Cornices						
23-13 21 25			Structural Support for Masonry							
23-13 21 25 11				Lintels						
23-13 21 25 11 11					Lintel Former Units					
23-13 21 25 13				Wall Connectors and Starters						
23-13 21 25 15				Supports for Masonry						
23-13 21 25 15 11					Masonry Angles					
23-13 21 25 15 11 11						Masonry Shelf Angles				
23-13 21 25 15 13					Gussets					
23-13 21 27			Ancillary Products for Masonry							
23-13 21 27 11				Embedded Flashing						
23-13 21 27 13				Cavity Closers						
23-13 21 27 15				Cavity Weep and Ventilation Units						
23-13 21 27 15 11					Cavity Weeps					
23-13 21 27 15 13					Cavity Vents					
23-13 21 27 15 15					Cavity Drainage Material					
23-13 21 27 17				Masonry Joint Materials						
23-13 21 27 17 11					Masonry Control Joints					
23-13 21 27 17 13					Masonry Expansion Joints					
23-13 21 27 19				Airbricks						
23-13 23 00		Mechanical Fasteners, Adhesives, and Sealants							Any mechanical fasteners, adhesives and sealants involved with the structural and exterior enclosure.	
23-13 23 11			Mechanical Fasteners							
23-13 23 11 11				Cast In Anchorages						
23-13 23 11 11 11					Rail Anchors					
23-13 23 11 11 13					Screw Cases					
23-13 23 11 11 15					Anchor Blocks					
23-13 23 11 11 17					Cast In Anchorages Inserts					
23-13 23 11 11 17 11						Cast In Anchorages Inserts Adjustable Wedges				
23-13 23 11 11 17 13						Cast In Anchorages Inserts Adjustable Boxes				
23-13 23 11 11 17 15						Threaded Cast In Anchorages Inserts				
23-13 23 11 11 19					Dovetail Slots					
23-13 23 11 13				Multi Purpose Mechanical Fasteners						
23-13 23 11 13 11					Plugs					
23-13 23 11 13 13					Staples					
23-13 23 11 13 15					Nails					
23-13 23 11 13 17					Rivets					
23-13 23 11 13 19					Screws					
23-13 23 11 13 21					Bolts and Nuts					
23-13 23 11 13 23					Threaded Rods and Nuts					
23-13 23 11 13 25					Bandings					
23-13 23 11 15				Structural Mechanical Fasteners in Hardened Concrete and Masonry						
23-13 23 11 15 11					Expansion Anchors					
23-13 23 11 15 13					Undercut Anchors					
23-13 23 11 15 15					Bonded Anchors					
23-13 23 11 17				Mechanical Fasteners for Metal Structures						
23-13 23 11 19				Mechanical Fasteners for Wood Structures						
23-13 23 11 19 11					Nail Plates					
23-13 23 11 19 13					Wood Connectors					
23-13 23 11 19 15					Framing Anchors					
23-13 23 11 21				Mechanical Fasteners for Glass Structures						
23-13 23 13			Welded Joint Products							
23-13 23 13 11				Soldering Products						
23-13 23 13 13				Brazing Products						
23-13 23 13 15				Welding Products						
23-13 23 15			Adhesives							
23-13 23 15 11				Natural Adhesives and Glues						
23-13 23 15 13				Synthetic Adhesives						
23-13 23 15 15				Sound Proofing Adhesive						
23-13 23 17			General Purpose Tape							
23-13 23 19			Joint Fillers, Sealants, and Mastics							
23-13 23 19 11				Joint Fillers						
23-13 23 19 11 11					Backer Rods					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-13 23 19 13				Putties						
23-13 23 19 15				Construction Sealants						
23-13 23 19 15 11					Elastomeric Construction Sealants					
23-13 23 19 15 13					Rigid Construction Sealants					
23-13 23 19 15 15					Sanitary Construction Sealants					
23-13 23 19 15 17					Chemical Resistant Construction Sealants					
23-13 23 19 15 19					Water Immersed Construction Sealants					
23-13 23 19 17				Preformed Joint Seals						
23-13 23 19 17 11					Compression Seals					
23-13 23 19 17 13					Joint Gaskets					
23-13 23 21			Ropes, Wires, and Cables							
23-13 23 21 11				Ropes						
23-13 23 21 13				Wires						
23-13 23 21 15				Cables						
23-13 25 00		Thermal and Moisture Protective Products							Products which include materials used to seal the outside of the building against moisture, thermal, and air penetration.	
23-13 25 11			Fireproofing							
23-13 25 11 11				Board Fireproofing						
23-13 25 11 11 11					Calcium Silicate Board Fireproofing					
23-13 25 11 11 13					Slag Fiberboard Fireproofing					
23-13 25 11 13				Blanket Fireproofing						
23-13 25 11 13 11					Blanket Fireproofing Smoke Containment Barriers					
23-13 25 11 15				Fireproofing Coatings						
23-13 25 11 15 11					Cement Aggregate Fireproofing					
23-13 25 11 15 13					Cementitious Fireproofing					
23-13 25 11 15 15					Foamed Magnesium Oxychloride Fireproofing					
23-13 25 11 15 17					Intumescent Mastic Fireproofing					
23-13 25 11 15 19					Magnesium Cement Fireproofing					
23-13 25 11 15 21					Mineral Fiber Cementitious Fireproofing					
23-13 25 11 15 23					Miner Fiber Fireproofing					
23-13 25 13			Firestopping							
23-13 25 13 11				Penetrations Firestopping						
23-13 25 13 11 11					Annular Space Protection Firestopping					
23-13 25 13 11 13					Fire Resistant Joint Sealants					
23-13 25 13 11 15					Firestopping Foams					
23-13 25 13 11 15 11						Intumescent Firestopping Foams				
23-13 25 13 11 15 13						Silicone Firestopping Foams				
23-13 25 13 11 17					Firestopping Mortars					
23-13 25 13 11 19					Firestopping Pillows					
23-13 25 13 11 21					Firestopping Thermal Barriers for Plastics					
23-13 25 13 13				Fire Safing						(Includes: Perimeter Fire Containment)
23-13 25 13 13 11					Fire Safing Fibrous Blankets					
23-13 25 13 13 13					Fire Safing Sealants					
23-13 25 13 13 15					Fire Safing Clip Anchors					
23-13 25 15			Dampproofings							
23-13 25 15 11				Dampproofing Membranes						
23-13 25 15 13				Dampproofing Coatings						
23-13 25 15 13 11					Bituminous Dampproofing Coatings					
23-13 25 15 13 13					Cementitious Dampproofing Coatings					
23-13 25 17			Waterproofing							
23-13 25 17 11				Built Up Bituminous Waterproofing						
23-13 25 17 13				Sheet Waterproofing						
23-13 25 17 13 11					Bituminous Sheet Waterproofing					
23-13 25 17 13 13					Elastomeric Sheet Waterproofing					
23-13 25 17 13 15					Modified Bituminous Sheet Waterproofing					
23-13 25 17 13 17					Thermoplastic Sheet Waterproofing					
23-13 25 17 15				Fluid Applied Waterproofing						
23-13 25 17 15 11					Hot Applied Rubberized Asphalt					
23-13 25 17 17				Sheet Metal Waterproofing						
23-13 25 17 19				Cementitious and Reactive Waterproofing						
23-13 25 17 19 11					Acrylic Modified Cement Waterproofing					
23-13 25 17 19 13					Crystalline Waterproofing					
23-13 25 17 19 15					Metal Oxide Waterproofing					
23-13 25 17 21				Bentonite Waterproofing						
23-13 25 17 21 11					Bentonite Panel Waterproofing					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-13 25 17 21 13					Bentonite Sheet Waterproofing					
23-13 25 17 23				Waterproof Traffic Coatings						
23-13 25 17 23 11					Pedestrian Waterproof Traffic Coatings					
23-13 25 17 23 13					Vehicular Waterproof Traffic Coatings					
23-13 25 19			Thermal Insulation							
23-13 25 19 11				Slab and Board Thermal Insulation						
23-13 25 19 11 11					Polystyrene Slab and Board Thermal Insulation					
23-13 25 19 11 11 11						Expanded Polystyrene Slab and Board Thermal Insulation				
23-13 25 19 11 11 13						Extruded Polystyrene Slab and Board Thermal Insulation				
23-13 25 19 11 13					Urethane Slab and Board Thermal Insulation					
23-13 25 19 11 15					Perlite Slab and Board Thermal Insulation					
23-13 25 19 11 17					Fiberglass Slab and Board Thermal Insulation					
23-13 25 19 13				Blanket Thermal Insulation					(Includes: Batts, Quilts)	
23-13 25 19 13 11					Fiberglass Blanket Thermal Insulation					
23-13 25 19 13 13					Rock Wool Blanket Thermal Insulation					
23-13 25 19 15				Thermal Insulation Coatings						
23-13 25 19 15 11					Sprayed Thermal Insulation Coatings					
23-13 25 19 15 11 11						Sprayed Cellulose Thermal Insulation Coatings				
23-13 25 19 17				Loose Fill Thermal Insulation						
23-13 25 19 17 11					Granular Fill Thermal Insulation					
23-13 25 21			Sound Isolation Insulation							
23-13 25 21 11				Slab and Board Sound Isolation Insulation						
23-13 25 21 13					Fiberglass Slab and Board Sound Isolation Insulation					
23-13 25 21 15				Blanket Sound Isolation Insulation					(Includes: Batts, Quilts)	
23-13 25 21 15 11					Fiberglass Blanket Sound Isolation Insulation					
23-13 25 21 15 13					Rock Wool Blanket Sound Isolation Insulation					
23-13 25 21 17				Sound Isolation Coatings						
23-13 25 21 19				Sound Isolation Loose Fills						
23-13 25 21 19 11					Granular Sound Isolation Loose Fills					
23-13 25 23			Damage Prevention Products						(Note: By special preventative function)	
23-13 25 23 11				Products for Prevention of Biological Damage						
23-13 25 23 11 11					Coatings for Prevention of Biological Damage					
23-13 25 23 13				Products for Prevention of Chemical Damage						
23-13 25 23 13 11					Tiles and Slabs for Prevention of Chemical Damage					
23-13 25 23 13 13					Sheets for Prevention of Chemical Damage					
23-13 25 23 13 15					Coatings for Prevention of Chemical Damage					
23-13 25 23 15				Products for Prevention of Abrasive Wear						
23-13 25 25			Air Barriers							
23-13 25 27			Vapor Barriers							
23-13 27 00		Maintenance Products and Chemicals for Construction							Maintenance products and chemicals used in the structural and exterior enclosure.	
23-13 27 11			Cleaning and Maintenance Products							
23-13 27 11 11				Cleaning Products						
23-13 27 11 13				Maintenance Products						
23-13 27 11 15				Combined Cleaning and Protection Products						
23-13 27 13			Repair Products							
23-13 27 13 11				Repair Mortars						
23-13 27 13 13				Concrete Restoration and Cleaning Products						
23-13 27 13 13 11					Concrete Cleaning Products					
23-13 27 13 13 13					Concrete Resurfacing Products					
23-13 27 13 13 15					Concrete Rehabilitation Products					
23-13 27 13 15				Masonry Restoration and Cleaning Products						
23-13 27 13 15 11					Unit Masonry Restoration Products					
23-13 27 13 15 13					Stone Restoration products					
23-13 27 13 15 15					Unit Masonry Cleaning Products					
23-13 27 13 15 17					Stone Cleaning products					
23-13 27 13 17				Metal Restoration and Cleaning Products						
23-13 27 13 19				Wood and Plastic Restoration and Cleaning Products						
23-13 27 13 19 11					Wood Restoration and Cleaning Products					
23-13 27 13 19 13					Plastic Restoration and Cleaning Products					
23-13 27 15			Chemicals for Construction							
23-13 27 15 11				Solvents						
23-13 27 15 13				Acids						
23-13 27 15 15				Alkalis						
23-13 27 15 17				Salts						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-13 29 00		Foundations							The entire masonry substructure below the first floor or frame of a building, including the footing upon which the building rests; the soil or rock upon which a building or other structures rests.	
23-13 29 11			Foundation Piles							
23-13 29 11 11				Foundation Pile Components						
23-13 29 11 11 11					Pile Casings (Linings)					
23-13 29 11 11 13					Cores and Mandrels					
23-13 29 11 11 15					Pile Extension Pieces					
23-13 29 11 11 17					Pile Shoes					
23-13 29 11 11 19					Pile Splices					
23-13 29 11 11 21					Pile Caps					
23-13 29 11 13				Driven Piles						
23-13 29 11 13 11					Composite Driven Piles					
23-13 29 11 13 13					Concrete Filled Steel Driven Piles					
23-13 29 11 13 15					Precast Concrete Driven Piles					
23-13 29 11 13 17					Rolled Steel Section Driven Piles					
23-13 29 11 13 19					Unfilled Tubular Steel Driven Piles					
23-13 29 11 13 21					Wood Driven Piles					
23-13 29 11 13 23					Sheet Driven Piles					
23-13 29 11 15				Screw Piles						
23-13 29 13			Caissons, Foundation Casings							
23-13 29 13 11				Well Foundation Casings						
23-13 29 13 13				Caissons						
23-13 29 15			Shallow Foundations							
23-13 29 15 11				Column Bases						
23-13 29 15 13				Grade Beams						
23-13 29 15 15				Strip Foundation Blocks						
23-13 29 17			Special Foundations							
23-13 29 17 11				Controlled Modulus Columns						
23-13 29 17 13				Other Special Foundations						
23-13 31 00		Structural Concrete Products							A special type of concrete that carries a structural load or forms an integral part of a structure.	
23-13 31 11			Structural Concrete							
23-13 31 13			Ready Mixed Concrete							
23-13 31 15			Precast Structural Concrete							
23-13 31 17			Concrete Formwork							
23-13 31 17 11				Steel Forms						
23-13 31 17 13				Prefabricated Stair Forms						
23-13 31 17 15				Concrete Form Liners						
23-13 31 17 17				Insulated Concrete Forms						
23-13 31 19			Non Formwork							
23-13 31 21			Reinforcement and Prestressing Components							
23-13 31 21 11				Reinforcement Components						
23-13 31 21 11 11					Reinforcing Steel					
23-13 31 21 11 13					Reinforcement Steel Mesh					
23-13 31 21 11 13 11						Welded Wire Fabric Reinforcing				
23-13 31 21 11 15					Fibrous Reinforcing				(Note: Steel Fibers)	
23-13 31 21 11 15 11						Steel Fibrous Reinforcing				
23-13 31 21 11 15 13						Synthetic Fibrous Reinforcing				
23-13 31 21 11 17					Reinforcement Couplers					
23-13 31 21 11 19					Reinforcement Spacers					
23-13 31 21 11 21					Reinforcement Accessories					
23-13 31 21 13				Prestressing Components						
23-13 31 21 13 11					Stressing Tendons					
23-13 31 21 13 11 11						Steel Stressing Tendons				
23-13 31 21 13 11 11 11							Steel Strand Stressing Tendons			
23-13 31 21 13 11 11 13							Steel Wire Stressing Tendons			
23-13 31 21 13 11 11 15							Steel Bar Stressing Tendons			
23-13 31 21 13 11 13						Glass Fibers				
23-13 31 21 13 13					Steel Bars					
23-13 31 21 13 15					Glass Fiber Tendons					
23-13 31 21 13 17					Prestressing Couplers					
23-13 31 21 13 19					Tendon Sheathing					
23-13 31 21 13 19 11						Tendon Sheathing Ducts				
23-13 31 21 13 21					Prestressing Anchorages					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-13 31 21 15				Post Tensioning Products						
23-13 31 21 17				Complete Reinforcement Cages						
23-13 31 21 19				Cast In Jointing						
23-13 31 21 19 11					Expansion and Contraction Joints				(Includes: Crack Inducers)	
23-13 31 21 19 13					Waterstops					
23-13 31 23				Concrete Finishing Products						
23-13 31 23 11				Stamped Concrete Finishing Products						
23-13 31 23 13				Colored Concrete Finishing Products						
23-13 33 00				Envelope Enclosure Products					Products used in the envelop enclosure of a structure.	
23-13 33 11				Sliding Glass Wall Systems						
23-13 33 13				Folding Glass Wall Systems						
23-13 33 15				Wall Exteriors						
23-13 33 15 11				Blast Resistant Wall Exteriors						
23-13 33 17				Infill Facades						
23-13 33 17 11				Exterior Wall Assemblies						
23-13 33 19				Precast Concrete Facade						
23-13 33 19 11				Cladding and Curtainwall Panels						
23-13 33 19 11 11					Opening Infill Units					
23-13 33 19 11 13					Imbedded Material Finish Mix, Tiles, Brick					
23-13 33 21				Entrances						
23-13 33 21 11				Aluminum-Framed Entrances						
23-13 33 21 11 11					Automatic Aluminum-Framed Entrances					
23-13 33 21 11 13					Revolving Door Aluminum-Framed Entrances					
23-13 33 21 11 15					Balanced Door Aluminum-Framed Entrances					
23-13 33 21 11 17					Pressure-Resistant Aluminum-Framed Entrances					
23-13 33 21 11 19					Intensive Care Unit/Critical Care Unit Aluminum-Framed Entrances					
23-13 33 21 13				Bronze-Framed Entrances						
23-13 33 21 13 11					Automatic Bronze-Framed Entrances					
23-13 33 21 13 13					Revolving Door Bronze-Framed Entrances					
23-13 33 21 13 15					Balanced Door Bronze-Framed Entrances					
23-13 33 21 13 17					Pressure-Resistant Bronze-Framed Entrances					
23-13 33 21 13 19					Intensive Care Unit/Critical Care Unit Bronze-Framed Entrances					
23-13 33 21 15				Stainless-Steel-Framed Entrances						
23-13 33 21 15 11					Automatic Stainless-Steel-Framed Entrances					
23-13 33 21 15 13					Revolving Door Stainless-Steel-Framed Entrances					
23-13 33 21 15 15					Balanced Door Stainless-Steel-Framed Entrances					
23-13 33 21 15 17					Pressure-Resistant Stainless-Steel-Framed Entrances					
23-13 33 21 15 19					Intensive Care Unit/Critical Care Unit Stainless-Steel-Framed Entrances					
23-13 33 21 17				Steel-Framed Entrances						
23-13 33 21 17 11					Automatic Steel-Framed Entrances					
23-13 33 21 17 13					Revolving Door Steel-Framed Entrances					
23-13 33 21 17 15					Balanced Door Steel-Framed Entrances					
23-13 33 21 17 17					Pressure-Resistant Steel-Framed Entrances					
23-13 33 21 17 19					Intensive Care Unit/Critical Care Unit Steel-Framed Entrances					
23-13 33 21 19				All-Glass Entrances						
23-13 33 21 19 11					Automatic All-Glass Entrances					
23-13 33 21 19 13					Revolving Door All-Glass Entrances					
23-13 33 21 19 15					Balanced Door All-Glass Entrances					
23-13 33 21 19 17					Pressure-Resistant All-Glass Entrances					
23-13 33 21 19 19					Intensive Care Unit/Critical Care Unit All-Glass Entrances					
23-13 33 23				Storefronts						
23-13 33 23 11				Aluminum-Framed Storefronts						
23-13 33 23 11 11					Automatic Aluminum-Framed Storefronts					
23-13 33 23 11 13					Revolving Door Aluminum-Framed Storefronts					
23-13 33 23 11 15					Balanced Door Aluminum-Framed Storefronts					
23-13 33 23 11 17					Pressure-Resistant Aluminum-Framed Storefronts					
23-13 33 23 11 19					Intensive Care Unit/Critical Care Unit Aluminum-Framed Storefronts					
23-13 33 23 13				Bronze-Framed Storefronts						
23-13 33 23 13 11					Automatic Bronze-Framed Storefronts					
23-13 33 23 13 13					Revolving Door Bronze-Framed Storefronts					
23-13 33 23 13 15					Balanced Door Bronze-Framed Storefronts					
23-13 33 23 13 17					Pressure-Resistant Bronze-Framed Storefronts					
23-13 33 23 13 19					Intensive Care Unit/Critical Care Unit Bronze-Framed Storefronts					
23-13 33 23 15				Stainless-Steel-Framed Storefronts						
23-13 33 23 15 11					Automatic Stainless-Steel-Framed Storefronts					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-13 33 23 15 13					Revolving Door Stainless-Steel-Framed Storefronts					
23-13 33 23 15 15					Balanced Door Stainless-Steel-Framed Storefronts					
23-13 33 23 15 17					Pressure-Resistant Stainless-Steel-Framed Storefronts					
23-13 33 23 15 19					Intensive Care Unit/Critical Care Unit Stainless-Steel-Framed Storefronts					
23-13 33 23 17				Steel-Framed Storefronts						
23-13 33 23 17 11					Automatic Steel-Framed Storefronts					
23-13 33 23 17 13					Revolving Door Steel-Framed Storefronts					
23-13 33 23 17 15					Balanced Door Steel-Framed Storefronts					
23-13 33 23 17 17					Pressure-Resistant Steel-Framed Storefronts					
23-13 33 23 17 19					Intensive Care Unit/Critical Care Unit Steel-Framed Storefronts					
23-13 33 23 19				All-Glass Storefronts						
23-13 33 23 19 11					Automatic All-Glass Storefronts					
23-13 33 23 19 13					Revolving Door All-Glass Storefronts					
23-13 33 23 19 15					Balanced Door All-Glass Storefronts					
23-13 33 23 19 17					Pressure-Resistant All-Glass Storefronts					
23-13 33 23 19 19					Intensive Care Unit/Critical Care Unit All-Glass Storefronts					
23-13 33 25			Precast Modules							Made up of unitized bathrooms, prison cells, stairwells, service cores
23-13 33 27			Glazed Facade and Roof Structures							
23-13 33 27 11				Curtain Walls						
23-13 33 27 11 11					Curtain Wall Components					
23-13 33 27 11 11 11						Curtain Wall Frames				
23-13 33 27 11 11 13						Curtain Wall Sections				
23-13 33 27 11 11 15						Curtain Wall Infill Panels				
23-13 33 27 11 13					Metal Framed Curtain Wall					
23-13 33 27 11 15					Translucent Curtain Wall Assemblies					
23-13 33 27 13				Structural Glazing						
23-13 33 27 13 11					Structural Glass Curtain Walls					
23-13 33 27 15				Suspended Glazing						
23-13 33 27 17				Patent Glazing					Metal glazing-bars supporting glass without putty, employed in roofs and walls. A dry assembly system of glass and metal.	
23-13 33 27 19				Glazed Roof Structures						
23-13 33 27 19 11					Sections for Glazed Roofs					
23-13 33 27 19 13					Sloped Glazing Assemblies					
23-13 33 27 19 15					Translucent Roof Assemblies					
23-13 33 27 19 17					Translucent Wall Assemblies					
23-13 35 00		Framing Products								Products involved with the structural framing of a building.
23-13 35 11			Structural Frames							
23-13 35 11 11				Beam Column Frames						
23-13 35 11 13				Column Slab Frames						
23-13 35 11 13 11					Columns					
23-13 35 11 13 13					Beams					
23-13 35 11 15				Portal Frames						
23-13 35 11 17				Structural Racking						
23-13 35 11 19				Structural Bearings						
23-13 35 11 19 11					Structural Roller Bearings					
23-13 35 11 19 13					Structural Slide Bearings					
23-13 35 11 19 15					Structural Rocker Bearings					
23-13 35 11 19 17					Structural Fixed Bearings					
23-13 35 11 21				Vibration and Earthquake Controls						
23-13 35 13			Non Structural Framing Products							
23-13 35 15			Space Frames							
23-13 35 15 11				Booms Braces						
23-13 35 15 13				Couplers						
23-13 35 15 15				Complete Space Frames						
23-13 35 17			Geodesic Structures							
23-13 35 19			Rafters, Beams, and Joists							
23-13 35 19 11				Trussed Rafters						
23-13 35 19 13				Trussed Beams and Joists						
23-13 35 19 13 11					Trussed Metal Joists					
23-13 35 19 13 13					Trussed Composite Joist Assemblies					
23-13 35 19 13 15					Trussed Metal Web Wood Joists					
23-13 35 19 13 17					Wood Trusses					
23-13 35 19 13 19					Metal Trusses					
23-13 35 19 15				Web Beams and Joists						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-13 35 19 15 11					Wood Joists					
23-13 35 19 15 13					Wood Beams					
23-13 35 19 15 15					Heavy Timber Construction					
23-13 35 19 15 17					Engineered Wood Products					
23-13 35 19 17				Precast Concrete Beams						
23-13 35 19 17 11					Precast Concrete Doubletee Beams					
23-13 35 19 17 13					Precast Concrete Hollowcore Beams					
23-13 35 19 17 15					Precast Concrete Inverted Tee Beams					
23-13 35 19 17 17					Precast Concrete Spandrel Beams					
23-13 35 21			Structural Walls							
23-13 35 21 11				Concrete Structural Walls						
23-13 35 21 13				Masonry Structural Walls						
23-13 35 21 15				Wood Framed Structural Walls						
23-13 35 21 17				Metal Framed Structural Walls						
23-13 35 21 19				Structural Panels						
23-13 35 21 19 11					Cementitious Reinforced Structural Panels					
23-13 35 21 19 13					Stressed Skin Structural Panels					
23-13 35 21 19 15					Structural Insulated Panels				(Abbreviation: SIP)	
23-13 35 21 21				Other Structural Walls						
23-13 35 23			Structural Floors and Flat Roofs							
23-13 35 23 11				Structural Floor Decks						
23-13 35 23 11 11					Concrete Structural Floor Decks					
23-13 35 23 11 13					Metal Structural Floor Decks					
23-13 35 23 11 13 11						Raceway Deck Systems				
23-13 35 23 11 13 13						Acoustical Metal Floor Decks				
23-13 35 23 11 15					Wood Structural Floor Decks					
23-13 35 23 13				Structural Roof Decks						
23-13 35 23 13 11					Concrete Structural Roof Decks					
23-13 35 23 13 13					Metal Structural Roof Decks					
23-13 35 23 13 13 11						Acoustical Metal Roof Deck				
23-13 35 23 13 15					Wood Structural Roof Decks					
23-13 35 23 15				Structural Grating Floors						
23-13 35 23 17				Balconies and Overhang Units						
23-13 35 23 17 11					Balcony Components					
23-13 35 23 17 11 11						Balcony Holders and Mechanical Fasteners				
23-13 35 23 17 13					Concrete Balconies and Overhang Units					
23-13 35 23 17 15					Metal Balconies and Overhang Units					
23-13 35 23 17 17					Wood Balconies and Overhang Units					
23-13 35 25			Structural Profiled Roofs							
23-13 35 25 11				Prefabricated Shell Roofs						
23-13 35 25 13				Simulated Stones						
23-13 37 00		Multi-Function Exterior Coverings, Claddings, Linings							Covering of the building involved in protecting the building from effects of the weather and which products may have more than one function. Cladding is siding or a non-loadbearing wall. Roofing is the material put on a roof to make it water-tight.	
23-13 37 11			Multi-Function Exterior Claddings							
23-13 37 13			Exterior Wall Cladding							
23-13 37 15			Exterior Siding							
23-13 37 15 11				Metal Exterior Siding						
23-13 37 15 13				Composition Exterior Siding						
23-13 37 15 15				Mineral Fiber Cement Exterior Siding						
23-13 37 15 17				Plastic Exterior Siding						
23-13 37 15 19				Wood Exterior Siding						
23-13 37 17			Multi Function Exterior Linings							
23-13 37 17 11				Sheathing Products						
23-13 37 19			Exterior Plasters							
23-13 37 21			Preformed Exterior Casings							
23-13 37 23			Ancillary Products for Coverings and Claddings							
23-13 37 23 11				Supports for Coverings and Claddings						
23-13 37 23 13				Mechanical Fasteners for Coverings and Claddings						
23-13 37 23 15				Movement and Dividing Joints for Coverings and Claddings						
23-13 37 23 17				Joint Coverings, Flashings, Tapes						
23-13 37 23 19				Reinforcements for Coverings and Claddings						
23-13 37 23 21				Trims, Edgings, Capping						
23-13 37 23 23				Spacers						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-13 37 23 25				Profile Fillers						
23-13 37 23 27				Underlays, Linings, Separations						
23-13 37 23 29				Beddings, Adhesives for Coverings and Claddings						
23-13 37 23 31				Sealants for Coverings and Claddings						
23-13 39 00		Roof Coverings, Claddings, Linings							Covering of the upper most part of the building involved in protecting the building from effects of the weather.	
23-13 39 11			Exterior Roof Panels							
23-13 39 11 11				Exterior Metal Roof Panels						
23-13 39 11 13				Exterior Plastic Roof Panels						
23-13 39 11 15				Exterior Wood Roof Panels						
23-13 39 11 17				Exterior Composite Roof Panels						
23-13 39 11 19				Exterior Faced Roof Panels						
23-13 39 11 21				Exterior Aggregate Coated Panels						
23-13 39 11 23				Exterior Porcelain Enameled Faced Panels						
23-13 39 11 25				Exterior Tile Faced Panels						
23-13 39 11 27				Exterior Fiber Reinforced Cementitious Panels						
23-13 39 11 29				Exterior Glass Fiber Reinforced Cementitious Panels						
23-13 39 11 31				Exterior Miner Fiber Reinforced Cementitious Panels						
23-13 39 13			Roof Underlayment							
23-13 39 15			Roof Shingles							
23-13 39 15 11				Asphalt Roof Shingles						
23-13 39 15 13				Fiberglass Reinforced Roof Shingles						
23-13 39 15 15				Metal Roof Shingles					Does not include metal roof tiles.	
23-13 39 15 17				Mineral Fiber Cement Roof Shingles						
23-13 39 15 19				Plastic Roof Shingles						
23-13 39 15 21				Porcelain Enamel Roof Shingles						
23-13 39 15 23				Wood Shingles					Does not include wood shakes.	
23-13 39 15 25				Concrete Roof Shingles						
23-13 39 17			Roof Tiles							
23-13 39 17 11				Clay Roof Tiles						
23-13 39 17 13				Concrete Roof Tiles						
23-13 39 17 15				Metal Roof Tiles						
23-13 39 17 17				Mineral Fiber Cement Roof Tiles						
23-13 39 17 19				Plastic Roof Tiles						
23-13 39 17 21				Ceramic Roof Tiles						
23-13 39 17 23				Tile Roof Mechanical Fasteners						
23-13 39 19			Natural Stone Roofing							
23-13 39 19 11				Roof Slates						
23-13 39 19 11 11					Slate Roof Mechanical Fasteners					
23-13 39 21			Shake Roofing							
23-13 39 21 11				Wood Shakes Roofing						
23-13 39 23			Fiat Roofing							
23-13 39 23 11				Acoustical Metal Deck Roofing						
23-13 39 23 13				Structural Deck Roofing						
23-13 39 23 13 11					Concrete Structural Deck Roofing					
23-13 39 23 13 13					Metal Structural Deck Roofing					
23-13 39 23 15				Wood Decking Roofing						
23-13 39 25			Roof Finish Coating							
23-13 39 27			Roof Cladding							
23-13 39 27 11				Roof Cladding Sheets						
23-13 39 27 11 11					Metal Roof Panels					
23-13 39 27 11 13					Sheet Metal Roofing					
23-13 39 27 13				Roof Battens Cladding					(Includes: Sarking)	
23-13 39 29			Roof Coverings							
23-13 39 29 11				Thatched Roofing						
23-13 39 29 13				Sod Roofing						
23-13 39 29 15				Vegetated Roof Covering					(Alternate Term: Green Roofs)	
23-13 39 29 15 11					Vegetated Roof Planting Modules					
23-13 39 29 17				Coated Foam Roof Covering						
23-13 39 31			Roof Membranes							
23-13 39 31 11				Single Layer Roof Membranes						
23-13 39 31 11 11					Chlorinated Polyethylene (CPE) Single Layer Roof Membranes					
23-13 39 31 11 13					Chlorosulfonated Polyethylene (CSPE) Single Layer Roof Membranes					
23-13 39 31 11 15					Copolymer Alloy (CPA) Single Layer Roof Membranes					
23-13 39 31 11 17					Elastomeric Single Layer Roof Membranes					

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23-13 39 31 11 19					Ethylene Interpolymer (EIP) Single Layer Roof Membranes					
23-13 39 31 11 21					Ethylene Propylene Diene Monomer (EPDM) Single Layer Roof Membranes					
23-13 39 31 11 23					Nitrile Butadiene Polymer (NBP) Single Layer Roof Membranes					
23-13 39 31 11 25					Polyisobutylene (PIB) Single Layer Roof Membranes					
23-13 39 31 11 27					Polyvinyl chloride (PVC) Single Layer Roof Membranes					
23-13 39 31 11 29					Thermoplastic Alloy (TPA) Single Layer Roof Membranes					
23-13 39 31 11 31					Thermoplastic Single Layer Roof Membranes					
23-13 39 31 13				Multi Layer Roof Membranes						
23-13 39 31 13 11					Asphalt Multi Layer Roof Membranes					
23-13 39 31 13 13					Built Up Bituminous Multi Layer Roof Membranes					
23-13 39 31 13 15					Coal Tar Multi Layer Roof Membranes					
23-13 39 31 13 17					Cold Applied Bituminous Multi Layer Roof Membranes					
23-13 39 31 13 19					Cold Applied Mastic Multi Layer Roof Membranes					
23-13 39 31 13 21					Glass Fiber Reinforced Asphalt Emulsion Multi Layer Roof Membranes					
23-13 39 31 13 23					Modified Bituminous Multi Layer Roof Membranes			(APP, SBS, etc)		
23-13 39 31 15				Fluid Applied Roofing						
23-13 39 31 17				Coated Foam Roofing						
23-13 39 31 19				Roll Roofing						
23-13 39 33			Roof Decking							(Includes: Roof Screeds)
23-13 39 33 11				Cementitious Deck Roofing						
23-13 39 33 11 11					Cementitious Composite Insulation Deck Roofing					
23-13 39 33 11 13					Cementitious Lightweight Cellular Deck Roofing					
23-13 39 33 11 15					Cementitious Lightweight Insulating Deck Roofing					
23-13 39 33 13				Lightweight Concrete Roofing Insulation						
23-13 39 33 13 11					Composite Concrete and Insulation Deck Roofing					
23-13 39 33 13 13					Lightweight Cellular Concrete Deck Roofing					
23-13 39 33 13 15					Lightweight Insulating Concrete Deck Roofing					
23-13 39 33 15				Concrete Deck Roofing						
23-13 39 33 15 11					Concrete Composite Insulation Deck Roofing					
23-13 39 33 15 13					Concrete Lightweight Cellular Deck Roofing					
23-13 39 33 15 15					Concrete Lightweight Insulating Deck Roofing					
23-13 39 33 17				Concrete Roof Topping						
23-13 39 35				Roof Finishing Coatings						
23-13 39 37				Renovation Products for Roof Coverings and Claddings						
23-13 41 00		Roof Specialties and Accessories								Products involved in the upper covering of the envelop of the building that are considered as either an accessory or specialty.
23-13 41 11			Roof Edgings and Trims							
23-13 41 11 11				Roof Copings						
23-13 41 11 13				Roof Counterflashing Systems						
23-13 41 11 15				Roof Gravel Stops						
23-13 41 11 17				Roof Fascias						
23-13 41 11 19				Roof Reglets						
23-13 41 11 21				Roof Scuppers						
23-13 41 13			Roof Flashings							
23-13 41 13 11				Laminated Sheet Flexible Roof Flashings						
23-13 41 13 13				Modified Bituminous Sheet Flexible Roof Flashings						
23-13 41 13 15				Plastic Sheet Flexible Roof Flashings						
23-13 41 13 17				Rubber Sheet Flexible Roof Flashings						
23-13 41 13 19				Self Adhering Sheet Flexible Roof Flashings						
23-13 41 13 21				Roof Vent Flashings						
23-13 41 13 23				Roof Flashing Drip Caps						
23-13 41 13 25				Roof Penetration Flashings						
23-13 41 15			Roof Expansion Joints							
23-13 41 17			Roof Vents							
23-13 41 17 11				Roof Relief Vents						
23-13 41 17 13				Roof Ridge Vents						
23-13 41 17 15				Roof Smoke Vents						
23-13 41 17 17				Gravity Roof Vents						
23-13 41 17 19				Automatic Roof Vents						
23-13 41 17 21				Fire Vents						
23-13 41 19			Roof Walkways							
23-13 41 19 11				Roof Pavers						
23-13 41 19 11 11					Precast Concrete Roof Pavers					
23-13 41 19 11 13					Pedestals Roof Pavers					
23-13 41 19 13				Roof Treads						

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23-13 41 19 13 11					Rubber Roof Treads					
23-13 41 21			Roof Snow Guards							
23-13 41 23			Roof Piping Portals							
23-13 41 25			Roof Domes							
23-13 41 27			Roof Turrets							
23-13 41 29			Roof Lanterns							
23-13 41 31			Roof Curb							
23-13 41 31 11				Structural Roof Curb						
23-13 41 31 13				Acoustical Roof Curb						
23-13 41 31 15				Manufactured Roof Curbs						
23-13 41 33			Roof Gutters							
23-13 41 35			Roof Soffits							
23-13 41 37			Roof Splash Blocks							
23-13 41 39			Roof Drains							
23-13 41 39 11				Roof Downspouts						
23-13 41 39 13				Roof Drains With Strainer						
23-13 41 39 15				Roof Drains Without Strainer						
23-13 41 39 17				Eavestroughs						
23-13 41 39 17 11					Mechanical Fasteners for Downspouts					
23-13 41 39 17 13					Downspout Strainers					
23-13 41 39 19				Siphonic Roof Drains						
23-15 00 00	Interior and Finish Products								Products used inside the facility to finish surfaces and divide spaces.	Includes interior finishes such as paints ceilings, and flooring, and interior space division materials such as a gypsum board and other partitions.
23-15 11 00		Space Division Products							Products which divide spaces between the internal parts of a facility. (Note: Non-Demountable Walls)	
23-15 11 11			Fixed Partitions							
23-15 11 11 11				Gypsum Board Fixed Partitions						
23-15 11 11 11 11					Metal Framed Gypsum Board Fixed Partitions					
23-15 11 11 11 13					Wood Framed Gypsum Board Fixed Partitions					
23-15 11 11 13				Plaster Fixed Partitions						
23-15 11 11 13 11					Gypsum Plaster Fixed Partitions					
23-15 11 11 13 13					Portland Cement Plaster Fixed Partitions					
23-15 11 11 13 15					Metal Framed Plaster Fixed Partitions					
23-15 11 11 13 17					Wood Framed Plaster Fixed Partitions					
23-15 11 11 15				Masonry Fixed Partitions						
23-15 11 13			Demountable Partitions							
23-15 11 13 11				General Demountable Partitions						
23-15 11 13 11 11					Demountable Partitions Component					
23-15 11 13 11 11 11						Partition Frames				
23-15 11 13 11 11 13						Partition Infill Panels				
23-15 11 13 11 11 15						Mechanical Fasteners for Partitions				
23-15 11 13 11 11 17						Joint Fillers and Tapes				
23-15 11 13 11 13					Gypsum Board Demountable Partitions					
23-15 11 13 11 15					Metal Demountable Partitions					
23-15 11 13 11 17					Wood Demountable Partitions					
23-15 11 15			Sanitary Partitions and Cubicles							
23-15 11 15 11				Toilet Compartments and Urinal Screens						
23-15 11 15 11 11					Metal Toilet Compartment and Urinal Screens					
23-15 11 15 11 13					Plastic Laminate Toilet Compartment and Urinal Screens					
23-15 11 15 11 15					Plastic Toilet Compartment and Urinal Screens					
23-15 11 15 11 17					Particleboard Toilet Compartment and Urinal Screens					
23-15 11 15 11 19					Stone Toilet Compartment and Urinal Screens					
23-15 11 15 13				Shower and Dressing Compartments						
23-15 11 15 13 11					Metal Shower and Dressing Compartments					
23-15 11 15 13 13					Plastic Laminate Shower and Dressing Compartments					
23-15 11 15 13 15					Plastic Shower and Dressing Compartments					
23-15 11 15 13 17					Particleboard Shower and Dressing Compartments					
23-15 11 15 13 19					Stone Shower and Dressing Compartments					
23-15 11 15 15				Cubicles						
23-15 11 15 15 11					Cubicle Curtains					
23-15 11 15 15 13					Cubicle Track and Hardware					
23-15 11 15 17				Storage Wall Partitions and Compartments						
23-15 11 15 17 11					Wire Mesh Partitions					
23-15 11 15 19				Modular Corridor Linings						
23-15 11 15 21				Combined Partitions and Ceilings						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-15 11 17			Operable Partitions						(Note: Room Dividers)	
23-15 11 17 11				Horizontally Sliding Partitions						
23-15 11 17 13				Folding Panel Partitions						
23-15 11 17 15				Accordion Folding Partitions						
23-15 11 17 17				Coiling Partitions						
23-15 11 17 19				Vertically Sliding Room Dividers						
23-15 13 00		Multi-Function Interior Coverings, Claddings, Linings							Interior covering, cladding and lining products used inside the facility to finish surfaces and divide spaces that have more than one function.	
23-15 13 11			Multi Function Interior Claddings							
23-15 13 13			Interior Wall and Ceiling Cladding							
23-15 13 15			Interior Siding							
23-15 13 15 11				Metal Interior Siding						
23-15 13 15 13				Composition Interior Siding						
23-15 13 15 15				Mineral Fiber Cement Interior Siding						
23-15 13 15 17				Plastic Interior Siding						
23-15 13 15 19				Wood Interior Siding						
23-15 13 17			Multi Function Interior Linings							
23-15 13 19			Wall Panels							
23-15 13 19 11				Metal Wall Panels						
23-15 13 19 13				Plastic Wall Panels						
23-15 13 19 15				Wood Wall Panels						
23-15 13 19 17				Composite Wall Panels						
23-15 13 19 19				Faced Wall Panels						
23-15 13 19 21				Aggregate Coated Wall Panels						
23-15 13 19 23				Porcelain Enameled Faced Wall Panels						
23-15 13 19 25				Tile Faced Wall Panels						
23-15 13 19 27				Fiber Reinforced Cementitious Wall Panels						
23-15 13 19 29				Glass Fiber Reinforced Cementitious Wall Panels						
23-15 13 19 31				Miner Fiber Reinforced Cementitious Wall Panels						
23-15 13 19 33				Flexible Wood Wall Sheets						
23-15 13 19 35				Acoustical Wall Treatment						
23-15 13 21			Ceiling Panels							
23-15 13 21 11				Metal Ceiling Panels						
23-15 13 21 13				Plastic Ceiling Panels						
23-15 13 21 15				Wood Ceiling Panels						
23-15 13 21 17				Composite Ceiling Panels						
23-15 13 21 19				Faced Ceiling Panels						
23-15 13 21 21				Aggregate Coated Ceiling Panels						
23-15 13 21 23				Porcelain Enameled Faced Ceiling Panels						
23-15 13 21 25				Tile Faced Ceiling Panels						
23-15 13 21 27				Fiber Reinforced Cementitious Ceiling Panels						
23-15 13 21 29				Glass Fiber Reinforced Cementitious Ceiling Panels						
23-15 13 21 31				Miner Fiber Reinforced Cementitious Ceiling Panels						
23-15 13 21 33				Flexible Wood Ceiling Sheets						
23-15 13 21 35				Acoustical Ceiling Treatment						
23-15 13 23			Interior Plasters							
23-15 13 25			Preformed Interior Casings							
23-15 15 00		Wall Coverings, Claddings, Linings							Interior covering, cladding and lining products used inside the facility to finish surfaces and divide spaces	
23-15 15 11			Wall Cladding Sections							
23-15 15 11 11				Metal Wall Cladding Sections						
23-15 15 11 13				Wood Wall Cladding Sections						
23-15 15 11 15				Plastics Wall Cladding Sections						
23-15 15 11 17				Other Wall Cladding Sections						
23-15 15 13			Wall Tiles							
23-15 15 13 11				Natural Stone Wall Tiles						
23-15 15 13 13				Reconstituted Stone Wall Tiles						
23-15 15 13 15				Cementitious Wall Tiles						
23-15 15 13 17				Clay Based Wall Tiles						
23-15 15 13 19				Metal Wall Tiles						
23-15 15 13 21				Vegetable Based Wall Tiles						
23-15 15 13 23				Plastics Wall Tiles						
23-15 15 13 25				Other Wall Tiles						
23-15 15 15			Wall Cladding Panels							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-15 15 15 11				Wall Stone Facing						
23-15 15 15 13				Cementitious Wall Cladding Panels						
23-15 15 15 13 11					Precast Concrete Wall Cladding Panels					
23-15 15 15 15				Metal Wall Cladding Panels						
23-15 15 15 17				Wood Based Wall Cladding Panels						
23-15 15 15 19				Plastic Wall Cladding Panels						
23-15 15 15 19 11					Plastic Wall Cladding Blocks					
23-15 15 15 21				Other Wall Cladding Panels						
23-15 15 17			Wall Cladding Sheets							
23-15 15 17 11				Fiber Based Wall Cladding Sheets						
23-15 15 17 13				Metal Wall Cladding Sheets						
23-15 15 17 15				Plastic Wall Cladding Sheets						
23-15 15 17 17				Fiberglass Reinforced Panels						
23-15 15 19			Wall Coverings							
23-15 15 19 11				Wallpaper						
23-15 15 19 13				Wall Fabrics						
23-15 15 19 15				Plastic Wall Coverings						
23-15 15 19 17				Cork Wall Covering						
23-15 15 19 19				Vinyl Coated Fabric Wall Covering						
23-15 15 19 21				Vinyl Wall Covering						
23-15 15 19 23				Wall Carpet						
23-15 15 19 25				Wall Veneers						
23-15 15 21			Wall Blocks							
23-15 15 23			Wall Linings							
23-15 15 25			Wall Finish Coatings							
23-15 15 27			Renders							
23-15 15 29			Acoustical Wall Finishes							
23-15 15 31			Wall Specialties and Trim							
23-15 15 31 11				Wall Pilasters						
23-15 15 31 13				Wall Niches						
23-15 15 31 15				Wall Moldings						
23-15 15 31 17				Renovating Wall Coverings						
23-15 15 31 19				Renovating Wall Claddings						
23-15 15 33			Wall Finish Restoration Products							
23-15 15 35			Security Wall Protection Products							
23-15 15 35 11				Blast Resistant Wall Exteriors						
23-15 15 35 13				Blast Resistant Wall Interiors						
23-15 17 00		Floor Coverings							Floor covering products used inside the facility to finish surfaces.	
23-15 17 11			Flooring Specialties and Accessories							
23-15 17 11 11				Floor Toppings						
23-15 17 11 11 11					Concrete Floor Toppings					
23-15 17 11 13				Floor Underlayments						
23-15 17 11 13 11					Cementitious Floor Underlayments					
23-15 17 11 13 11 11					Gypsum Floor Underlayments					
23-15 17 11 13 11 13					Portland Cement Floor Underlayments					
23-15 17 11 13 13					Acoustical Underlayments					
23-15 17 11 13 15					Crack Prevention Mat Underlayments					
23-15 17 11 15				Floor Treatment Products						
23-15 17 11 15 11					Floor Sealers					
23-15 17 11 15 13					Floor Hardeners					
23-15 17 11 15 15					Slip Resistant Floor Treatment					
23-15 17 11 15 17					Static Resistant Floor Treatment					
23-15 17 11 15 19					Acid Resistant Floor Treatment					
23-15 17 11 17				Floor Base and Accessories						
23-15 17 11 17 11					Base and Accessories for Floor Coverings					
23-15 17 11 17 13					Acoustic Floor Mountings					
23-15 17 11 19				Floor Mats and Grilles						
23-15 17 11 19 11					Floor Mats					
23-15 17 11 19 13					Floor Grilles					
23-15 17 11 19 15					Floor Gratings					
23-15 17 11 21				Flooring Restoration Products						
23-15 17 11 21 11					Bamboo					
23-15 17 13			Floor Covering Strips, Tiles, Blocks, and Slabs							
23-15 17 13 11				Wood Flooring						
23-15 17 13 11 11					Cushioned Wood Flooring Assemblies					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-15 17 13 11 13					Mastic Set Wood Flooring Assemblies					
23-15 17 13 11 15					Resilient Wood Flooring Assemblies					
23-15 17 13 11 17					Wood Athletic Flooring					
23-15 17 13 11 19					Wood Block Flooring					
23-15 17 13 11 21					Wood Composition Flooring					
23-15 17 13 11 23					Wood Parquet Flooring					
23-15 17 13 11 25					Wood Strip Flooring					
23-15 17 13 13				Tile Flooring						
23-15 17 13 13 11					Clay Based Flooring					
23-15 17 13 13 13					Ceramic Tile Flooring					
23-15 17 13 13 13 11						Ceramic Mosaic Tile Flooring				
23-15 17 13 13 13 13						Conductive Tile Flooring				
23-15 17 13 13 15					Quarry Tile Flooring					
23-15 17 13 13 17					Chemical Resistant Quarry	Tile Flooring				
23-15 17 13 13 17 11						Porcelain Tile Flooring				
23-15 17 13 13 17 13						Glass Mosaic Tile Flooring				
23-15 17 13 13 17 15						Plastic Tile Flooring				
23-15 17 13 13 17 17						Metal Tile Flooring				
23-15 17 13 13 17 19						Natural Cut Stone Tile Flooring				
23-15 17 13 13 17 21						Tile Flooring Restoration Products				
23-15 17 13 15				Terrazzo Flooring						
23-15 17 13 15 11					Portland Cement Terrazzo Flooring					
23-15 17 13 15 13					Precast Terrazzo Flooring					
23-15 17 13 15 15					Conductive Terrazzo Flooring					
23-15 17 13 15 17					Plastic matrix Terrazzo Flooring					
23-15 17 13 15 19					Terrazzo Flooring Restoration Products					
23-15 17 13 17				Masonry Flooring						
23-15 17 13 17 11					Brick Flooring					
23-15 17 13 17 11 11						Chemical Resistant Brick Flooring				
23-15 17 13 17 13					Stone Flooring					
23-15 17 13 17 15					Other Masonry Flooring					
23-15 17 13 19				Precast Tile and Slab Flooring						
23-15 17 13 21				Metal Flooring						
23-15 17 15			Resilient Flooring							
23-15 17 15 11				Cork Flooring						
23-15 17 15 13				Plastic Flooring						
23-15 17 15 15				Rubber Flooring						
23-15 17 15 17				Linoleum Flooring						
23-15 17 15 19				Mechanical Fasteners for Resilient Floor Coverings						
23-15 17 15 19 11					Floor Clips					
23-15 17 15 19 13					Carpet Grippers					
23-15 17 15 19 15					Stair Rods					
23-15 17 15 21				Other Resilient Flooring						
23-15 17 17			Carpet Flooring							
23-15 17 17 11				Carpet Cushions						
23-15 17 17 13				Carpet Tiles						
23-15 17 17 15				Indoor Carpet Flooring						
23-15 17 17 17				Outdoor Carpet Flooring						
23-15 17 17 19				Sheet Carpet Flooring						
23-15 17 19			Preformed Flooring Equipment Systems							
23-15 17 19 11				Floating Floors						
23-15 17 19 13				Portable Floors						
23-15 17 19 15				Convertible Floors						
23-15 17 19 17				Gymnasium or Dance Flooring						
23-15 17 21			Access Flooring Components							
23-15 17 21 11				Access Floor Frames						
23-15 17 21 13				Access Floor Infill Panels						
23-15 17 23			Rigid Grid Access Flooring							
23-15 17 25			Snap On Stringer Access Flooring							
23-15 17 27			Stringerless Access Flooring							
23-15 17 29			Floor Finishing Coatings							
23-15 17 29 11				Industrial Floor Coatings						
23-15 17 29 13				Fluid Applied Flooring						
23-15 17 29 13 11					Elastomeric Liquid Flooring					
23-15 17 29 13 13					Epoxy Marble Chip Flooring					
23-15 17 29 13 15					Magnesium Oxychloride Flooring					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-15 17 29 13 17					Mastic Fills Flooring					
23-15 17 29 13 19					Resinous Flooring					
23-15 17 29 13 21					Seamless Quartz Flooring					
23-15 19 00		Ceiling Coverings, Claddings, and Linings							Ceiling coverings, claddings, and linings used inside the facility to finish surfaces.	
23-15 19 11			Ceiling Baffles							
23-15 19 13			Ceiling Clouds							
23-15 19 15			Ceiling Tiles, Panels, Strips, and Sections							
23-15 19 15 11				Ceiling Tiles						
23-15 19 15 11 11					Acoustical Ceiling Tile					
23-15 19 15 13				Ceiling Panels						
23-15 19 15 13 11					Acoustical Ceiling Panels					
23-15 19 15 13 13					Mirror Ceiling Panels					
23-15 19 15 13 15					Curved Ceiling Panels					
23-15 19 15 13 17					Metal Ceiling Panels					
23-15 19 15 15				Ceiling Covering Strips						
23-15 19 15 15 11					Linear Metal Ceiling Covering Strips					
23-15 19 15 15 13					Linear Wood Ceiling Covering Strips					
23-15 19 15 17				Ceiling Covering Sections						
23-15 19 15 17 11					Suspended Decorative Ceiling Grids					
23-15 19 17			Ceiling Finishing Coatings							
23-15 19 17 11				Textured Ceilings						
23-15 19 17 11 11					Gypsum Panel Textured Ceilings					
23-15 19 17 11 13					Metal Panel Textured Ceilings					
23-15 19 19			Ceiling Specialties and Accessories							
23-15 19 19 11				Roses Ceiling Centerpieces						
23-15 19 19 13				Ceiling Coving						
23-15 19 19 15				Ceiling Cornices						
23-15 19 19 17				Ceiling Friezes						
23-15 19 19 19				Integral Speaking Panels						
23-15 19 21			Ceiling Assembly Restoration Products							
23-15 19 23			Ceilings							
23-15 19 23 11				Suspended Ceilings						
23-15 19 23 11 11					Suspended Ceiling Components					
23-15 19 23 11 11 11						Suspended Ceilings, Suspension Assembly				
23-15 19 23 11 11 13						Suspended Ceilings, Panels and Tiles				
23-15 19 23 11 11 15						Suspended Ceilings, Grids				
23-15 19 23 11 11 17						Mechanical Fasteners for Suspended Ceilings				
23-15 19 23 11 13					Acoustical Ceilings					
23-15 19 23 11 13 11						Metal Pan Acoustical Ceilings				
23-15 19 23 11 13 13						Acoustical Panel Ceilings				
23-15 19 23 11 13 15						Acoustical Tile Ceilings				
23-15 19 23 11 15					Specialty Ceilings					
23-15 19 23 11 15 11						Integrated Ceilings				
23-15 19 23 11 15 13						Linear Ceilings				
23-15 19 23 11 15 13 11							Metal Linear Ceilings			
23-15 19 23 11 15 13 13							Wood Linear Ceilings			
23-15 19 23 11 15 15						Luminous Ceilings				
23-15 19 23 11 15 17						Mirror Panel Ceilings				
23-15 19 23 11 15 19						Textured Ceilings				
23-15 19 23 11 15 21						Suspended Decorative Grids				
23-15 19 23 11 15 23						Clean Room Ceilings				
23-15 19 23 13				Stretched Fabric Ceilings					(Includes: Tensed Ceilings)	
23-15 21 00		Surface Applied Coatings							Surface applied coating products used inside the facility to finish surfaces.	
23-15 21 11			Paints and Varnishes							
23-15 21 11 11				General Purpose Paints and Varnishes						
23-15 21 11 11 11					Solvent Based General Purpose Paints and Varnishes					
23-15 21 11 11 13					Water Based General Purpose Paints and Varnishes					
23-15 21 11 13				Textured Paints						
23-15 21 11 13 11					Solvent Based Textured Paints					
23-15 21 11 13 13					Water Based Textured Paints					
23-15 21 13			Paints for Particular Applications							
23-15 21 13 11				Corrosion Prevention Paints						
23-15 21 13 13				Solar Reflective Paints						
23-15 21 13 15				Fluorescent Paints						
23-15 21 13 17				Line Paints						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-15 21 13 19				Roadway Marking Paints						
23-15 21 13 21				Swimming Pool Paints						
23-15 21 13 23				Coatings for Concrete and Masonry						
23-15 21 13 25				Mold/Mildew Resistant Coatings						
23-15 21 15			Powder Coating Services							
23-15 21 15 11				Factory Applied Metal Powder Coatings						
23-15 21 17			Inorganic Metal Treatments							
23-15 21 17 11				Galvanized Coatings						
23-15 21 17 13				Anodized Coatings						
23-15 21 17 15				Electro Plated Coatings						
23-15 21 17 17				Vitreous Enameling						
23-15 21 19			Stains and Decorative Surface Impregnations							
23-15 21 19 11				Decorative Wood Conservation Products						
23-15 21 19 13				Stains						
23-15 21 19 13 11					Opaque Stains					
23-15 21 19 13 11 11						Exterior Opaque Stains				
23-15 21 19 13 11 13						Interior Opaque Stains				
23-15 21 19 13 13					Transparent Stains					
23-15 21 19 13 13 11						Exterior Transparent Stains				
23-15 21 19 13 13 13						Interior Transparent Stains				
23-15 21 21			High Performance Coatings							
23-15 21 21 11				Abrasion Resistant Coatings						
23-15 21 21 13				Chemical Resistant Coatings						
23-15 21 21 15				Elastomeric Coatings						
23-15 21 21 17				Fire Resistant Coatings						
23-15 21 21 19				Graffiti Resistant Coatings						
23-15 21 21 21				High Building Coatings						
23-15 21 21 23				Intumescent Paints						
23-15 21 21 25				Marine Coatings						
23-15 21 21 27				Textured Plastic Coatings						
23-15 21 23			Protective Surface Impregnations							
23-15 21 23 11				Surface Consolidation Hardening Impregnations						
23-15 21 23 13				Impregnations Protecting from Biological Attack						
23-15 21 23 13 11					Wood Treatment Protecting from Biological Attack					
23-15 21 23 15				Impregnations Protecting from Fire						
23-15 21 23 15 11					Wood Treatment Protecting from Fire					
23-15 21 23 15 11 11						Fire Retardant Treatment				
23-15 21 23 17				Water Repellents						
23-15 21 23 17 11					Acrylic Water Repellents					
23-15 21 23 17 13					Silane Water Repellents					
23-15 21 23 17 15					Silicone Water Repellents					
23-15 21 23 17 17					Siloxane Water Repellents					
23-15 21 23 17 19					Stearate Water Repellents					
23-17 00 00	Openings, Passages, and Protection Products								Products which allow for access within a facility or between a facility and the outside.	Includes products such as doors, windows, frames, fire doors, hatches, louvers, and awnings, shutters, and other protection of openings.
23-17 11 00		Doors							A hinged, pivoted or sliding member, permitting passage through a wall.	
23-17 11 11			Door Components							
23-17 11 11 11				Door Frames						
23-17 11 11 13				Preassembled Door and Frame Units						
23-17 11 11 15				Door Fanlights						
23-17 11 11 17				Door Sections						
23-17 11 11 17 11					Structural Door Sections					
23-17 11 11 17 13					Door Cladding Sections					
23-17 11 11 19				Door Linings and Boards						
23-17 11 11 21				Door Renovation Sets						
23-17 11 11 23				Door Sidelites						
23-17 11 11 25				Door Accessories						
23-17 11 11 25 11					Door Peep Holes					
23-17 11 11 25 13					Door Buffers					
23-17 11 11 25 15					Door Stops					
23-17 11 11 25 17					Door Mail Openings					
23-17 11 11 25 19					Door Mail Slots					
23-17 11 11 25 21					Door Louvers					
23-17 11 11 25 23					Door Lights					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-17 11 13			Metal Doors							
23-17 11 13 11				Hollow Metal Doors						
23-17 11 13 13				Aluminum Doors						
23-17 11 13 13 11					Aluminum Screen Doors					
23-17 11 13 13 13					Aluminum Storm Doors					
23-17 11 13 15				Steel Doors						
23-17 11 13 15 11					Steel Screen Doors					
23-17 11 13 15 13					Steel Storm Doors					
23-17 11 13 17				Bronze Doors						
23-17 11 13 19				Sliding Metal Doors						
23-17 11 13 21				Folding Metal Doors						
23-17 11 13 23				Revolving Metal Doors						
23-17 11 13 25				Overhead Metal Doors						
23-17 11 13 25 11					Roller Shutter Overhead Metal Doors					
23-17 11 13 25 13					Sectional Overhead Metal Doors					
23-17 11 15			Wood Doors							
23-17 11 15 11				Carved Wood Doors						
23-17 11 15 13				Flush Wood Doors						
23-17 11 15 15				Clad Wood Doors						
23-17 11 15 17				Prefinished Wood Doors						
23-17 11 15 19				Stile and Rail Wood Doors						
23-17 11 15 21				Wood Storm Doors						
23-17 11 15 23				Wood Screen Doors						
23-17 11 15 25				Sliding Wood Doors						
23-17 11 15 27				Folding Wood Doors						
23-17 11 15 29				Revolving Wood Doors						
23-17 11 15 31				Overhead Wood Doors						
23-17 11 15 31 11					Roller Shutter Overhead Wood Doors					
23-17 11 15 31 13					Sectional Overhead Wood Doors					
23-17 11 17			Plastic Doors							
23-17 11 17 11				Laminated Plastic Doors						
23-17 11 17 13				Solid Plastic Doors						
23-17 11 17 15				Plastic Storm Doors						
23-17 11 17 17				Plastic Screen Doors						
23-17 11 17 19				Sliding Plastic Doors						
23-17 11 17 21				Folding Plastic Doors						
23-17 11 17 23				Revolving Plastic Doors						
23-17 11 17 25				Overhead Plastic Doors						
23-17 11 17 25 11					Roller Shutter Overhead Plastic Doors					
23-17 11 17 25 13					Sectional Overhead Plastic Doors					
23-17 11 19			Composite Doors							
23-17 11 19 11				Fiberglass Composite Doors						
23-17 11 19 13				Sliding Composite Doors						
23-17 11 19 15				Folding Composite Doors						
23-17 11 19 17				Composite Hinged Doors						
23-17 11 19 19				Revolving Composite Doors						
23-17 11 19 21				Overhead Composite Doors						
23-17 11 19 21 11					Roller Shutter Overhead Composite Doors					
23-17 11 19 21 13					Sectional Overhead Composite Doors					
23-17 11 21			Glazed Doors					Glass Doors		
23-17 11 21 11				Glazed Hinged Doors						
23-17 11 23			All Glass Doors							
23-17 11 23 11				Swinging All Glass Doors				Swing Door	Swing door is a special hinged door that allows the door to open either outwards or inwards, usually sprung to keep closed.	
23-17 11 23 13				Sliding All Glass Doors						
23-17 11 23 15				Folding All Glass Doors and Grilles						
23-17 11 23 15 11					Accordion Folding All Glass Doors					
23-17 11 23 15 13					Panel Folding All Glass Doors					
23-17 11 23 15 15					Bifold All Glass Doors					
23-17 11 23 17				Revolving All Glass Doors						
23-17 11 23 19				Balanced All Glass Doors						
23-17 11 25			Passage Grilles							
23-17 11 25 11				Sliding Passage Grilles						
23-17 11 25 13				Folding Passage Grilles						
23-17 11 25 13 11					Accordion Folding Passage Grilles					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-17 11 25 15				Rolling Grilles						
23-17 11 27			Access Doors						A provision for access to concealed plumbing or other equipment without disturbing the wall or fixtures which usually includes frames.	
23-17 11 27 11				Trap Doors						
23-17 11 27 13				Access Doors						
23-17 11 27 15				Floor Hatches						
23-17 11 27 17				Roof Hatches						
23-17 11 27 19				Security Floor Hatches						
23-17 11 27 21				Security Roof Hatches						
23-17 11 27 21 11					Forced Entry and Ballistic Resistant Roof Hatches					
23-17 11 27 21 13					Ballistic Resistant Roof Hatches					
23-17 11 27 23				Man Hole Accesses					Manholes specifically related to equipment access such as tanks & boilers, for traditional utilities manholes, see Utility and Transportation Products.	
23-17 11 29			Access Panels							
23-17 11 29 11				Equipment Access Panels						
23-17 11 31			Fire Doors						Fire doors are doors specifically designed to withstand exposure to a fire for a minimum specified period of time.	
23-17 11 31 11				Fire Rated Doors						
23-17 11 31 11 11					Fire Rated Overhead Doors					
23-17 11 31 11 13					Fire Rated Rolling Doors					
23-17 11 31 11 15					Fire Rated Sliding Doors					
23-17 11 31 11 17					Fire Rated Hinged Doors					
23-17 11 31 11 19					Fire Rated Revolving Doors					
23-17 11 31 13				Temperature Rate of Rise Fire Doors					Are fire doors designed to withstand exposure to a fire for a minimum specified period of time and to minimize the transmission of heat, degree Fahrenheit or Celsius, from one side of the door to the other side of the door.	
23-17 11 31 13 11					Temperature Rate of Rise Fire Rated Overhead Doors					
23-17 11 31 13 13					Temperature Rate of Rise Fire Rated Rolling Doors					
23-17 11 31 13 15					Temperature Rate of Rise Fire Rated Sliding Doors					
23-17 11 31 13 17					Temperature Rate of Rise Fire Rated Hinged Doors					
23-17 11 31 13 19					Temperature Rate of Rise Fire Rated Revolving Doors					
23-17 11 35			Fire Shutters							
23-17 11 37			Controlled Environment Doors							
23-17 11 37 11				Cold Storage Doors						
23-17 11 37 13				Sound Control Doors						
23-17 11 37 15				Radiation Protection Doors						
23-17 11 37 15 11					Electromagnetic Shielding Doors					
23-17 11 37 15 13					Radio Frequency Protection Doors				Used to protect people from RF radiation	
23-17 11 37 15 15					BO Shielding Doors					
23-17 11 37 15 17					X Ray Protection Doors					
23-17 11 37 15 19					Nuclear Radiation Protection Doors					
23-17 11 37 15 21					High Energy Magnetic Pulse Protection Doors					
23-17 11 39			Detention Doors							
23-17 11 41			Hanger Doors							
23-17 11 43			Lightproof Doors							
23-17 11 43 11				Revolving Darkroom Door						
23-17 11 45			Traffic Doors							
23-17 11 45 11				Flexible Traffic Doors						
23-17 11 45 13				Flexible Strip Doors						
23-17 11 45 15				Rigid Panel Traffic Doors						
23-17 11 45 17				Rapid Opening Doors						
23-17 11 47			Pressure Resistant Doors							
23-17 11 47 11				Airtight Doors						
23-17 11 47 13				Watertight Doors						
23-17 11 49			Security Rated Door							
23-17 11 49 11				Blast Resistant Doors						
23-17 11 49 13				Forced Entry Door						
23-17 11 49 13 11					Multi Forced Entry Lock Door					
23-17 11 49 13 13					Single Forced Entry Lock Door					
23-17 11 49 15				Forced Entry and Ballistic Resistant Door						
23-17 11 49 17				Ballistic Resistant Door						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-17 13 00		Windows							An opening in a wall for light and ventilation, with all its paraphernalia	
23-17 13 11			Window Components							
23-17 13 11 11				Window Sections						
23-17 13 11 13				Window Linings and Boards						
23-17 13 11 15				Window Vents						
23-17 13 11 17				Window Frames						
23-17 13 11 19				Transoms						
23-17 13 11 21				Sidelites						
23-17 13 11 23				Retractable Screens				Movable Screens	Retractable screen doors provide an attractive barrier to unwelcome insects while ensuring views are maintained, and without the nuisance of a swinging screen door.	
23-17 13 13			Metal Windows							
23-17 13 13 11				Metal Fixed Windows						
23-17 13 13 13				Metal Horizontal Sliding Windows						
23-17 13 13 15				Metal Single Hung Windows						
23-17 13 13 17				Metal Double Hung Windows						
23-17 13 13 19				Metal Triple Hung Windows						
23-17 13 13 21				Metal Awning Windows						
23-17 13 13 23				Metal Casement Windows						
23-17 13 13 25				Metal Hopper Windows						
23-17 13 13 27				Metal Vertical Pivoted Windows						
23-17 13 13 29				Metal Jalousie Windows						
23-17 13 15			Wood Windows							
23-17 13 15 11				Wood Fixed Windows						
23-17 13 15 13				Wood Horizontal Sliding Windows						
23-17 13 15 15				Wood Single Hung Windows						
23-17 13 15 17				Wood Double Hung Windows						
23-17 13 15 19				Wood Triple Hung Windows						
23-17 13 15 21				Wood Awning Windows						
23-17 13 15 23				Wood Casement Windows						
23-17 13 15 25				Wood Hopper Windows						
23-17 13 15 27				Wood Vertical Pivoted Windows						
23-17 13 15 29				Wood Jalousie Windows						
23-17 13 17			Plastic Windows							
23-17 13 17 11				Plastic Fixed Windows						
23-17 13 17 13				Plastic Horizontal Sliding Windows						
23-17 13 17 15				Plastic Single Hung Windows						
23-17 13 17 17				Plastic Double Hung Windows						
23-17 13 17 19				Plastic Triple Hung Windows						
23-17 13 17 21				Plastic Awning Windows						
23-17 13 17 23				Plastic Casement Windows						
23-17 13 17 25				Plastic Hopper Windows						
23-17 13 17 27				Plastic Vertical Pivoted Windows						
23-17 13 17 29				Plastic Jalousie Windows						
23-17 13 17 31				Plastic Jalousie Awning Windows						
23-17 13 19			Composite Windows						includes fiberglass	
23-17 13 19 11				Composite Fixed Windows						
23-17 13 19 13				Composite Horizontal Sliding Windows						
23-17 13 19 15				Composite Single Hung Windows						
23-17 13 19 17				Composite Double Hung Windows						
23-17 13 19 19				Composite Triple Hung Windows						
23-17 13 19 21				Composite Awning Windows						
23-17 13 19 23				Composite Casement Windows						
23-17 13 19 25				Composite Hopper Windows						
23-17 13 19 27				Composite Vertical Pivoted Windows						
23-17 13 19 29				Composite Jalousie Windows						
23-17 13 19 31				Composite Jalousie Awning Windows						
23-17 13 21			Projecting Windows							
23-17 13 21 11				Bay Windows						
23-17 13 21 11 11					Angles Bay Windows					
23-17 13 21 11 13					Box Bay Windows					
23-17 13 21 13				Bow Windows						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-17 13 23			Roof Windows						A sloped window used for daylighting, built into a roof structure that is within reach where a skylight is not within reach. See: Skylights	
23-17 13 25			Masonry Windows							
23-17 13 25 11				Glass Masonry Unit Windows						
23-17 13 27			Special Purpose Windows							
23-17 13 27 11				Fire Rated Windows						
23-17 13 27 13				Detention Windows						
23-17 13 27 15				Pass Windows						
23-17 13 27 17				Controlled Environment Windows						
23-17 13 27 17 11					Sound Control Windows					
23-17 13 27 17 13					Radiation Protection Windows					
23-17 13 27 17 13 11						Electromagnetic Shielding Windows				
23-17 13 27 17 13 13						BO Shielding Windows				
23-17 13 27 17 13 15						Radio Frequency Protection Windows				
23-17 13 27 17 13 17						X Ray Protection Windows				
23-17 13 27 17 13 19						Nuclear Radiation Protection Windows				
23-17 13 27 17 13 21						High Energy Magnetic Pulse Protection Windows				
23-17 13 29			Security Windows							
23-17 13 29 11				Ballistic Resistant Windows				Bullet Resistant Windows		
23-17 13 29 11 11					Teller Forced Entry and Ballistic Resistant Windows					
23-17 13 29 13				Blast Resistant Windows						
23-17 13 29 13 11					Blast Resistant Structural Muntin Windows					
23-17 13 29 13 13					Blast Resistant Window Frames					
23-17 13 29 15				Impact Resistant Windows				hurricane windows, coastal windows		
23-17 13 29 17				Forced Entry Resistant Windows						
23-17 13 29 19				Radio Frequency Shielding Windows						
23-17 13 29 21				Security Window Films						
23-17 13 29 21 11					Shatter Resistant Security Window Films					
23-17 13 29 23				Security Window Curtains						
23-17 13 29 23 11					Security Window Blast Curtains					
23-17 15 00		Glazing							Wiki: Glazing is a transparent part of a wall, usually made of glass or plastic (acrylic and polycarbonate). Glazing also describes the work done by a professional "glazier". Common types of glazing used in architectural applications include clear and tinted.	
23-17 15 11			Glass Glazing							
23-17 15 11 11				Bent Glass						
23-17 15 11 13				Chemically Strengthened Glass						
23-17 15 11 15				Coated Glass						
23-17 15 11 17				Composite Glass						
23-17 15 11 19				Decorative Glass						
23-17 15 11 21				Fire Rated Glass						
23-17 15 11 23				Float Glass						
23-17 15 11 25				Heat Strengthened Glass						
23-17 15 11 27				Impact Resistant Glass						
23-17 15 11 29				Insulating Glass						
23-17 15 11 31				Laminated Glass						
23-17 15 11 33				Low Emissivity Glass						
23-17 15 11 35				Rolled Glass						
23-17 15 11 37				Spandrel Glass						
23-17 15 11 39				Tempered Glass						
23-17 15 11 41				Wired Glass						
23-17 15 13			Plastic Glazing							
23-17 15 13 11				Ballistics Resistant Plastic Glazing						
23-17 15 13 13				Decorative Plastic Glazing						
23-17 15 13 15				Insulating Plastic Glazing						
23-17 15 13 17				Translucent Plastic Glazing						
23-17 15 13 19				Transparent Plastic Glazing						
23-17 15 15			Security Glass							
23-17 15 15 11				Laminated Security Glass						
23-17 15 17			Tinted Glass							
23-17 15 19			Glazing by Special Function							
23-17 15 19 11				Security Glazing						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-17 15 19 13				Ballistics Resistant Glass Glazing						
23-17 15 19 15				Pressure Resistant Glazing						
23-17 15 19 17				Hurricane Resistant Glazing						
23-17 15 19 19				Radiation Resistant Glazing						
23-17 15 19 21				Switchable Privacy Glass						
23-17 15 21			Glazing Components							
23-17 15 21 11				Glazing Frames						
23-17 15 21 13				Glazing Sections						
23-17 15 21 15				Mechanical Glazing Fasteners						
23-17 15 23			Glazing Accessories							
23-17 15 23 11				Glazing Beads						
23-17 15 23 13				Condensation Channels						
23-17 15 23 15				Glazing Sealants and Tapes						
23-17 15 23 17				Glazing Gaskets						
23-17 15 23 19				Glazing Leading Material						
23-17 15 25			Protective Films							
23-17 15 25 11				Solar Control Films						
23-17 15 25 13				Safety Films						
23-17 15 25 15				Security Films						
23-17 15 25 17				Decorative Films						
23-17 17 00		Skylights						Rooflights	An opening in a roof or ceiling for admitting daylight. Includes: Rooflights	
23-17 17 11			Skylight Components							
23-17 17 11 11				Skylight Hardware						
23-17 17 13			Unit Skylights							Note: Individual Units
23-17 17 13 11				Domed Unit Skylights						
23-17 17 13 13				Pyramidal Unit Skylights						
23-17 17 13 15				Vaulted Unit Skylights						
23-17 17 13 17				Single Slope Unit Skylights						
23-17 17 13 19				Octagonal Unit Skylights						
23-17 17 13 21				Tubular Skylights						
23-17 17 15			Metal Framed Skylights							
23-17 17 15 11				Domed Metal Framed Skylights						
23-17 17 15 13				Pyramidal Metal Framed Skylights						
23-17 17 15 15				Ridge Metal Framed Skylights						
23-17 17 15 17				Vaulted Metal Framed Skylights						
23-17 17 15 19				Single Slope Metal Framed Skylights						
23-17 17 15 21				Octagonal Metal Framed Skylights						
23-17 19 00		Hardware for Openings							Metal fittings permanently incorporated in a building as adjuncts to products in openings.	
23-17 19 11			Hardware for Doors							
23-17 19 11 11				Rotation, Pivoting Door Gear						
23-17 19 11 13				Sliding Door Gear						
23-17 19 11 15				Door Guiding Hardware						
23-17 19 11 17				Door Holding Hardware						
23-17 19 11 17 11					Door Hold Open Hardware					
23-17 19 11 19				Door Closing Hardware						
23-17 19 11 19 11					Door Closers					
23-17 19 11 19 11 11						Manual Floor Door Closers				
23-17 19 11 19 11 13						Manual Surface Door Closers				
23-17 19 11 19 11 15						Manual Concealed Overhead Door Closers				
23-17 19 11 19 11 17						Power Operator Floor Door Closers				
23-17 19 11 19 11 19						Power Operator Surface Door Closers				
23-17 19 11 19 11 21						Power Operator Concealed Overhead Door Closers				
23-17 19 11 21				Door Barrier Locks						
23-17 19 11 21 11					Door Deadbolt Locks					
23-17 19 11 21 13					Door Chains					
23-17 19 11 21 15					Door Electric Strike Locks					
23-17 19 11 21 17					Door Electromagnetic Locks					
23-17 19 11 21 17 11						Door Time Locks				
23-17 19 11 21 17 13						Door Time Delay Combination Locks				
23-17 19 11 21 19					Door Latches					
23-17 19 11 21 21					Door Mortise Locks					
23-17 19 11 21 21 11						Door Electric Mortise Locks				
23-17 19 11 21 21 13						Door Electronic Mortise Locks				
23-17 19 11 21 23					Door Pin Tumbler Locks			Key Lock		

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-17 19 11 21 23 11						Door Tubular Pin Tumbler Locks		Key Lock		
23-17 19 11 21 25					Door Flush Bolts					
23-17 19 11 23				Door Cores						
23-17 19 11 25				Door Cylinders						
23-17 19 11 27				Door Key Control Systems						
23-17 19 11 29				Personnel Door Access						
23-17 19 11 29 11					Door Position Switches					
23-17 19 11 29 13					Door Emergency Exit Panic Bars			Crash Bar, Exit Device		
23-17 19 11 29 15					Door End of Line Devices			Line supervision		
23-17 19 11 29 17					Door Request to Exit Switches					
23-17 19 11 29 19					Personnel Access Door Keypads					
23-17 19 11 29 19 11						Door Infrared Request to Exit Switches		Passive Infrared Detector ROE		
23-17 19 11 31				Automatic Door Controls and Operators						
23-17 19 11 31 11					Card Key Door Locking Hardware					
23-17 19 11 31 13					Electrical Door Locking Control					
23-17 19 11 31 15					Electromagnetic Door Holders					
23-17 19 11 31 17					Sensors for Automatic Doors					
23-17 19 11 33				Door Exiting Hardware						
23-17 19 13			Hardware for Windows							
23-17 19 13 11				Sliding Window Gear						
23-17 19 13 11 11					Horizontal Sliding Window Gear					
23-17 19 13 11 13					Vertical Sliding Window Gear					
23-17 19 13 13				Horizontal Pivoting Window Gear						
23-17 19 13 15				Window Tilt and Turn Gear						
23-17 19 13 17				Louver Gear						
23-17 19 13 19				Automatic Window Equipment						
23-17 19 13 21				Window Barrier Locks						
23-17 19 13 21 11					Window Deadbolt Locks					
23-17 19 13 21 13					Window Latches					
23-17 19 13 21 15					Window Mortise Locks					
23-17 19 13 21 17					Window Flush Bolts					
23-17 19 13 23				Window Lifts						
23-17 19 13 25				Window Operators						
23-17 19 13 25 11					Manual Surface Window Closers					
23-17 19 13 25 13					Manual Concealed Overhead Window Closers					
23-17 19 13 25 15					Power Operator Surface Window Closers					
23-17 19 13 25 17					Power Operator Concealed Overhead Window Closers					
23-17 19 15			Weatherstripping and Seals							
23-17 19 15 11				Door Weatherstripping and Seals						
23-17 19 15 11 11					Acoustic Seals					
23-17 19 15 11 13					Astragals					
23-17 19 15 11 15					Perimeter Gasketing					
23-17 19 15 13				Thresholds						
23-17 19 15 15				Window Weatherstripping and Seals						
23-17 19 17			Other Openings Hardware							
23-17 19 17 11				Door Stops						
23-17 21 00		Protection of Openings								Any product which assists in the protection of the opening.
23-17 21 11			Exterior Protection of Openings							
23-17 21 11 11				Projecting Screens						
23-17 21 11 11 11					Solid Canopies					
23-17 21 11 11 13					Louvered Canopies					
23-17 21 11 11 15					Solid Vertical Fins					
23-17 21 11 11 17					Louvered Vertical Fins					
23-17 21 11 11 19					Manual Awnings					
23-17 21 11 11 21					Powered Awnings					
23-17 21 11 13				Exterior Shutters						
23-17 21 11 13 11					Folding Exterior Shutters					
23-17 21 11 13 13					Shutter Components					
23-17 21 11 13 13 11						Roller Shutter Gear				
23-17 21 11 13 13 13						Roller Shutter Sections				
23-17 21 11 13 13 15						Roller Shutter Casings				
23-17 21 11 13 15					Sliding Exterior Shutters					
23-17 21 11 13 17					Swinging Exterior Shutters					
23-17 21 11 13 19					Coiling Exterior Shutters					
23-17 21 11 15				Exterior Louvers and Grilles						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-17 21 11 15 11					Fixed Exterior Louvers and Grilles					
23-17 21 11 15 13					Roller Exterior Louvers and Grilles					
23-17 21 11 15 15					Sliding Exterior Louvers and Grilles					
23-17 21 11 17				Storm Panels						
23-17 21 11 17 11					Demountable Storm Panels					
23-17 21 11 17 13					Movable Storm Panels					
23-17 21 13			Interior Window Treatment							
23-17 21 13 11				Window Blinds						
23-17 21 13 11 11					Horizontal Window Blinds					
23-17 21 13 11 13					Vertical Window Blinds					
23-17 21 13 11 15					Window Blind Components					
23-17 21 13 11 15 11						Window Slats				
23-17 21 13 11 15 13						Window Vanes				
23-17 21 13 11 15 15						Blinds Hardware			Includes motorized controls.	
23-17 21 13 13				Curtains and Drapes						
23-17 21 13 13 11					Drapery Tracks					
23-17 21 13 15				Window Interior Shutters						
23-17 21 13 17				Window Shades						
23-17 21 13 17 11					Cellular/Pleated Shades					
23-17 21 13 17 13					Roller Shades					
23-17 21 15			Fire and Smoke Shutters and Curtains							
23-17 21 15 11				Fire Shutters						
23-17 21 15 11 11					Vertical Fire Shutters					
23-17 21 15 11 13					Horizontal Fire Shutters					
23-17 21 15 13				Smoke Curtains						
23-17 21 15 13 11					Water Spray Smoke Curtains					
23-17 21 15 15				Smoke Shutters						
23-17 21 17			Insect Screens							
23-17 21 17 11				Complete Insect Screens						
23-17 21 17 13				Components						
23-17 21 17 13 11					Frames for Insect Screens					
23-17 21 17 13 13					Mesh for Insect Screens					
23-17 23 00		Circulation and Escape Products							Products which aid in the circulation or escape of occupants from the facility.	
23-17 23 11			Ramps							
23-17 23 13			Walkways							
23-17 23 15			Ladders							
23-17 23 15 11				Ladder Component Products						
23-17 23 15 11 11					Ladder Hardware					
23-17 23 15 11 13					Rungs					
23-17 23 15 13				Vertical Ladders						
23-17 23 15 15				Ship Ladders						
23-17 23 17			Stairs							
23-17 23 17 11				Stair Component Products						
23-17 23 17 11 11					Stair Treads					
23-17 23 17 11 13					Stair Nosings					
23-17 23 17 11 15					Stair Tread Coverings					
23-17 23 17 11 17					Stair Railings					
23-17 23 17 11 19					Stair Handrails					
23-17 23 17 11 21					Stair Barrier Gates					
23-17 23 17 13				Spiral Stairs						
23-17 23 17 13 11					Metal Spiral Stairs					
23-17 23 17 13 13					Wood Spiral Stairs					
23-17 23 17 15				Retractable Stairs						
23-17 23 19			Fire Escapes							
23-17 23 19 11				Escape Ladders, Stairs						
23-17 23 19 11 11					Fire Escapes					
23-17 23 19 13				Escape Slides						
23-17 23 21			Evacuation Equipment							
23-17 23 21 11				Evacuation Slings						
23-17 23 21 13				Evacuation Chairs						
23-17 25 00		Circulation Guiding and Protection Products							Products which guide occupants in the circulation or escape from the facility.	
23-17 25 11			Guardrails					Railings, Balustrades	Includes: Railings and Balustrades	
23-17 25 11 11				Guardrail Component Products						
23-17 25 11 11 11					Cable Infill Systems					
23-17 25 11 11 13					Infill Panels					

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23-17 25 11 11 15					Posts, Newel Posts, Pickets					
23-17 25 11 11 17					Railing					
23-17 25 13			Handrails							
23-17 25 13 11				Rope Handrails						
23-17 25 13 13				Capping						
23-17 25 13 15				Chain Handrails						
23-17 25 15			Impact Protection Products							
23-17 25 15 11				Impact Guard Rails						
23-17 25 15 11 11					Bumper Guards					
23-17 25 15 13				Corner Guards						
23-17 25 15 15				Column Protectors						
23-17 25 15 17				Door and Wall Protector Products						
23-17 25 15 17 11					Impact Resistant Wall Protection Products					
23-19 00 00	Specialty Products								Architectural and other accessories and ornamentation used on the exterior and interior of the facility, and other miscellaneous products.	Includes steeples, spires, lockers, fireplaces, stoves, flagpoles, scales, specialty bathroom products, and engineered structures.
23-19 11 00		Information Display Specialties							Specialties which display information.	
23-19 11 11			Information Signs							
23-19 11 13			Display Lettering							
23-19 11 15			Display Numerals							
23-19 11 17			Notice Boards					Bulletin Board, Pin Board		
23-19 11 19			Writing Boards							
23-19 11 19 11				Interactive Multi Media Whiteboards						
23-19 11 19 13				Chalk Boards						
23-19 11 19 15				Dry Erase Boards						
23-19 11 19 17				Drawing Boards						
23-19 11 21			Plaques							
23-19 11 23			Poster Display Units							
23-19 11 25			Display Screens							
23-19 11 27			Pictograms							
23-19 11 29			Directory Boards							
23-19 11 31			Electronic Copy Boards							
23-19 11 33			Magnetic Boards							
23-19 13 00		Lockers								
23-19 13 11			Metal Lockers							
23-19 13 13			Plastic Laminate Lockers							
23-19 13 15			Solid Core Lockers							
23-19 15 00		Communication Specialties							Specialties aiding in communication.	
23-19 15 11			Mail Boxes						See: Manufactured Exterior Specialties	
23-19 15 13			Mail Racks							
23-19 15 15			Pigeonholes							
23-19 15 17			Mail Trolleys							
23-19 15 19			Mail Handling Equipment							
23-19 15 21			Telephone Booths							
23-19 17 00		Fireplaces							An opening on a hearth, served by a chimney flue, where an open fire may be placed.	
23-19 17 11			Electric Fireplace							
23-19 17 13			Fuel Oil Fireplace							
23-19 17 15			Gas Fireplace							
23-19 17 17			Solid Fuel Fireplace					Wood Fireplace, Charcoal Fireplace	Includes wood, charcoal, and pellet.	
23-19 17 19			Fireplace Doors							
23-19 17 21			Fireplace Water Heaters							
23-19 19 00		Flue and Chimney Products								
23-19 19 11			Complete Flue and Chimney Systems						Residential and Commercial Fireplaces only - Industrial smoke stacks to be found in Utility and Transportation Products	
23-19 19 11 11				Chimney Gas Vents						
23-19 19 11 13				Fabricated Stacks						
23-19 19 11 15				Fabricated Breechings and Accessories						
23-19 19 11 17				Insulated Sectional Chimneys						
23-19 19 13			Fireplace Ductwork							
23-19 19 13 11				Fireplace B Vent Ductwork						
23-19 19 13 13				Fireplace Direct Vent Ductwork						

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23-19 19 13 15				Fireplace Free Vent Ductwork						
23-19 19 13 17				Fireplace Tri Wall Vent Ductwork						
23-19 19 13 19				Fireplace Dampers						
23-19 19 15				Flue and Chimney Systems Components						
23-19 19 15 11				Draft Control Devices						
23-19 19 15 13				Fireplace Lintels						
23-19 19 15 15				Flue Linings						
23-19 19 15 17				Flue Caps						
23-19 19 15 19				Flue Cows						
23-19 19 15 21				Chimney Dampers						
23-19 19 15 23				Fire Shutter Extinguishers						
23-19 19 15 25				Flue Gas Purifiers						
23-19 21 00		Hearths							The floor of a fireplace; also the portion of the floor immediately in front of the fireplace, which can be made of brick, tile or stone.	
23-19 23 00		Kilns							A furnace or oven for drying, charring, hardening, baking, calcining, sintering, or burning various materials or a chamber used for drying lumber.	
23-19 25 00		Pest Control Devices								
23-19 25 11			Bird Control Devices							
23-19 25 11 11				Roost Inhibitors						
23-19 25 11 11 11					Bird Wire					
23-19 25 11 11 13					Bird Spikes					
23-19 25 11 11 15					Bird Netting					
23-19 25 11 13				Bird Flight Diverters						
23-19 25 11 15				Bird Repellant Devices						
23-19 25 11 15 11					Sonic Repellant Devices					
23-19 25 11 15 13					Ultra Sonic Repellant Devices					
23-19 25 11 15 15					Visual Devices					
23-19 25 11 17				Bird Attractors						
23-19 25 11 19				Bird Control Accessories						
23-19 25 11 19 11					Mounting Clips					
23-19 25 11 19 13					Extension Speakers				Extends sound for best utilization of audio products.	
23-19 25 11 19 15					Solar Panels				Constantly charges a repeller's battery.	
23-19 25 11 19 17					Spikes Adhesives					
23-19 25 11 19 19					Foot Pumps				for inflating balloon (visual) devices	
23-19 25 11 19 21					Caulking Guns					
23-19 25 13			Insect Control Devices							
23-19 25 13 11				Electronic Insect Repellers						
23-19 25 13 11 11					Automatic Misting Systems					
23-19 25 13 11 13					Vacuum System s					
23-19 25 13 11 15					Sonic Repellers					
23-19 25 13 11 17					Ultrasonic Repellers					
23-19 25 13 11 19					Electromagnetic Repellers					
23-19 25 13 13				Fly Traps						
23-19 25 13 15				Screens						
23-19 25 13 17				Foam Sealants						
23-19 25 13 19				Fly Boards						
23-19 25 13 21				Insect Control Accessories						
23-19 25 13 21 11					Nozzles					
23-19 25 13 21 13					Tubing					
23-19 25 13 21 15					Risers					
23-19 25 13 21 17					Fittings					
23-19 25 13 21 19					Remote Controls					
23-19 25 15			Rodent Control Devices							
23-19 25 15 11				Traps						
23-19 25 15 11 11					Snap Traps					
23-19 25 15 11 13					Glue Traps					
23-19 25 15 11 15					Sticky Traps					
23-19 25 15 11 17					Electronic Traps					
23-19 25 15 13				Ultrasonic Rodent Control Devices						
23-19 25 15 15				Electronic Rodent Control Devices						
23-19 25 15 17				Proofing Devices						
23-19 25 15 19				Tracking Products						
23-19 25 15 21				Spray Devices						

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23-19 25 15 23				Rodent Control Accessories						
23-19 27 00		Manufactured Exterior Specialties							Exterior specialties which are manufactured before they are delivered to the site. See also: Mail Boxes, Exterior Directional Signs	
23-19 27 11			Weathervanes							
23-19 27 13			Clocks							
23-19 27 15			Cupolas							
23-19 27 17			Spires							
23-19 27 19			Steeples							
23-19 27 21			Towers							
23-19 27 23			Industrial Breechings							
23-19 27 23 11				Industrial Breechings						
23-19 27 23 13				Fabricated Industrial Breechings						
23-19 27 23 15				Fabricated Industrial Breechings Accessories						
23-19 27 25			Industrial Chimneys							
23-19 27 25 11				Industrial Chimney Shafts						
23-19 27 25 13				Industrial Chimney Linings						
23-19 27 25 15				Industrial Chimney Draft Control Devices						
23-19 27 25 17				Industrial Insulated Sectional Chimneys						
23-19 27 27			Industrial Stacks							
23-19 29 00		Complete Buildings							Buildings prefabricated and ready for incorporation into the site.	
23-19 29 11			Pre Engineered Structures					Systems Buildings		Includes: Systems Buildings
23-19 29 11 11				Pre Engineered Structure Component						
23-19 29 11 11 11					Lift Shaft Components					
23-19 29 11 13				Framed Pre Engineered Buildings						
23-19 29 11 15				Panel Structure Pre Engineered Buildings						
23-19 29 11 17				Cubicle Structure Pre Engineered Buildings						
23-19 29 11 19				Air Supported Pre Engineered Buildings						
23-19 29 11 21				Cable Supported Pre Engineered Buildings						
23-19 29 11 23				Fabric Pre Engineered Building Structures						
23-19 29 11 25				Prefabricated Dome Structures						
23-19 29 11 27				Portable Buildings					Portable buildings are buildings that can be moved by man power.	
23-19 29 11 29				Mobile Buildings					Mobile structures are buildings that require a vehicle to move.	
23-19 29 13			Covers and Shelters						Items which are prefabricated and complete building products, not adjunct to a building.	
23-19 29 13 11				General Purpose Shelters						
23-19 29 13 13				Shelters for Public Transport						
23-19 29 13 13 11					Bus Stop Shelters					
23-19 29 13 13 13					Train Platform Shelters					
23-19 29 13 15				Walkway Coverings						
23-19 29 13 17				Shelters for Civil Protection						
23-19 29 13 19				Animal Shelters						
23-19 29 13 19 11					Kennels					
23-19 29 13 21				Car Shelters				Carport		
23-19 29 13 23				Shelters for Services						
23-19 29 13 25				Garden Umbrellas						
23-19 29 15			Special Purpose Buildings							
23-19 29 15 11				Observatories						
23-19 29 15 13				Control Booths						
23-19 29 15 15				Greenhouses						
23-19 29 15 15 11					Glazed Greenhouse Structures					
23-19 29 15 17				Summerhouses						
23-19 29 15 17 11					Gazebos					
23-19 29 15 17 13					Pavilions					
23-19 29 15 19				Kiosks						
23-19 29 15 21				Public Restrooms						
23-19 29 15 23				Sauna Buildings						
23-19 29 15 25				Funerary Construction Products						
23-19 29 15 25 11					Preassembled Mausoleums					
23-19 29 15 27				General Purpose Booths						See also: 23-19 31 21 11 Plant Office Shelter and Booth
23-19 29 15 27 11					Ticket Booths					
23-19 29 15 27 13					Parking Attendant Booths					
23-19 29 15 27 15					Toll Booths					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-19 29 15 27 17					Guard Booths					
23-19 29 15 27 19					Valet Booths					
23-19 29 17			Building Modules							
23-19 29 17 11				Prison Cells						
23-19 29 17 13				Hotel Rooms						
23-19 29 17 15				Dormitory Rooms						
23-19 29 19			Integrated Assemblies							
23-19 29 19 11				Sound, Vibration and Seismic Control Products						
23-19 29 19 11 11					Floating Floor Construction Products					
23-19 31 00		Room Units							Prefabricated rooms ready for placement on or into the site.	
23-19 31 11			General Purpose Room Units							
23-19 31 11 11				Prefabricated General Purpose Rooms						
23-19 31 13			Storage Room Units							
23-19 31 15			Special Purpose Rooms							
23-19 31 15 11				Athletic Rooms						
23-19 31 15 11 11					Handball Racquetball Courts					
23-19 31 15 13				Conservatories				Solarium		
23-19 31 15 13 11					Solarium Specialties					
23-19 31 15 15				Planetariums						
23-19 31 15 17				Saunas						
23-19 31 15 19				Steam Baths						
23-19 31 17			Sanitary Room Units							
23-19 31 17 11				Bathroom Units						
23-19 31 17 13				Lavatory Units						
23-19 31 19			Controlled Environment Rooms							
23-19 31 19 11				Clean Rooms						
23-19 31 19 13				Insulated Rooms						
23-19 31 19 13 11					Cold Storage Rooms					
23-19 31 19 15				Sound Conditioned Rooms						
23-19 31 19 15 11					Practice Booths					
23-19 31 19 17				Hyperbaric Rooms						
23-19 31 19 19				Radiation Protected Rooms						
23-19 31 19 19 11					Electromagnetic Shielded Rooms					
23-19 31 19 19 13					RF Shielded Rooms					
23-19 31 19 19 15					BO Shielded Rooms					
23-19 31 19 19 17					Radio Frequency Protected Rooms					
23-19 31 19 19 19					X Ray Protected Rooms					
23-19 31 19 19 21					Nuclear Radiation Protected Rooms					
23-19 31 19 19 23					High Energy Magnetic Pulse Protected Rooms					
23-19 31 21			Plant and Control Room Units							
23-19 31 21 11				Plant Office Shelters and Booths						See also: 23-19 29 15 27 General Purpose Booths
23-19 31 23			Corridor Units							
23-21 00 00	Furnishings, Fixtures and Equipment Products								Amenities and other products that enable the use and enjoyment of the facility, both interior and exterior.	Includes recreational and fitness equipment, art, playground equipment, pools, potted plants, furniture, and food service and other light duty equipment. Does not include industrial equipment.
23-21 11 00		Commercial Furniture							Equipment for inhabited interiors and outlying spaces such as tables, chairs, beds and desks used at the commercial level.	
23-21 11 11			Commercial Storage Units							
23-21 11 11 11				Commercial Storage Shelves						
23-21 11 11 13				Commercial Storage Supports						
23-21 11 11 15				Commercial Storage Racking						
23-21 11 11 17				Commercial Mobile Storage Units						
23-21 11 11 19				Commercial Filing Cabinets						
23-21 11 11 21				Architecture Plan Chests				Architecture Map Chest		
23-21 11 11 23				Commercial Desks						
23-21 11 11 25				Commercial Bookcases						
23-21 11 11 27				Commercial Key Hangers						
23-21 13 00		Retail and Office Equipment and Furnishings							Equipment for inhabited interiors such as desks, cash registers and file cabinets used in offices and retail spaces.	
23-21 13 11			Registration Equipment							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 13 13			Checkroom Equipment							
23-21 13 15			Mercantile Equipment and Furnishings							
23-21 13 17			Barber Shop Equipment							
23-21 13 19			Beauty Shop Equipment							
23-21 13 21			Cash Registers							
23-21 13 23			Checkout Equipment							
23-21 13 25			Office Equipment							
23-21 13 25 11				Drafting Equipment						
23-21 13 25 13				Plotters						
23-21 13 25 15				Drawing Equipment						
23-21 13 25 17				Office Accessories						
23-21 15 00		Wardrobe and Closet Specialties							Equipment for inhabited interiors and having to do with wardrobes and closets such as coat racks and shelving units.	
23-21 15 11			Wardrobes							
23-21 15 13			Chests of Drawers							
23-21 15 15			Clothing Lockers							
23-21 15 17			Clothing Racks							
23-21 15 17 11				Coat Racks						
23-21 15 17 13				Hat Racks						
23-21 15 19			Clothing Hangers							
23-21 15 19 11				Shoe Trees						
23-21 15 19 13				Coat Hooks						
23-21 15 19 15				Coat Hangers						
23-21 15 19 17				Coat Rails						
23-21 15 21			Cloakroom Units							
23-21 15 23			Umbrella Storage Stands							
23-21 15 25			Checkroom Equipment							
23-21 15 25 11				Manual Checkroom Equipment						
23-21 15 25 13				Automated Checkroom Equipment						
23-21 15 27			Clothing Shelving Units							
23-21 15 27 11				Clothing Shelves						
23-21 15 27 13				Clothing Shelving and Storage Units						
23-21 17 00		Interior Refuse Disposal Furniture							Furniture which aids in the disposal of waste. See also: Site Products	
23-21 17 11			Interior Waste Bins							
23-21 17 13			Interior Ash Trays							
23-21 17 15			Interior Refuse Holders							
23-21 19 00		Casework							Assembled cabinetry or millwork.	
23-21 19 11			Modular General Casework						Casework which can be used for more than one purpose, is prefabricated (not customized) and is not in the specialty category.	
23-21 19 11 11				Metal Modular General Casework						
23-21 19 11 13				Wood Modular General Casework						
23-21 19 11 15				Plastic Modular General Casework						
23-21 19 13			Custom General Casework							
23-21 19 15			Specialty Casework						Casework only used for one purpose.	
23-21 19 15 11				Bank Specialty Casework						
23-21 19 15 13				Hospitality Specialty Casework						
23-21 19 15 15				Medical Specialty Casework				Healthcare Specialty Casework		
23-21 19 15 15 11					Hospital Specialty Casework					
23-21 19 15 15 13					Nurse Station Specialty Casework					
23-21 19 15 15 15					Exam Room Specialty Casework					
23-21 19 15 15 17					Dental Specialty Casework					
23-21 19 15 15 19					Pharmacy Specialty Casework					
23-21 19 15 17				Display Specialty Casework						
23-21 19 15 19				Religious Specialty Casework						
23-21 19 15 21				Library Specialty Casework						
23-21 19 15 21 11					Library Specialty Casework Study Carrels					
23-21 19 15 21 13					Library Specialty Casework Book Stacks					
23-21 19 15 21 15					Library Specialty Casework Periodical Racks					
23-21 19 15 23				Educational Specialty Casework						
23-21 19 15 23 11					Educational Specialty Casework Study Carrels					
23-21 19 15 25				Laboratory Specialty Casework						
23-21 19 15 25 11					Metal Laboratory Specialty Casework					
23-21 19 15 25 13					Plastic-Laminate-Clad Laboratory Specialty Casework					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 19 15 25 15					Wood Laboratory Specialty Casework					
23-21 19 15 25 17					Solid-Plastic Laboratory Specialty Casework					
23-21 19 15 27				Mortuary Specialty Casework						
23-21 19 15 29				Commercial Kitchen Specialty Casework						
23-21 19 15 31				Darkroom Specialty Casework						
23-21 19 15 33				Residential Specialty Casework						
23-21 19 15 33 11					Residential Kitchen Specialty Casework					
23-21 19 15 33 13					Residential Bathroom Specialty Casework					
23-21 19 15 33 15					Residential Dormitory Specialty Casework					
23-21 19 15 35				Utility Room Specialty Casework						
23-21 19 15 39				Mailroom Casework						
23-21 19 17			Casework Components					counters, countertops		
23-21 19 17 11				Casework Component Cabinets						
23-21 19 17 13				Casework Component Hardware						
23-21 19 17 15				Casework Component Work Surfaces				Counters		Includes: Counters
23-21 21 00		Food Service Equipment and Furnishings						Restaurant Equipment	Equipment used in food service and furnishings related to use in food service. See: Residential Furniture and Equipment	
23-21 21 11			Commercial Food Services Cabinets						Commercial - is industrial grade products. Residential - consumer grade products.	
23-21 21 11 11				Commercial Hot Cabinets				Heated Food Cabinet		
23-21 21 11 13				Commercial Cold Cabinets						
23-21 21 11 15				Commercial Combination Hot Cold Cabinets						
23-21 21 11 17				Commercial Pastry Cabinets						
23-21 21 11 19				Commercial Warming Cabinets						
23-21 21 11 21				Commercial Snack Cabinets						
23-21 21 13			Commercial Food Cooking Equipment							
23-21 21 13 11				Commercial Bain Maries						
23-21 21 13 13				Commercial Beverage Equipment						
23-21 21 13 13 11					Commercial Coffee Makers					
23-21 21 13 13 13					Commercial Coffee Warmers					
23-21 21 13 13 15					Commercial Iced Tea Makers					
23-21 21 13 15				Commercial Broilers						
23-21 21 13 15 11					Commercial Steam Broilers					
23-21 21 13 15 13					Commercial Infra Red Broilers					
23-21 21 13 15 15					Commercial Gas Broilers					
23-21 21 13 17				Commercial Food Cookers						
23-21 21 13 17 11					Commercial Food Induction Cookers					
23-21 21 13 17 13					Commercial Pasta Cookers					
23-21 21 13 17 15					Commercial Food Pressure Cookers					
23-21 21 13 17 17					Commercial Rice Cookers					
23-21 21 13 19				Commercial Crepe Machines						
23-21 21 13 21				Commercial Fryers						
23-21 21 13 21 11					Commercial Deep Fryers					
23-21 21 13 21 13					Commercial Pressure Fryers					
23-21 21 13 23				Commercial Frying Pans						
23-21 21 13 23 11					Commercial Tilting Frying Pans					
23-21 21 13 25				Commercial Griddles						
23-21 21 13 27				Commercial Grills						
23-21 21 13 27 11					Commercial Barbecue Grills					
23-21 21 13 27 13					Commercial Char Broiler Grills					
23-21 21 13 27 15					Commercial Hot Dog Grills					
23-21 21 13 29				Commercial Kettles						
23-21 21 13 29 11					Commercial Poacher Kettles					
23-21 21 13 29 13					Commercial Salmon Kettles					
23-21 21 13 31				Commercial Ovens						
23-21 21 13 31 11					Commercial Barbecue Ovens					
23-21 21 13 31 13					Commercial Combination Convection Ovens					
23-21 21 13 31 15					Commercial Convection Ovens					
23-21 21 13 31 17					Commercial Microwave Ovens					
23-21 21 13 31 19					Commercial Pastry Ovens					
23-21 21 13 31 21					Commercial Pizza Ovens					
23-21 21 13 31 23					Commercial Proofer Ovens					
23-21 21 13 31 25					Commercial Smoker Ovens					
23-21 21 13 33				Commercial Popcorn Machines						
23-21 21 13 35				Commercial Ranges						
23-21 21 13 37				Commercial Rotisseries						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 21 13 39				Commercial Food Steamers						
23-21 21 13 39 11					Commercial High Pressure Food Steamer					
23-21 21 13 41				Commercial Skilllets						
23-21 21 13 41 11					Commercial Tilt Skilllets					
23-21 21 13 43				Commercial Stoves						
23-21 21 13 45				Commercial Toasters						
23-21 21 13 45 11					Commercial Toaster Conveyors					
23-21 21 13 47				Commercial Waffle Irons						
23-21 21 13 49				Commercial Small Specialized Cooking Equipment						
23-21 21 15				Commercial Food Services Warming Equipment						
23-21 21 15 11				Commercial Food Warmers						
23-21 21 15 13				Commercial Food Warmer Stations				Dump Station		
23-21 21 15 15				Commercial Hot Plates						
23-21 21 15 17				Commercial Steam Tables						
23-21 21 17				Commercial Food Services Cooling Equipment						
23-21 21 17 11				Commercial Refrigerated Tables						
23-21 21 19				Commercial Dishwasher Equipment						
23-21 21 19 11				Commercial Dishwashers						
23-21 21 19 11 11					Commercial Steam Dishwashers					
23-21 21 19 11 13					Commercial Dishwasher Conveyors					
23-21 21 19 11 15					Commercial Dishwasher Tray Conveyors					
23-21 21 21				Commercial Food Disposal Equipment						
23-21 21 21 11				Commercial Waste Disposal Units						
23-21 21 21 13				Commercial Garbage Disposals						
23-21 21 21 15				Commercial Garbage Pulpers						
23-21 21 23				Commercial Food Display Equipment						
23-21 21 23 11				Commercial Food Display Coolers				Show Case		
23-21 21 23 11 11					Commercial Freezer Food Display Cases					
23-21 21 23 11 13					Commercial Heated Food Display Cases					
23-21 21 23 11 15					Commercial Refrigerated Food Display Cases					
23-21 21 23 11 17					Commercial Unconditioned Food Display Cases					
23-21 21 23 13				Commercial Food Guards				Sneeze Guard		
23-21 21 25				Commercial Food and Beverage Dispensing Equipment						
23-21 21 25 11				Commercial Soda Fountain Equipment						
23-21 21 25 13				Commercial Bottled Water Dispensers						
23-21 21 25 15				Commercial Bowl and Plate Dispensers						
23-21 21 25 17				Commercial Bread Dispensers						
23-21 21 25 19				Commercial Cappuccino or Espresso Dispensers						
23-21 21 25 21				Commercial Carbonated Beverage Dispensers						
23-21 21 25 23				Commercial Coffee Dispensers						
23-21 21 25 25				Commercial Condiment Dispensers						
23-21 21 25 27				Commercial Cream Dispensers						
23-21 21 25 29				Commercial Cup Dispensers						
23-21 21 25 31				Commercial Cup and Saucer Dispensers						
23-21 21 25 33				Commercial Bubbler Dispensers						
23-21 21 25 35				Commercial Drinking Glass Dispensers						
23-21 21 25 37				Commercial Flatware Dispensers						
23-21 21 25 39				Commercial Hot Chocolate Dispensers						
23-21 21 25 41				Commercial Hot Water Dispensers						
23-21 21 25 43				Commercial Ice Cream Dispensers						
23-21 21 25 45				Commercial Milk Dispensers						
23-21 21 25 47				Commercial Milkshake Dispensers						
23-21 21 25 49				Commercial Non Carbonated Beverage Dispensers						
23-21 21 25 49 11					Commercial Refrigerated Non Carbonated Beverage Dispensers					
23-21 21 25 51				Commercial Plate Dispensers						
23-21 21 25 53				Commercial Saucer Dispensers						
23-21 21 25 55				Commercial Slush Dispensers						
23-21 21 25 57				Commercial Soft Serve Ice Cream Dispensers						
23-21 21 25 59				Commercial Syrup Pump Dispensers						
23-21 21 25 61				Commercial Tray Dispensers						
23-21 21 25 63				Commercial Water Filter System						
23-21 21 25 65				Commercial Filtration Equipment						
23-21 21 27				Commercial Refrigerators And Freezers						
23-21 21 27 11				Commercial Blast Chillers					Rapidly cools food	
23-21 21 27 13				Commercial Freezers						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 21 27 13 11					Commercial Blast Freezers				Accelerated freezing not meant for long term storage	
23-21 21 27 13 13					Commercial Chest Freezers					
23-21 21 27 13 15					Commercial Flammable Liquid Freezers					
23-21 21 27 13 17					Commercial Freeze Drying Equipment					
23-21 21 27 13 19					Commercial Plate Freezers					
23-21 21 27 13 21					Commercial Sub Zero Freezers					
23-21 21 27 13 23					Commercial Upright Freezers					
23-21 21 27 13 25					Commercial Upright Reach In Freezers					
23-21 21 27 13 27					Commercial Upright Pass Through Freezers					
23-21 21 27 13 29					Commercial Upright Roll In Freezers					
23-21 21 27 13 31					Commercial Walk In Freezers					
23-21 21 27 15				Commercial Refrigerators						
23-21 21 27 15 11					Commercial Flammable Liquid Refrigerators					
23-21 21 27 15 13					Commercial Liquid Nitrogen Refrigerators					
23-21 21 27 15 15					Commercial Refrigerated Containers					
23-21 21 27 15 17					Commercial Refrigerated Tanks					
23-21 21 27 15 19					Commercial Refrigerated Vessels					
23-21 21 27 15 21					Commercial Upright Refrigerators					
23-21 21 27 15 23					Commercial Upright Reach In Refrigerators					
23-21 21 27 15 25					Commercial Upright Pass Through Refrigerators					
23-21 21 27 15 27					Commercial Upright Roll In Refrigerators					
23-21 21 27 15 29					Commercial Walk In Refrigerators					
23-21 21 27 17				Commercial Refrigerator Freezers						
23-21 21 27 19				Commercial Food Storage Coolers						
23-21 21 27 19 11					Commercial Walk In Coolers					
23-21 21 29			Commercial Ice Machines							
23-21 21 29 11				Commercial Block Ice Makers						
23-21 21 29 13				Commercial Cube Ice Makers						
23-21 21 29 15				Commercial Flaker Ice Makers						
23-21 21 29 17				Commercial Ice Dispensers						
23-21 21 29 19				Commercial Ice Shaver Dispensers						
23-21 21 29 21				Commercial Ice Maker Bins						
23-21 21 31			Commercial Food Preparation Equipment							
23-21 21 31 11				Commercial Food Mixers						
23-21 21 31 13				Commercial Food Peelers						
23-21 21 31 15				Commercial Food Processors						
23-21 21 31 17				Commercial Food Service Stations						
23-21 21 31 19				Commercial Food Slicers						
23-21 21 31 19 11					Commercial Electric Food Slicers					
23-21 21 31 19 13					Commercial Mechanical Food Slicers					
23-21 21 31 21				Commercial Food Preparation Tables						
23-21 21 31 21 11					Commercial Refrigerated Food Preparation Tables					
23-21 21 31 23				Commercial Drink Making Equipment						
23-21 21 33			Commercial Food Service Furniture					Restaurant Furniture		See also: Residential Furniture and Equipment
23-21 21 33 11				Commercial Bar Stools						
23-21 21 33 13				Commercial Restaurant Chairs						
23-21 21 33 15				Commercial Restaurant Booths						
23-21 21 33 17				Commercial Restaurant Seating Units						
23-21 21 33 19				Commercial Restaurant Tables						
23-21 21 35			Commercial Serving Counters							
23-21 21 35 11				Commercial Bars						
23-21 21 35 11 11					Commercial Beverage Bars					
23-21 21 35 11 13					Commercial Salad Bars					
23-21 21 35 11 15					Commercial Bar Equipment					
23-21 21 35 13				Commercial Serving Counters						
23-21 21 35 13 11					Commercial Condiment Counters					
23-21 21 35 13 13					Commercial Serving Counters					
23-21 21 35 15				Commercial Service Line Equipment						
23-21 21 37			Commercial Food Service Storage Equipment							
23-21 21 37 11				Commercial Bottle Racks						
23-21 21 39			Commercial Food Service Delivery Equipment							
23-21 21 39 11				Commercial Food Delivery Conveyors						
23-21 21 39 13				Commercial Food Delivery Carts						
23-21 21 39 15				Commercial Restaurant Turntables						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 21 41			Commercial Food Service Ventilation Equipment							
23-21 21 41 11				Commercial Food Hood Equipment						
23-21 21 41 11 11					Commercial Food Service Hoods					
23-21 21 41 13				Commercial Food Ventilation Equipment						
23-21 21 41 13 11					Commercial Food Ventilation Fire Suppression Systems					
23-21 21 41 13 13					Commercial Catering Ventilation					
23-21 21 43			Commercial Food Processing Equipment							
23-21 21 45			Commercial Food Weighing Equipment							
23-21 21 47			Commercial Food Wrapping Equipment							
23-21 23 00		Residential Furniture and Equipment							Non-commercial furniture and equipment used internally or in the outlying spaces of the building. See: Commercial Food Service Furniture or Food Service Equipment and Furnishings	
23-21 23 11			Complete Residential Dining Room Suites							
23-21 23 13			Residential Seating							
23-21 23 13 11				Residential Chairs						
23-21 23 13 13				Residential Settees						
23-21 23 13 15				Residential Sofas						
23-21 23 13 17				Residential Stools						
23-21 23 13 19				Residential Benches						
23-21 23 13 21				Residential Chaises Lounges						
23-21 23 13 23				Residential Sofa Beds						
23-21 23 13 25				Residential Chair Beds						
23-21 23 15			Residential Tables							
23-21 23 15 11				Residential Dining Room Tables						
23-21 23 15 13				Residential Sideboards						
23-21 23 15 15				Residential End Tables						
23-21 23 15 17				Residential Coffee Tables						
23-21 23 17			Residential Storage Units							
23-21 23 17 11				Residential Cabinet						
23-21 23 17 13				Residential China Cabinets						
23-21 23 17 15				Residential Cupboards						
23-21 23 17 17				Residential Chests						
23-21 23 19			Residential Bedroom Furniture							
23-21 23 19 11			Complete Residential Bedroom Suites							
23-21 23 19 13				Residential Beds						
23-21 23 19 13 11					Residential Headboards					
23-21 23 19 13 13					Residential Footboards					
23-21 23 19 13 15					Residential Cots					
23-21 23 19 13 17					Residential Mattresses					
23-21 23 19 15				Residential Bedside Units					File or storage cabinet and table lamp combination	
23-21 23 19 17				Residential Dressing Tables						
23-21 23 19 19				Residential Dressers						
23-21 23 21			Residential Food Cabinets						See: Residential Casework	
23-21 23 23			Residential Food Cooking Equipment							
23-21 23 23 11				Residential Broilers						
23-21 23 23 11 11					Residential Steam Broilers					
23-21 23 23 11 13					Residential Infra Red Broilers					
23-21 23 23 11 15					Residential Gas Broilers					
23-21 23 23 13				Residential Food Cookers						
23-21 23 23 13 11					Residential Food Induction Cookers					
23-21 23 23 13 13					Residential Pasta Cookers					
23-21 23 23 13 15					Residential Food Pressure Cookers					
23-21 23 23 13 17					Residential Rice Cookers					
23-21 23 23 15				Residential Crepe Machines						
23-21 23 23 17				Residential Fryers						
23-21 23 23 17 11					Residential Deep Fryers					
23-21 23 23 17 13					Residential Pressure Fryers					
23-21 23 23 19				Residential Griddles						
23-21 23 23 21				Residential Grills						
23-21 23 23 21 11					Residential Barbecue Grills					
23-21 23 23 21 13					Residential Char Broiler Grills					
23-21 23 23 21 15					Residential Hot Dog Grills					
23-21 23 23 23				Residential Kettles						
23-21 23 23 23 11					Residential Poacher Kettles					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 23 23 23 13					Residential Salmon Kettles					
23-21 23 23 25				Residential Ovens and Stoves					A stove can include both units (which is referred to as a range), the burners (or cooktops) as well as the oven, or just one of the two units dependent on the setup of the home. An oven is an enclosed compartment or receptacle in which one can bake or heat an item.	
23-21 23 23 25 11					Residential Stoves			Kitchen Range, cooking stove, kitchen stove, or cooker, cookstove.		
23-21 23 23 25 13					Residential Combination Convection Ovens					
23-21 23 23 25 15					Residential Convection Ovens					
23-21 23 23 25 17					Residential Gas Ovens					
23-21 23 23 25 19					Residential Electric Ovens					
23-21 23 23 25 21					Residential Microwave Ovens					
23-21 23 23 27				Residential Rotisseries						
23-21 23 23 29				Residential Food Steamers						
23-21 23 23 29 11					Residential High Pressure Food Steamer					
23-21 23 23 31				Residential Small Specialized Cooking Equipment						
23-21 23 25				Residential Dishwashers						
23-21 23 25 11					Residential Electric Dishwashers					
23-21 23 25 13					Residential Gas Dishwashers					
23-21 23 27				Residential Waste Disposal Units				Garbage Disposals		
23-21 23 27 11					Residential Garbage Disposals					
23-21 23 27 13					Residential Garbage Compactors					
23-21 23 27 13 11					Residential Coffee Dispensers					
23-21 23 29				Residential Food and Beverage Dispensing Equipment						
23-21 23 29 11					Residential Cappuccino or Espresso Dispensers					
23-21 23 29 13					Residential Bubbler Dispensers					
23-21 23 29 15					Residential Hot Water Dispensers					
23-21 23 31				Residential Water Filter System						
23-21 23 33				Residential Refrigerators And Freezers						
23-21 23 33 11					Residential Freezers					
23-21 23 33 11 11					Residential Chest Freezers					
23-21 23 33 11 13					Residential Sub Zero Freezers					
23-21 23 33 11 15					Residential Upright Freezers					
23-21 23 33 13				Residential Refrigerators						
23-21 23 33 13 11					Residential Upright Refrigerators					
23-21 23 33 15				Residential Refrigerator Freezers						
23-21 23 35				Residential Ice Machines						
23-21 23 35 11					Residential Cube Ice Makers					
23-21 23 35 13					Residential Ice Dispensers					
23-21 23 37				Residential Food Preparation Equipment						
23-21 23 37 11					Residential Food Mixers					
23-21 23 37 13					Residential Food Peelers					
23-21 23 37 15					Residential Food Processors					
23-21 23 37 17					Residential Food Slicers					
23-21 23 37 17 11					Residential Electric Food Slicers					
23-21 23 37 17 13					Residential Mechanical Food Slicers					
23-21 23 37 19				Residential Food Preparation Tables						
23-21 23 39				Residential Kitchen and Dining Room Furniture				Restaurant Furniture		
23-21 23 39 11					Residential Bar Stools					
23-21 23 39 13					Residential Kitchen and Dining Room Chairs					
23-21 23 39 15					Residential Kitchen and Dining Room Tables					
23-21 23 39 17				Residential Bars						
23-21 23 39 17 11					Residential Beverage Bars					
23-21 23 39 17 13					Residential Bar Equipment					
23-21 23 41				Residential Food Storage Equipment						See also: Residential Casework
23-21 23 41 11					Residential Bottle Racks					
23-21 23 43				Residential Cooking Ventilation Equipment						
23-21 23 43 11					Residential Range Hoods					
23-21 23 43 13					Residential Food Ventilation Equipment					
23-21 23 45				Residential Clothes Airers						
23-21 23 45 11					Residential Clothes Stands					
23-21 23 45 13					Residential Clothes Lines					
23-21 23 47				Residential Combination Laundry Washer Dryers						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 23 49			Residential Ironing and Pressing Machines							
23-21 23 51			Residential Laundry Dryers							
23-21 23 51 11				Residential Electric Laundry Dryers						
23-21 23 51 13				Residential Gas Laundry Dryers						
23-21 23 53			Residential Washing Machines							
23-21 23 53 11				Residential Front Loading Laundry Washers						
23-21 23 53 13				Residential Side Loading Laundry Washers						
23-21 23 53 15				Residential Top Loading Laundry Washers						
23-21 25 00		Educational and Cultural Equipment and Furnishings							Equipment or furnishings used in educational settings as well as cultural settings.	
23-21 25 11			Group Seating							
23-21 25 11 11				Auditorium Seating						
23-21 25 11 11 11					Fixed Audience Seating					
23-21 25 11 11 13					Portable Audience Seating					
23-21 25 11 11 13 11						Folding Audience Chairs				
23-21 25 11 11 13 13						Interlocking Audience Chairs				
23-21 25 11 11 13 15						Stacking Audience Chairs				
23-21 25 11 13				Classroom Furniture						
23-21 25 11 13 11					Seat Assembly					
23-21 25 11 13 13					Table Assembly					
23-21 25 11 13 15					Modular Desks					
23-21 25 11 15				Multiple Use Fixed Seating						
23-21 25 11 17				Platforms						
23-21 25 11 17 11					Portable Stages					
23-21 25 11 17 13					Risers					
23-21 25 11 19				Language Laboratory Equipment						
23-21 25 13			Theater and Stage Equipment							
23-21 25 13 11				Acoustical Shells						
23-21 25 13 13				Rigging Systems and Controls						
23-21 25 13 15				Scenery Docks						
23-21 25 13 17				Suspension Systems						
23-21 25 13 19				Stage Curtains						
23-21 25 15			Planetarium Equipment and Furnishings							
23-21 25 15 11				Planetarium Projectors						
23-21 25 15 13				Planetarium Seating						
23-21 25 17			Observatory Equipment and Furnishings							
23-21 25 17 11				Telescopes						
23-21 25 19			Ecclesiastical Equipment and Furnishings							
23-21 25 19 11				Religious Seating						
23-21 25 19 11 11					Pews					
23-21 25 19 11 13					Benches					
23-21 25 19 13				Chancel Furnishings						
23-21 25 19 13 11					Lecterns					
23-21 25 19 13 13					Pulpits					
23-21 25 19 13 15					Choir Screens					
23-21 25 19 13 17					Altars					
23-21 25 19 15				Baptisteries						
23-21 25 19 17				Baptismal Fonts						
23-21 25 19 19				Instrumental Equipment						
23-21 25 19 19 11					Organs					
23-21 25 19 19 13					Organ Cases					
23-21 25 19 19 15					Screens					
23-21 25 19 19 17					Bells					
23-21 25 19 19 19					Carillons					
23-21 25 19 21				Synagogue Furniture						
23-21 25 19 23				Mosque Furniture						
23-21 25 19 25				Temple Furniture						
23-21 25 21			Library and Archive Equipment and Furnishings							
23-21 25 21 11				Library Stack Systems						
23-21 25 21 11 11					Library Shelving					
23-21 25 21 13				Book Depositories						
23-21 25 21 15				Book Theft Protection Equipment						
23-21 25 21 17				Library Furniture						
23-21 25 21 17 11					Library Filing Furniture					
23-21 25 21 17 13					Library Display Furniture					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 25 21 17 15					Study Carrels					
23-21 25 23			Exhibition Equipment and Furnishings							
23-21 25 23 11				Display Furniture						
23-21 25 23 11 11					Display Cabinets					
23-21 25 23 11 13					Display Racks					
23-21 25 23 11 15					Display Carousels					
23-21 25 23 13				Gallery Hanging Systems						
23-21 25 23 15				Pedestals				Stands		
23-21 25 23 17				Retail Cabinets						
23-21 25 23 19				Exhibition Stands						
23-21 25 23 21				Shell Schemes					Pre-erected rows of stands or panels for use in exhibitions. Typically includes stand walls, lighting, carpet and possibly a power socket.	
23-21 25 23 23				Exhibit Equipment						
23-21 27 00		Child Furnishings							Furnishings used specifically for children, usually residential use.	
23-21 27 11			Child Beds							
23-21 27 11 11				Infant Cradles						
23-21 27 11 13				Bassinets						
23-21 27 11 15				Infant Beds				Crib		
23-21 27 11 17				Toddler Beds						
23-21 27 11 19				Children Beds						
23-21 27 13			Child Cots							
23-21 27 13 11				Toddler Cots						
23-21 27 13 13				Children Cots						
23-21 27 13 15				Cot Carrier						
23-21 27 15			Child Playpens							
23-21 27 17			Child Benches							
23-21 27 17 11				Toddler Benches						
23-21 27 17 13				Children Benches						
23-21 27 19			Child Bathtub							
23-21 27 19 11				Infant Bathtubs						
23-21 27 19 13				Toddler Bathtubs						
23-21 27 19 15				Children Bathtubs						
23-21 27 21			Child Chairs							
23-21 27 21 11				Child High Chairs						
23-21 27 21 13				Child Stools						
23-21 27 23			Child Play Panels							
23-21 27 25			Child Indoor Swings							
23-21 27 25 11				Infant Swings						
23-21 27 25 13				Toddler Swings						
23-21 27 27			Child Sofas							
23-21 27 29			Child Strollers							
23-21 27 29 11				Child Carriage Strollers						
23-21 27 29 13				Child Multiple Carriage Strollers						
23-21 27 29 15				Child Perambulators						
23-21 27 29 17				Child Buggies						
23-21 27 31			Child Tables							
23-21 27 31 11				Diaper Changing Tables						
23-21 27 33			Child Storage Units							
23-21 27 33 11				Child File Cabinets						
23-21 27 33 13				Child Kiosks						
23-21 27 33 15				Child Shelves						
23-21 27 33 17				Child Book Display Units						
23-21 27 33 19				Child Card Catalog Units						
23-21 27 33 21				Child Cubbies						
23-21 27 35			Child Dressers							
23-21 29 00		Athletic and Recreational Equipment							Equipment specific to recreational use and athletic sports. Does not include fitness and exercise equipment.	
23-21 29 11			Athletic or Recreation Screening							
23-21 29 11 11				Tennis Court Windbreakers						
23-21 29 13			Athletic Surfacing							
23-21 29 13 11				Baseball Field Surfacing						
23-21 29 13 13				Multi Purpose Court Surfacing						
23-21 29 13 15				Resilient Matting						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 29 13 17				Synthetic Grass Surfacing						
23-21 29 13 19				Synthetic Running Track Surfacing						
23-21 29 13 21				Tennis Court Surfacing						
23-21 29 15			Athletic Equipment							
23-21 29 15 11				Bowling Alley Equipment						
23-21 29 15 13				Goalposts						
23-21 29 15 15				Nets						
23-21 29 15 17				Backstops						
23-21 29 15 19				Scoreboards						
23-21 29 15 21				Time Clocks						
23-21 29 15 23				Floor Sockets						
23-21 29 15 25				Climbing Equipment						
23-21 29 15 25 11					Climbing Walls					
23-21 29 15 25 13					Climbing Ropes					
23-21 29 15 27				Gymnasium Dividers						
23-21 29 15 29				Wall Mats						
23-21 29 15 31				Floor Mats						
23-21 29 15 33				Referee Platforms						
23-21 29 15 35				Athletic Equipment Storage Racks						
23-21 29 17			Playground Equipment							
23-21 29 17 11				Climbing Apparatus						
23-21 29 17 13				Climbing Walls						
23-21 29 17 13 11					Harness Equipment					
23-21 29 17 15				Merry Go Rounds						
23-21 29 17 17				Playhouse Gardens						
23-21 29 17 19				Rope Climbing Equipment						
23-21 29 17 21				Sand Tables						
23-21 29 17 23				Water Tables						
23-21 29 17 25				Sandboxes						
23-21 29 17 27				See Saws						
23-21 29 17 27 11					Spring, Rocking Equipment					
23-21 29 17 29				Slides						
23-21 29 17 31				Swings						
23-21 29 17 31 11					Harness Swings					
23-21 29 17 31 13					Rope Swings					
23-21 29 17 31 15					Tire Swings					
23-21 29 17 31 17					Seat Swings			Chair swing		
23-21 29 17 33				Playground Tunnel						
23-21 29 17 35				Play Structures						
23-21 29 19			Recreational Equipment					Abbreviation: Rec Equipment		
23-21 29 19 11				Ping Pong Equipment						
23-21 29 19 13				Arcade Machines						
23-21 29 19 15				Billiards Equipment						
23-21 29 19 17				Sauna Equipment						
23-21 29 19 19				Steam Room Equipment						
23-21 29 19 21				Shooting Range Equipment						
23-21 29 19 23				Swimming Pool Equipment						
23-21 29 19 23 11					Diving Boards					
23-21 29 19 23 13					Starting Blocks					
23-21 29 19 23 15					Ladders					
23-21 29 21			Pools							
23-21 29 21 11				Leisure Whirlpools						
23-21 29 21 13				Hot Tubs						
23-21 29 21 15				Swimming Pools						
23-21 29 21 17				Lap Pools				Therapy Pools		See also: Therapy Pools
23-21 29 23			Spectator Stands					Seating		
23-21 29 23 11				Fixed Stadium Seating				Fixed Arena Seating		Main difference between a stadium and an arena are the acoustics. Doesn't seem to effect seating. Both words in some cases are the same according to other dictionaries. There are 2 MF numbers for each of these items.
23-21 29 23 13				Telescoping Stands						
23-21 29 23 15				Bleachers						
23-21 29 23 15 11					Telescoping Bleachers					
23-21 29 23 17				Telescoping Chair Platforms						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 31 00		Fitness and Exercise Equipment							Equipment used specifically for exercise and fitness; not sports.	
23-21 31 11			Exercise Apparatus							
23-21 31 11 11				Weight Training Exercise Apparatus						
23-21 31 11 11 11					Multi Station Weight Training Exercise Apparatus					
23-21 31 13			Exercise Bars							
23-21 31 13 11				Chinning Bars						
23-21 31 13 13				Weightlifting Bars						
23-21 31 15			Exercise Benches							
23-21 31 15 11				Weightlifting Benches						
23-21 31 15 11 11					Adjustable Utility Weightlifting Benches					
23-21 31 15 11 13					Decline Weightlifting Benches					
23-21 31 15 11 15					Incline Weightlifting Benches					
23-21 31 15 11 17					Supine Weightlifting Benches					
23-21 31 17			Exercise Boards							
23-21 31 17 11				Abdominal Exercise Boards						
23-21 31 17 11 11					Raised and Bent Leg Abdominal Exercise Boards					
23-21 31 19			Exercise Machines							
23-21 31 19 11				Abdominal Exercise Machines						
23-21 31 19 13				Back Extension Exercise Machines						
23-21 31 19 15				Biceps Exercise Machines						
23-21 31 19 17				Chest Exercise Machines						
23-21 31 19 19				Closed Chain Exercise Machines						
23-21 31 19 21				Hip Exercise Machines						
23-21 31 19 21 11					Hip Abduction Exercise Machines					
23-21 31 19 21 13					Hip Adduction Exercise Machines					
23-21 31 19 23				Leg Exercise Machines						
23-21 31 19 23 11					Leg Curl Exercise Machines					
23-21 31 19 23 13					Leg Extension Exercise Machines					
23-21 31 19 23 15					Leg Press Exercise Machines					
23-21 31 19 23 17					Leg Press Squat Exercise Machines					
23-21 31 19 23 19					Leg Squat Exercise Machines					
23-21 31 19 25				Neck Exercise Machines						
23-21 31 19 27				Pullover Exercise Machines						
23-21 31 19 29				Rotary Shoulder Exercise Machines						
23-21 31 19 31				Rowing Exercise Machines						
23-21 31 19 33				Shoulder Exercise Machines						
23-21 31 19 35				Treadmills						
23-21 31 19 37				Triceps Exercise Machines						
23-21 31 19 39				Continuous Passive Motion CPM Exercisers						
23-21 31 19 41				Ladder Exercisers						
23-21 31 19 43				Exercise Platforms						
23-21 31 19 45				Ramp Curb Exercisers						
23-21 31 19 47				Staircase Exercisers						
23-21 31 19 49				Upper and Lower Extremities Exercisers						
23-21 31 19 51				Upper Body Exercisers						
23-21 31 21			Exercise Floor Mats							
23-21 31 23			Exercise Pulleys							
23-21 31 23 11				Triplex Exercise Pulleys						
23-21 33 00		Industrial and Manufacturing Equipment and Furnishings							Equipment and furnishings specific to industrial use.	
23-21 33 11			Manufacturing Equipment							
23-21 33 13			Manufacturing Furniture							
23-21 33 13 11				Flat Work Surface Furniture				counter, countertop		
23-21 33 13 13				Work Stations						
23-21 33 15			Shop Equipment							
23-21 33 17			Shop Furniture							
23-21 33 17 11				Shop Work Surfaces				shop counters		
23-21 33 17 13				Shop Storage Fittings						
23-21 35 00		Miscellaneous Equipment and Furnishings								
23-21 35 11			Darkroom Equipment and Furnishings							
23-21 35 11 11				Darkroom Processing Equipment						
23-21 35 13			Vending Equipment							
23-21 35 13 11				Vending Machines						
23-21 35 15			Ticket Machines							
23-21 35 17			Change Machines							
23-21 35 19			Vehicle Service Equipment							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 35 19 11				Compressed Air Vehicle Service Equipment						
23-21 35 19 13				Fuel Dispensing Equipment						
23-21 35 19 15				Vehicle Lubrication Equipment						
23-21 35 19 17				Tire Changing Equipment						
23-21 35 19 19				Vehicle Washing Equipment						
23-21 35 19 21				Vehicle Hoists						
23-21 35 21				Security and Vault Equipment and Furnishings						
23-21 35 21 11				Safes						
23-21 35 21 13				Safe Deposit Boxes						
23-21 35 21 15				Vault Doors						
23-21 35 21 17				Day Gates						
23-21 35 21 19				Anti Bandit Screens						
23-21 35 21 19 11					Gun Ports					
23-21 35 21 21				Teller and Service Equipment						
23-21 35 21 21 11					Automated Banking Systems					
23-21 35 21 21 13					Money Cart Pass Through					
23-21 35 21 21 15					Package Transfer Units					
23-21 35 21 21 17					Service and Teller Window Units					
23-21 35 21 21 19					Teller Equipment Systems					
23-21 35 21 21 21					Deal Drawers					
23-21 35 21 23				Key Security Cabinets						
23-21 35 21 25				Money Handling Equipment						
23-21 35 23				Detention Equipment and Furnishings						
23-21 35 23 11				Detention Enclosures						
23-21 35 23 13				Detention Furnishings and Specialties						
23-21 35 23 15				Detention Furniture						
23-21 35 25				Agricultural Equipment						
23-21 35 25 11				Milkers						
23-21 35 25 13				Stock Feeders						
23-21 35 25 15				Stock Waterers						
23-21 35 25 17				Waste Clean Up Equipment						
23-21 37 00		Furnishings, Ornaments, and Decoration							Products used to decorate or improve or make one more comfortable in a space.	
23-21 37 11			Soft Furnishings							
23-21 37 11 11				Rugs						
23-21 37 11 13				Upholstery						
23-21 37 11 15				Cushions						
23-21 37 11 17				Padding						
23-21 37 11 19				Tablecloths						
23-21 37 13			Decoration					ornament	An item that accents or adorns.	
23-21 37 13 11				Commercial Artwork				Paintings, Prints, Photographs	Artwork that is mass produced and can be ordered out of a catalog or online. Non-original artwork.	Includes: Paintings, Prints, Photographs See also: Historic Preservation Products, Fine Art
23-21 37 13 11 11					Wall Hangings					
23-21 37 13 13				Clocks						
23-21 37 13 15				Mirrors					Mirrors used outside of the bathroom. See toilet and bath accessories.	
23-21 37 13 17				Interior Ornamental Fountains					See: Exterior Ornamental Fountains	
23-21 37 13 19				Ornamental Screens						
23-21 37 13 21				Decorative Planters						
23-21 37 13 23				Decorative Vases						
23-21 39 00		Commercial Washing and Waste Disposal Equipment							Equipment used for washing or waste disposal.	
23-21 39 11			Commercial Washing Equipment							
23-21 39 11 11				High Pressure Washing Equipment						
23-21 39 13			Drain Boards							
23-21 41 00		Commercial Laundry Equipment							Commercial equipment used in laundering clothes. See Residential Furniture and Equipment for residential laundry equipment.	
23-21 41 11			Commercial Clothes Airers							
23-21 41 11 11				Commercial Clothes Dryers						
23-21 41 11 13				Commercial Clothes Stands						
23-21 41 11 15				Commercial Clothes Lines						
23-21 41 13			Commercial Combination Laundry Washer Dryers							
23-21 41 15			Commercial Dry Cleaning Equipment							
23-21 41 17			Commercial Laundry Dispensers							
23-21 41 17 11				Commercial Dry Laundry Detergent Dispensers						
23-21 41 17 13				Commercial Liquid Laundry Detergent Dispensers						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 41 17 15				Commercial Dryer Sheet Dispensers						
23-21 41 19			Commercial Dry Cleaning Machines							
23-21 41 21			Commercial Laundry Extractors							
23-21 41 23			Commercial Flat Work Ironers							
23-21 41 23 11				Commercial Electric Flat Work Ironers						
23-21 41 23 13				Commercial Gas Flat Work Ironers						
23-21 41 23 15				Commercial Steam Flat Work Ironers						
23-21 41 25			Commercial Ironing and Pressing Machines							
23-21 41 27			Commercial Laundry Folding Machines							
23-21 41 29			Commercial Laundry Conveyors							
23-21 41 31			Commercial Laundry Dryers							
23-21 41 31 11				Commercial Electric Laundry Dryers						
23-21 41 31 13				Commercial Gas Laundry Dryers						
23-21 41 31 15				Commercial Steam Laundry Dryers				Laundry Tumbler		
23-21 41 33			Commercial Laundry Presses							
23-21 41 33 11				Commercial Electric Laundry Presses						
23-21 41 33 13				Commercial Gas Laundry Presses						
23-21 41 33 15				Commercial Steam Laundry Presses						
23-21 41 35			Commercial Laundry Spreader Feeders							
23-21 41 37			Commercial Laundry Steam Tunnels							
23-21 41 39			Commercial Laundry Tubs							
23-21 41 41			Commercial Washing Machines							
23-21 41 41 11				Commercial Front Loading Laundry Washers						
23-21 41 41 13				Commercial Side Loading Laundry Washers						
23-21 41 41 15				Commercial Top Loading Laundry Washers						
23-21 41 41 17				Commercial Tunnel Laundry Washers						
23-21 43 00		Cleaning Equipment							Equipment used for the purpose of cleaning.	
23-21 43 11			Buckets							
23-21 43 11 11				Mop Buckets						
23-21 43 11 13				Waste Paper Baskets						
23-21 43 13			Cleaners							
23-21 43 13 11				Pressure Cleaners						
23-21 43 13 13				Steam Cleaners						
23-21 43 15			Custodial Dispensers							
23-21 43 15 11				Air Freshener Dispensers						
23-21 43 15 13				Bathroom Tissue Dispensers						
23-21 43 15 15				Cleaning Rag Dispensers						
23-21 43 15 17				Facial Tissue Dispensers						
23-21 43 15 19				Hand Cleaner Dispensers						
23-21 43 15 21				Institutional Soap Dispensers						
23-21 43 15 23				Lotion Dispensers						
23-21 43 15 25				Paper Towel Dispensers						
23-21 43 15 27				Sanitary Goods Dispensers						
23-21 43 15 29				Toilet Accessories Dispensers						
23-21 43 15 31				Toilet Tissue Dispensers						
23-21 43 15 33				Urinal Accessories Dispensers						
23-21 43 17			Duct Cleaning Machines							
23-21 43 19			Floor Cleaning Equipment							
23-21 43 19 11				Floor Burnishers						
23-21 43 19 13				Floor Polishers						
23-21 43 19 15				Floor Scrapers						
23-21 43 19 17				Floor Scrubbers						
23-21 43 19 19				Floor Sweepers						
23-21 43 19 19 11					Carpet Sweepers					
23-21 43 19 21				Floor Washing Machines						
23-21 43 21			Room Cleaning Equipment							
23-21 43 21 11				Vacuum Cleaning Equipment						
23-21 43 21 11 11					Vacuum Cleaning Systems					
23-21 43 21 11 11 11						Centralized Vacuum Cleaning System				
23-21 43 21 11 13					Vacuum Cleaners					
23-21 43 21 11 13 11						Heavy Duty Tank Vacuum Cleaners				
23-21 43 21 11 13 13						Wet Dry Combination Vacuum Cleaners				
23-21 43 21 11 13 15						Wet Vacuum Cleaners				
23-21 43 21 13				Floor and Wall Cleaning						
23-21 43 21 15				Housekeeping Carts						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-21 43 23			Sanitary Waste Receptacles					Trash Can		
23-21 43 23 11				Installed Sanitary Waste Receptacles						
23-21 43 23 13				Portable Sanitary Waste Receptacles						
23-21 43 25			Custodial Sinks							
23-21 43 25 11				Mop Sinks						
23-21 43 27			Custodial Washers							
23-21 43 27 11				Trash Can Pedestal Washers						
23-21 45 00		Historic Preservation Products							Historical documents and high value original art work.	
23-21 45 11			Fine Art						High value original works of art that are not mass produced, a Monet painting versus a teamwork poster, and describes any art form developed primarily for aesthetics and/or concept rather than utility.	
23-21 45 11 11				Two Dimensional Art						
23-21 45 11 11 11					Fine Art Paintings					
23-21 45 11 11 13					Fine Art Drawings					
23-21 45 11 11 15					Fine Art Printmaking					
23-21 45 11 11 15 11						Fine Art Lithography				
23-21 45 11 11 15 13						Fine Art Intaglio				
23-21 45 11 11 15 15						Fine Art Prints				
23-21 45 11 11 17					Fine Art Photography					
23-21 45 11 11 19					Fine Art Graphic Designs					
23-21 45 11 11 21					Fine Art Illustrations					
23-21 45 11 13				Three Dimensional Art						
23-21 45 11 13 11					Fine Art Sculpture					
23-21 45 11 13 13					Fine Art Ceramics					
23-21 45 11 13 13 11						Fine Art Pottery				
23-21 45 11 13 15					Fine Art Mosaics					
23-21 45 11 13 15 11						Fine Art Tile				
23-21 45 11 13 17					Fine Art Glass					
23-21 45 11 13 17 11						Fine Art Stained Glass				
23-21 45 11 13 17 13						Fine Art Etched Glass				
23-21 45 11 13 19					Fine Art Architecture					
23-21 45 11 13 19 11						Fine Art Decorative Architecture				
23-21 45 11 13 21					Fine Art Textile					
23-21 45 11 13 21 11						Fine Art Tapestry				
23-21 45 11 15				Four Dimensional Art						
23-21 45 11 15 11					Fine Art Film				Four dimensional art is art work that requires time as a factor to the piece of art. Movie or documentary using film as a medium.	
23-21 45 11 15 13					Fine Art Video				Artwork using VHS, BETA, or digital encoding such as DVD, MPEG, as its main medium.	
23-21 45 13			Historic Documents						Historical documents such as the Constitution.	
23-21 45 13 11				Historic Paper Documents						
23-21 45 13 13				Historic Velum Documents						
23-21 45 13 15				Historic Parchment Documents						
23-21 45 15			Historic Architectural Items							
23-21 45 15 11				Historic Architectural Models						
23-21 45 15 13				Historic Architectural Constructions						
23-21 45 15 15				Historic Architectural Designs						
23-21 45 15 17				Historic Decorative Architectures						
23-21 47 00		Musical Equipment							Equipment placed into the building or within a space having to do with music.	
23-21 47 11			Conductor Equipment							
23-21 47 11 11				Conductor Podium						
23-21 47 11 13				Conductor Platform						
23-21 47 13			Musical Instrument							
23-21 47 13 11				String Instrument						
23-21 47 13 11 11					Piano					
23-23 00 00	Conveying Systems and Material Handling Products								Products that comprise systems to transport people or materials.	Includes elevator equipment, dumbwaiters, lifts, conveyors, hoists, and cranes.
23-23 11 00		Vertical Transportation Equipment							Equipment moving people in a vertical motion.	
23-23 11 11			Elevators						Elevators are selected by type of traction or hydraulic and then function.	
23-23 11 11 11				Traction Elevators						
23-23 11 11 11 11					Freight Traction Elevators					
23-23 11 11 11 13					Passenger Traction Elevators					
23-23 11 11 11 15					Residential Traction Elevators					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-23 11 11 11 17					Service Traction Elevators				elevators designed for materials only versus freight which includes in its design people and materials.	
23-23 11 11 13				Hydraulic Elevators						
23-23 11 11 13 11					Freight Hydraulic Elevators					
23-23 11 11 13 13					Passenger Hydraulic Elevators					
23-23 11 11 13 15					Residential Hydraulic Elevators					
23-23 11 11 13 17					Service Hydraulic Elevators					
23-23 11 11 15				Pneumatic Elevators						
23-23 11 11 15 11					Pneumatic Passenger Elevators					
23-23 11 11 17				Rack and Pinion Elevators						
23-23 11 11 19				Elevator Cabs						
23-23 11 11 21				Elevator Equipment and Controls						
23-23 11 11 21 11					Elevator Doors					
23-23 11 11 21 13					Elevator Controls					
23-23 11 11 23				Elevator Restoration Products						
23-23 11 13			Escalators							
23-23 13 00		Lifting Equipment							Products which comprise systems to transport materials via lifting.	
23-23 13 11			Lifts							
23-23 13 11 11				Boom Lifts						
23-23 13 11 13				Fork Lifts						
23-23 13 11 15				Man Lifts						
23-23 13 11 17				Patient Lifts						
23-23 13 11 17 11					Installed Patient Lifts					
23-23 13 11 17 13					Portable Patient Lifts					
23-23 13 11 19				Platform Lifts						
23-23 13 11 19 11					Elevating Platform Lifts					
23-23 13 11 19 13					Inclined Platform Lifts					
23-23 13 11 19 15					Scissor Platform Lifts					
23-23 13 11 21				Scaffold Lifts						
23-23 13 11 23				Stage Screen Lifts						
23-23 13 11 25				Wheel Chair Lifts						
23-23 13 11 25 11					Hydraulic Wheel Chair Lifts					
23-23 13 11 25 11 11						Hydraulic Wheel Chair Rail Lifts				
23-23 13 11 25 11 13						Hydraulic Wheel Chair Stair Lifts				
23-23 13 11 25 11 15						Hydraulic Wheel Chair Vertical Lifts				
23-23 13 11 25 13					Mechanical Wheel Chair Lifts					
23-23 13 11 25 13 11						Mechanical Wheel Chair Rail Lifts				
23-23 13 11 25 13 13						Mechanical Wheel Chair Stair Lifts				
23-23 13 11 25 13 15						Mechanical Wheel Chair Vertical Lifts				
23-23 15 00		Horizontal Transportation Equipment							Products which comprise systems to transport people and materials in a horizontal fashion.	
23-23 15 11			Moving Walks							
23-23 15 13			People Movers							
23-23 15 13 11				Monorails						
23-23 15 13 13				Duorails						
23-23 15 13 15				Maglevs						
23-23 15 15			Jetways							
23-23 15 17			Transportation Gangways							
23-23 17 00		Materials Handling							Products which comprise systems to transport or move materials.	
23-23 17 11			Dumbwaiters							
23-23 17 11 11				Manual Dumbwaiters						
23-23 17 11 13				Hydraulic Dumbwaiters						
23-23 17 11 15				Traction Dumbwaiters						
23-23 17 13			Material Transport							
23-23 17 13 11				Automated Document Filing and Retrieval						
23-23 17 13 13				Automated Guided Vehicles						
23-23 17 13 13 11					Guided Vehicle Material Handling					
23-23 17 13 13 13					Track Vehicle Material Handling					
23-23 17 15			Conveyors							
23-23 17 15 11				Conveyor Components						
23-23 17 15 11 11					Conveyor Belts					
23-23 17 15 11 13					Conveyor Rollers					
23-23 17 15 13				Belt Conveyors						
23-23 17 15 15				Bucket Conveyors						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-23 17 15 17				Container Conveyors						
23-23 17 15 19				Hopper and Track Conveyors						
23-23 17 15 21				Monorail Conveyors						
23-23 17 15 23				Oscillating Conveyors						
23-23 17 15 25				Pneumatic Conveyors						
23-23 17 15 27				Roller Conveyors						
23-23 17 15 29				Scoop Conveyors						
23-23 17 15 31				Screw Conveyors						
23-23 17 15 33				Selective Vertical Conveyors						
23-23 17 15 35				Postal Conveyors						
23-23 17 15 37				Baggage Conveying and Dispensing Equipment						
23-23 17 15 37 11					Baggage Conveyors					
23-23 17 15 37 13					Baggage Dispensing Units					
23-23 17 17			Chutes							
23-23 17 17 11				Coal Chutes						
23-23 17 17 13				Dry Bulk Materials Chutes						
23-23 17 17 15				Laundry and Linen Chutes						
23-23 17 17 17				Package Chutes						
23-23 17 17 19				Refuse Chutes						
23-23 17 19			Feeder Equipment							
23-23 17 19 11				Apron Feeders						
23-23 17 19 13				Reciprocating Plate Feeders						
23-23 17 19 15				Rotary Airlock Feeders						
23-23 17 19 17				Rotary Flow Feeders						
23-23 17 19 19				Vibratory Feeders						
23-23 17 21			Pneumatic Tube Systems					Vacuum Tube System		
23-23 17 21 11				Pneumatic Tubes						
23-23 17 21 13				Pneumatic Tube Controls						
23-23 17 21 15				Pneumatic Tube Vacuum Boxes						
23-23 17 21 17				Document Conveying Systems						
23-23 17 23			Cranes							
23-23 17 23 11				Hydraulic Cranes						
23-23 17 23 11 11					Hydraulic Bridge Cranes					
23-23 17 23 11 11 11						Top Running Hydraulic Overhead Cranes			Above Rail Overhead Bridge Crane	
23-23 17 23 11 11 13						Underslung Hydraulic Overhead Cranes			Below Rail Overhead Bridge Crane	
23-23 17 23 11 13					Hydraulic Gantry Cranes					
23-23 17 23 11 15					Hydraulic Jib Cranes					
23-23 17 23 11 17					Hydraulic Mobile Cranes					
23-23 17 23 11 19					Hydraulic Terrain Cranes					
23-23 17 23 11 21					Hydraulic Top Running Overhead Cranes					
23-23 17 23 11 23					Hydraulic Tower Cranes					
23-23 17 23 11 25					Hydraulic Track Cranes					
23-23 17 23 11 27					Hydraulic Underslung Overhead Cranes					
23-23 17 23 11 29					Hydraulic Workshop Cranes					
23-23 17 23 13				Mechanical Cranes						
23-23 17 23 13 11					Mechanical Bridge Cranes					
23-23 17 23 13 11 11						Top Running Mechanical Overhead Cranes				
23-23 17 23 13 11 13						Underslung Mechanical Overhead Cranes				
23-23 17 23 13 13					Mechanical Gantry Cranes					
23-23 17 23 13 15					Mechanical Jib Cranes					
23-23 17 23 13 17					Mechanical Mobile Cranes					
23-23 17 23 13 19					Mechanical Terrain Cranes					
23-23 17 23 13 21					Mechanical Top Running Overhead Cranes					
23-23 17 23 13 23					Mechanical Tower Cranes					
23-23 17 23 13 25					Mechanical Track Cranes					
23-23 17 23 13 27					Mechanical Underslung Overhead Cranes					
23-23 17 23 13 29					Mechanical Workshop Cranes					
23-23 17 23 15				Electric Cranes						
23-23 17 23 15 11					Electric Bridge Cranes					
23-23 17 23 15 13					Top Running Electric Overhead Cranes					
23-23 17 23 15 15					Underslung Electric Overhead Cranes					
23-23 17 23 15 17					Electric Gantry Cranes					
23-23 17 23 15 19					Electric Jib Cranes					
23-23 17 23 15 21					Electric Mobile Cranes					
23-23 17 23 15 23					Electric Terrain Cranes					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-23 17 23 15 25					Electric Top Running Overhead Cranes					
23-23 17 23 15 27					Electric Tower Cranes					
23-23 17 23 15 29					Electric Track Cranes					
23-23 17 23 15 31					Electric Underslung Overhead Cranes					
23-23 17 23 15 33					Electric Workshop Cranes					
23-23 17 25			Derricks							
23-23 17 27			Hoists							
23-23 17 27 11				Fixed Hoists						
23-23 17 27 11 11					Pneumatic Fixed Hoists					
23-23 17 27 11 13					Electric Fixed Hoists					
23-23 17 27 11 15					Manual Fixed Hoists			Manual Chain Hoist, Ratchet Hoist		
23-23 17 27 11 17					Hydraulic Fixed Hoists					
23-23 17 27 13				Trolley Hoists						
23-23 17 27 13 11					Pneumatic Trolley Hoists					
23-23 17 27 13 13					Electric Trolley Hoists					
23-23 17 27 13 15					Manual Trolley Hoists					
23-23 17 27 13 17					Hydraulic Trolley Hoists					
23-23 19 00		Turntables							a motorized rotating platform used for displaying items	
23-23 19 11			Stage Turntables							
23-23 19 13			Exhibit and Display Turntables							
23-23 19 15			Vehicular Turntable							
23-23 21 00		Parking Systems							A product that is delivered as an entire system for use in parking cars.	
23-23 21 11			Car Parking Systems							
23-23 23 00		Loading Dock Equipment							Equipment used in the process of loading and unloading products.	
23-23 23 11			Loading Dock Bumpers	Seals						
23-23 23 13			Dock Levelers							
23-23 23 13 11				Powered Dock Levelers						
23-23 23 13 13				Manual Dock Levelers						
23-23 23 13 15				Hydraulic Dock Levelers						
23-23 23 15			Loading Dock Lifts							
23-23 23 15 11				Powered Loading Dock Lifts						
23-23 23 15 13				Manual Loading Dock Lifts						
23-23 23 17			Loading Dock Ramps	And Bridges						
23-23 23 17 11				Portable Loading Dock Ramps				Movable Loading Dock Ramp		
23-23 23 17 13				Portable Loading Dock Bridges						
23-23 23 17 15				Portable Loading Dock Platforms						
23-23 23 19			Loading Dock Seals							
23-23 23 19 11				Inflatable Loading Dock Seals						
23-23 23 19 13				Loading Dock Weather Seals						
23-23 23 21			Loading Dock Shelters							
23-23 23 23			Loading Dock Vehicle Restraints							
23-23 23 23 11				Electric Loading Dock Vehicle Restraints						
23-23 23 23 13				Electro Magnetic Loading Dock Vehicle Restraints						
23-23 23 23 15				Hydraulic Loading Dock Vehicle Restraints						
23-23 25 00		Scaffolding							A temporary structure used to support people and material (usually modular) in the construction or repair of buildings and other large structures	
23-23 25 11			Suspended Scaffolding							
23-23 25 11 11				Beam Suspended Scaffolding						
23-23 25 11 13				Carriage Suspended Scaffolding						
23-23 25 11 15				Hook Suspended Scaffolding						
23-23 25 13			Scaffolding Rope Climbers							
23-23 25 13 11				Scaffolding Manual Rope Climbers						
23-23 25 13 13				Scaffolding Powered Rope Climbers						
23-23 25 15			Scaffolding Telescoping Platforms							
23-23 25 15 11				Electric and Battery Scaffolding Telescoping Platforms						
23-23 25 15 13				Pneumatic Scaffolding Telescoping Platforms						
23-23 25 17			Powered Scaffolding							
23-25 00 00	Medical and Laboratory Equipment								Products used specifically in medical and laboratory applications.	Includes dental equipment, radiology equipment, operating room equipment, and microscopes.
23-25 11 00		Anesthesiology and Respiratory Products								
23-25 11 11			Anesthesiology Furnishings							
23-25 11 13			Anesthesiology Equipment							

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23-25 11 13 11				Anesthesia Carts						
23-25 11 13 13				Anesthesia Gas Equipment						
23-25 11 13 15				Anesthesia Absorber Units						
23-25 11 13 17				Anesthesia Temperature Control Units						
23-25 11 13 19				Anesthesia Intrathecal Pumps						
23-25 11 13 21				Anesthesia Equipment Calibrators						
23-25 11 13 23				Anesthesia Inhalation Analgesia Units						
23-25 11 13 23 11					Anesthesia Inhalation Analgesia Central Gases and Vacuum Units					
23-25 11 13 23 13					Anesthesia Inhalation Analgesia Central Vacuum Only Units					
23-25 11 13 25				Respiratory Monitoring Products						
23-25 11 13 25 11					Apnea Monitors					
23-25 11 13 25 13					Arterial Blood Gas Monitors					
23-25 11 13 25 15					Carbon Dioxide End Tidal Monitors					
23-25 11 13 25 17					Esophageal Motility Recording Units					
23-25 11 13 25 19					Esophageal Stethoscopes					
23-25 11 13 25 21					Oxygen Analyzers					
23-25 11 13 25 23					Oxygen Monitors					
23-25 11 13 25 25					Respiratory Monitoring Kits					
23-25 11 13 27				Pulmonary Function Products						
23-25 11 13 27 11					Bedside Pulmonary Function Screeners					
23-25 11 13 27 13					Body Plethysmographs					
23-25 11 13 27 15					Pneumotachs					
23-25 11 13 27 15 11						Lilly Pneumotachs				
23-25 11 13 27 15 13						Fleisch Pneumotachs				
23-25 11 13 27 17					Pulmonary Calibration Devices					
23-25 11 13 27 19					Pulmonary Function Calculators					
23-25 11 13 27 21					Pulmonary Function With Computer Analyzers					
23-25 11 13 27 23					Pulmonary Gas Analyzers					
23-25 11 13 27 25					Pulmonary Gas Monitors					
23-25 11 13 27 27					Pulmonary Peak Flowmeters					
23-25 11 13 27 29					Pulmonary Pressure Monitors					
23-25 11 13 27 31					Pulmonary Ventilation Monitors					
23-25 11 13 27 33					Respiratory Temperature Monitors					
23-25 11 13 27 35					Sleep Study Monitors					
23-25 11 13 27 37					Spirometers					
23-25 11 13 27 37 11						Diagnostic Spirometers				
23-25 11 13 27 37 13						Monitoring Spirometers				
23-25 11 13 27 37 15						Therapeutic Spirometers				
23-25 11 13 29				Oxygen Delivery Products						
23-25 11 13 29 11					Oxygen Concentrators					
23-25 11 13 29 13					Oxygen Air Blenders					
23-25 11 13 29 15					Oxygen Timers					
23-25 11 13 29 17					Oxygen Compressors					
23-25 11 13 29 19					Medical Oxygen Head Hoods					
23-25 11 13 29 21					Medical Oxygen Aerosol Tents					
23-25 11 13 29 23					Medical Hyperbaric Chambers					
23-25 11 13 29 25					Medical Inhalators					
23-25 11 13 29 27					Oxygen Therapy Delivery Equipment					
23-25 11 13 29 29					Medical Oxygen Insufflators					
23-25 11 13 29 31					Liquid Oxygen Converters					
23-25 11 13 31				Airway Management Products						
23-25 11 13 31 11					Airway Pressure Gages					
23-25 11 13 31 13					Pharyngometers					
23-25 11 13 33				Intubation Products						
23-25 11 13 33 11					Laryngoscopes					
23-25 11 13 33 13					Intubation Benders					
23-25 11 13 33 15					Intubation Gauges					
23-25 11 13 33 17					Carbon Dioxide Patient Detectors					
23-25 11 13 33 19					Intubation Suction Pumps					
23-25 11 13 35				Negative Pressure Ventilators						
23-25 11 13 35 11					Iron Lungs					
23-25 11 13 35 13					Chest Cuirass Products					
23-25 11 13 37				Positive Pressure Ventilators						
23-25 11 13 37 11					Intermittent Positive Pressure Breathing Ventilator Units			IPPB Units		
23-25 11 13 37 13					Non Invasive Continuous Positive Air Pressure Ventilator Units					
23-25 11 13 37 15					Non Invasive Bi Level Ventilator Units					
23-25 11 13 37 17					Transport Ventilators					
23-25 11 13 37 19					Adult Intensive Care Ventilators					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 11 13 37 21					High Frequency Ventilators					
23-25 11 13 37 23					Home Care Ventilators					
23-25 11 13 37 25					Positive End Expiratory Pressure Ventilator Valves			PEEP Valve		
23-25 11 13 37 27					Ventilator Water Traps					
23-25 11 13 37 29					Ventilator Gas Sampling Ports					
23-25 11 13 37 31					Ventilator Heat Exchangers					
23-25 11 13 37 33					Ventilator Moisture Exchangers					
23-25 11 13 39				Resuscitation Products						
23-25 11 13 39 11					Manual Resuscitators					
23-25 11 13 39 13					Pneumatic Resuscitators					
23-25 11 13 39 15					Electro Mechanical Resuscitators					
23-25 11 13 41				Lung Fluid Products						
23-25 11 13 41 11					Pleural Cavity Drainage Units					
23-25 11 15				Anesthesiology Prefabricated Structures						
23-25 11 15 11				Anesthesiology Gas Columns						
23-25 13 00		Audiology Products								
23-25 13 11			Audiology Equipment							
23-25 13 11 11				Audiometers						
23-25 13 11 11 11					Diagnostic Audiometers					
23-25 13 11 11 13					Group Screening Audiometers					
23-25 13 11 11 15					Middle Ear Impedance Diagnostic Audiometers					
23-25 13 11 13				Audiometric Bone Vibrators						
23-25 13 11 15				Middle Ear Analyzers						
23-25 13 11 17				Auditory Function Screening Units						
23-25 13 11 19				Auditory Test Graphic Recorders						
23-25 13 11 21				Auditory Analyzers						
23-25 13 11 21 11					Evoked Potential Auditory Analyzers					
23-25 13 11 23				Ear Fenestrometers						
23-25 13 11 25				Electrocochleographs						
23-25 13 11 27				Hearing Aides						
23-25 13 11 29				Hearing Aid Analyzers						
23-25 13 11 31				Tinnitus Analyzers						
23-25 13 11 33				Toynbee Diagnostic Tubes						
23-25 13 11 35				Tympanometers						
23-25 13 13				Audiology Prefabricated Structures						
23-25 13 13 11				Audio Booths						
23-25 13 13 13				Double Wall Audio Booths						
23-25 13 13 13 11					Definitive Test Double Wall Audio Booths					
23-25 13 13 15				Single Wall Audio Booths						
23-25 13 13 17				Acoustic Hearing Test Chambers						
23-25 15 00				Autopsy and Postmortem Products						
23-25 15 11				Autopsy and Postmortem Furnishings						
23-25 15 11 11				Postmortem Refrigerators and Freezers						
23-25 15 11 11 11					Cadaver Cabinet Refrigerators					
23-25 15 11 11 13					Cadaver Freezers					
23-25 15 11 11 15					Cadaver Refrigerated Rooms					
23-25 15 11 11 17					Cadaver Refrigerators					
23-25 15 11 11 19					Cadaver Walk In Refrigerators					
23-25 15 11 13				Autopsy Tables						
23-25 15 11 13 11					Autopsy Body Boards					
23-25 15 11 13 13					Autopsy Dissecting Tank Tables					
23-25 15 11 13 15					Autopsy Head Rests					
23-25 15 11 13 17					Autopsy Sinks					
23-25 15 11 13 19					Mobile Autopsy Tables					
23-25 15 11 13 21					Stationary Autopsy Tables					
23-25 15 11 15				Embalming Sinks						
23-25 15 13				Autopsy and Postmortem Equipment						
23-25 15 13 11				Cadaver Lifts						
23-25 15 13 11 11					Cadaver Electric Lifts					
23-25 15 13 11 13					Cadaver Hydraulic Lifts					
23-25 15 13 11 15					Cadaver Scissor Lift Trolleys					
23-25 15 13 13				Autopsy Equipment						
23-25 15 13 13 11					Autopsy Fluid Collection Vacuum Aspirators					
23-25 15 13 13 13					Autopsy Hanging Scales					
23-25 15 13 13 15					Autopsy Saws					
23-25 15 13 13 17					Bone Dust Collectors					
23-25 15 13 15				Cadaver Transport And Storage Products						
23-25 15 13 15 11					Autopsy Carts					

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23-25 15 13 15 13					Body Transport Containers					
23-25 15 13 15 15					Cadaver Carriers					
23-25 15 13 15 17					Cadaver Lifter Or Transfer Devices					
23-25 15 13 15 19					Cadaver Storage Cabinets					
23-25 15 13 15 21					Cadaver Storage Racks					
23-25 15 13 15 23					Cadaver Trays					
23-25 15 15					Autopsy and Postmortem Prefabricated Structures					
23-25 15 15 11					Autopsy Workstations					
23-25 15 15 11 11					Autopsy Grossing Workstations					
23-25 15 15 11 13					Embalming Workstations					
23-25 15 15 11 15					Autopsy Down Draft Workstations					
23-25 15 17					Autopsy and Postmortem Devices					
23-25 17 00		Dental Products								
23-25 17 11			Dental Furnishings							
23-25 17 11 11				Dental Cabinets						
23-25 17 11 11 11					Mobile Dental Cabinets					
23-25 17 11 11 13					Dental Operating Stool					
23-25 17 11 13				Dental Examination Chairs						
23-25 17 11 15				Dental Stools						
23-25 17 11 17				Dental Cabinets						
23-25 17 11 19				Dental Tables						
23-25 17 11 21				Dental Combination Furniture Sets						
23-25 17 11 23				Dental Impression Water Baths						
23-25 17 11 25				Dental Lighting Products						
23-25 17 11 25 11					Dental Fiber Optic Lights					
23-25 17 11 25 13					Dental Operating Illumination Sets					
23-25 17 11 25 15					Dental Operating Light Tripods					
23-25 17 11 25 17					General Dental Lights					
23-25 17 13			Dental Equipment							
23-25 17 13 11				Dental Furnaces						
23-25 17 13 11 11					Dental Burnout Laboratory Furnaces					
23-25 17 13 11 13					Porcelain Glazing Laboratory Furnaces					
23-25 17 13 11 15					Vacuum Porcelain Furnaces					
23-25 17 13 13				Dental Specialized Hoods						
23-25 17 13 13 11					Dental Acrylic Floor Standing Fume Hoods					
23-25 17 13 13 13					Dental Fishmouth Hoods					
23-25 17 13 13 15					Dental Splash Hoods					
23-25 17 13 13 17					Dental Splash Hoods with Shield					
23-25 17 13 15				Dental Procedure Products						
23-25 17 13 15 01					Calcium Hydroxide Placement Tools					
23-25 17 13 15 03					Composite Placement Tools					
23-25 17 13 15 05					Crown Or Bridge Removers					
23-25 17 13 15 07					Dental Amalgam Carvers					
23-25 17 13 15 09					Dental Amalgamator					
23-25 17 13 15 11					Dental Anesthesia Sets					
23-25 17 13 15 13					Dental Bur Holders					
23-25 17 13 15 15					Dental Burnishers					
23-25 17 13 15 17					Dental Burs					
23-25 17 13 15 19					Dental Calipers					
23-25 17 13 15 21					Dental Cryosurgical Units					
23-25 17 13 15 23					Dental Dehydrators					
23-25 17 13 15 25					Dental Depth Gauges					
23-25 17 13 15 27					Dental Drills					
23-25 17 13 15 29					Dental Elevators					
23-25 17 13 15 31					Dental Excavators					
23-25 17 13 15 33					Dental Expanders					
23-25 17 13 15 35					Dental Filler Contouring Instruments					
23-25 17 13 15 37					Dental Fracture Detecting Tools					
23-25 17 13 15 39					Dental Gages					
23-25 17 13 15 41					Dental Guides					
23-25 17 13 15 43					Dental Heat Carriers					
23-25 17 13 15 45					Dental Hygiene Instruments					
23-25 17 13 15 47					Dental Instrument Cassettes					
23-25 17 13 15 49					Dental Instrument Sharpening Equipment					
23-25 17 13 15 51					Dental Instrument Trays					
23-25 17 13 15 53					Dental Instruments Mats					
23-25 17 13 15 55					Dental Lasers					
23-25 17 13 15 57					Dental Mallets					

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23-25 17 13 15 59					Dental Mixing Slabs					
23-25 17 13 15 61					Dental Nippers					
23-25 17 13 15 63					Dental Operative Brushes					
23-25 17 13 15 65					Dental Oral Suction Devices					
23-25 17 13 15 67					Dental Pin Benders					
23-25 17 13 15 69					Dental Pin Drivers					
23-25 17 13 15 71					Dental Placement Instruments					
23-25 17 13 15 73					Dental Pulp Testers					
23-25 17 13 15 75					Dental Reamers					
23-25 17 13 15 77					Dental Retraction Cord Packing Instruments					
23-25 17 13 15 79					Dental Retractors					
23-25 17 13 15 81					Dental Saliva Ejectors					
23-25 17 13 15 83					Dental Scalers					
23-25 17 13 15 85					Dental Spreaders					
23-25 17 13 15 87					Dental Tooth Separators					
23-25 17 13 15 89					Dental Vitality Testers					
23-25 17 13 15 91					Dentoscopes					
23-25 17 13 15 93					Intraoral Lights					
23-25 17 13 15 95					Pneumatic Dental Chisels					
23-25 17 13 15 97					Temporomandibular Joint (TMJ) Dental Videoscopes					
23-25 17 13 17				Dental Tanks						
23-25 17 13 17 11					Dental Blow Out Tanks					
23-25 17 13 17 13					Dental Curing Tanks					
23-25 17 13 17 15					Dental Washout Blow Out Tanks					
23-25 17 13 19				Dental Polishing and Grinding Machines						
23-25 17 13 19 11					Dental Combination Grinding and Polishing Machines					
23-25 17 13 19 13					Dental Grinding Machines					
23-25 17 13 19 15					Dental Polishing Machines					
23-25 17 13 21				Dental Imaging Products						
23-25 17 13 21 11					Cephalometric Radiographic Fluoroscopic Units					
23-25 17 13 21 13					Dental Film Processors					
23-25 17 13 21 15					Dental Radioactive Tracers					
23-25 17 13 21 17					Dental Radiographic Fluoroscopic Units					
23-25 17 13 21 17 11						Panographic Cephalo Dental Radiographic Fluoroscopic Units				
23-25 17 13 21 17 13						Panographic Dental Radiographic Fluoroscopic Units				
23-25 17 13 21 19					Dental Radiography Film Analyzers					
23-25 17 13 21 21					Dental Radiology Film Hangers					
23-25 17 13 21 23					Dental Radiology Film Holders					
23-25 17 13 21 25					Dental Radiology Film Mounts					
23-25 17 13 21 27					Dental X Ray Duplicators					
23-25 17 13 21 29					Dental X Ray Units					
23-25 17 13 21 31					Dental X Ray Viewers					
23-25 17 13 23				Dental Sterilization Products						
23-25 17 13 23 11					Dental Steam Cleaners					
23-25 17 13 25				Dental Laboratory Products						
23-25 17 13 25 11					Dental Air Abrasion Units					
23-25 17 13 25 13					Dental Burners					
23-25 17 13 25 15					Dental Casting Machines					
23-25 17 13 25 17					Dental Curing Units					
23-25 17 13 25 17 11						2 Stage Dental Curing Units				
23-25 17 13 25 17 13						3 Stage Dental Curing Units				
23-25 17 13 25 19					Dental Dust Collectors					
23-25 17 13 25 21					Dental Gold Platers					
23-25 17 13 25 23					Dental Lathes					
23-25 17 13 25 25					Dental Model Trimmers					
23-25 17 13 25 27					Dental Models					
23-25 17 13 25 29					Dental Plaster Traps					
23-25 17 13 25 31					Dental Resin Curing Units					
23-25 17 13 25 31 11						Dental Visible Light Resin Curing Units				
23-25 17 13 25 33					Dental Resins Processing Units					
23-25 17 13 25 35					Dental Sandblasters					
23-25 17 13 25 37					Dental Soldering Machines					
23-25 17 13 25 39					Dental Torches					
23-25 17 13 25 41					Dental Vacuum Units					
23-25 17 13 25 43					Dental Vibrators					
23-25 17 13 25 45					Dental Waxing Units					
23-25 17 15				Dental Prefabricated Structures						
23-25 17 15 11				Dental Lab Workcenters						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 17 15 11 11					Dental Lab Die Trimming Workcenters					
23-25 17 15 11 13					Dental Lab Equipment Workcenters					
23-25 17 15 11 15					Dental Lab Metal Grinding Workcenters					
23-25 17 15 11 17					Dental Lab Microblasting Workcenters					
23-25 17 15 11 19					Dental Lab Plaster Workcenters					
23-25 17 15 11 21					Dental Lab Polishing Workcenters					
23-25 17 15 11 23					Dental Lab Surveying and Milling Workcenters					
23-25 19 00		Dermatology Products								
23-25 19 11			Dermatology Furnishings							
23-25 19 13			Dermatology Equipment							
23-25 19 13 11				Phototherapy Products						
23-25 19 13 11 11					Phototherapy Air Circulators					
23-25 19 13 11 13					Phototherapy Blankets					
23-25 19 13 11 15					Phototherapy Light Mats					
23-25 19 13 11 17					Phototherapy Patient Protection Devices					
23-25 19 13 11 19					Phototherapy Power Units					
23-25 19 13 11 21					Phototherapy Warmer Beds					
23-25 19 15			Dermatology Prefabricated Structures							
23-25 19 15 11				Ultraviolet Treatment Booths						
23-25 19 15 13				Hand and Foot Ultraviolet Treatment Booths						
23-25 19 17			Dermatology Devices							
23-25 21 00		Emergency Trauma and Intensive Care Products								
23-25 21 11			Emergency Trauma and Intensive Furnishings							
23-25 21 11 11				Catheter Storage Cabinets						
23-25 21 13			Emergency Trauma and Intensive Equipment							
23-25 21 13 11				Emergency Carts						
23-25 21 13 13				Emergency Transportation Products						
23-25 21 13 13 11					Air Evacuation Stretchers					
23-25 21 13 13 13					Ambulance Cots					
23-25 21 13 13 15					Anti Shock Garments					
23-25 21 13 13 17					Basket Stretchers					
23-25 21 13 13 19					Scoop Stretchers					
23-25 21 13 13 21					Spine Boards					
23-25 21 13 13 23					Water Rescue Tubes					
23-25 21 13 15			Emergency Airway Management Products							
23-25 21 13 15 11				Emergency Laryngoscope Kits						
23-25 21 13 15 13				Emergency Oropharyngeal Airway Devices						
23-25 21 13 15 15				Emergency Suction Units						
23-25 21 13 15 17				Emergency Tracheal Tube Kits						
23-25 21 13 17			Emergency Kits							
23-25 21 13 17 11				Emergency Dental Kits						
23-25 21 13 17 13				Emergency First Aid Kits						
23-25 21 13 17 15				Emergency Fracture Kits						
23-25 21 13 17 17				Emergency Intravenous IV Kits						
23-25 21 13 17 19				Emergency Medical First Response Kits						
23-25 21 13 17 21				Emergency Medical Technician Kits						
23-25 21 13 17 23				Emergency Obstetrics Kits						
23-25 21 13 17 25				Emergency Resuscitation Kits						
23-25 21 13 17 27				Emergency Services Trauma Kits						
23-25 21 13 17 29				Emergency Ventriculostomy Kits						
23-25 21 13 19			Emergency Resuscitation Products							
23-25 21 13 19 11				Defibrillators						
23-25 21 13 19 11 11					Acute Care Defibrillators					
23-25 21 13 19 11 13					Acute Care Defibrillator With Monitors					
23-25 21 13 19 11 15					Automatic Defibrillators					
23-25 21 13 19 11 17					Defibrillator with Cardioscopes					
23-25 21 13 19 11 19					Portable Defibrillators					
23-25 21 13 19 13				Defibrillator Analyzers						
23-25 21 13 19 15				Emergency Aspirators						
23-25 21 13 19 17				Emergency Resuscitators						
23-25 21 13 19 17 11					Emergency Manual Resuscitators					
23-25 21 13 19 17 13					Emergency Pulmonary Resuscitators					
23-25 21 13 19 17 15					Emergency Oxygen Powered Resuscitators					
23-25 21 13 21			Acute Care Monitoring Units							
23-25 21 13 21 11				Acute Care Fetal Monitoring Units						
23-25 21 13 21 13				Acute Care Maternal Monitoring Units						
23-25 21 13 21 15				Cardiac Output Monitoring Units						
23-25 21 13 21 17				Intracranial Pressure Monitoring Units				ICP Units		

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23-25 21 13 21 19					Multiparameter Vital Sign Units					
23-25 21 15				Emergency Trauma and Intensive Prefabricated Structures						
23-25 21 15 11					Intensive Care Unit Prefabricated Service Columns					
23-25 21 15 13				Trauma Workcenters						
23-25 23 00		Endocrinology Products								
23-25 23 11			Endocrinology Furnishings							
23-25 23 11 11				Dialysis Chairs						
23-25 23 11 13				Dialysis Tables						
23-25 23 13			Endocrinology Equipment							
23-25 23 13 11				Peritoneal Dialysis Products						
23-25 23 13 11 11					Continuous Ambulatory Peritoneal Dialysis Transfer Units			CAPD Unit		
23-25 23 13 11 13					Dialysis Boxes					
23-25 23 13 11 15					Pheresis Units					
23-25 23 13 11 17					Peritoneal Dialysis Units					
23-25 23 13 11 17 11						Hollow Peritoneal Dialysis Units				
23-25 23 13 13				Hemodialysis Products						
23-25 23 13 13 11					Hemodialysis Blood Oxygen Demand Units					
23-25 23 13 13 13					Hemodialysis Conductivity Meters					
23-25 23 13 13 15					Hemodialysis Filters					
23-25 23 13 13 17					Hemodialysis Level Detectors					
23-25 23 13 13 19					Hemodialysis Pressure Pumps					
23-25 23 13 13 21					Hemodialysis Reprocessing Units					
23-25 23 13 13 23					Hemodialysis Tanks					
23-25 23 13 13 25					Hemodialysis Unit Arterial Pressure Monitors					
23-25 23 13 13 27					Hemodialysis Unit Blood Pumps					
23-25 23 13 13 29					Hemodialysis Unit Heparin Infusion Pumps					
23-25 23 13 13 31					Hemodialysis Unit Single Pass Converters					
23-25 23 13 13 33					Hemodialysis Unit Stands					
23-25 23 13 13 35					Hemodialysis Unit Temperature Monitors					
23-25 23 13 13 37					Hemodialysis Unit Test Equipment					
23-25 23 13 13 39					Hemodialysis Units					
23-25 23 13 13 41					Hemodialysis Warming Baths					
23-25 23 13 15				Continuous Renal Replacement Therapy Products						
23-25 23 13 15 11					Continuous Arteriovenous Dialysis Units				CRRT Units	
23-25 23 13 15 13					Continuous Arteriovenous Hemofiltration Units				CAVHD Units	
23-25 23 13 15 15					Continuous Venovenous Hemodialysis Units				CAVH Units	
23-25 23 13 15 17					Continuous Venovenous Hemofiltration Units					
23-25 23 13 15 19					Renal Dialysis Cartridge Flushing Units					
23-25 23 13 15 21					Slow Continuous Ultrafiltration Units				SCUF Units	
23-25 23 15			Endocrinology Prefabricated Structures							
23-25 25 00		Gastroenterology and Hepatology Products								
23-25 25 11			Gastroenterology Furnishings							
23-25 25 11 11				Proctology Examination Tables						
23-25 25 11 13				Urological Procedure Table						
23-25 25 11 13 11					Endoscope Storage Cabinets					
23-25 25 11 13 13					Endoscope Wall Hangers					
23-25 25 11 13 15					Endoscopic Procedure Carts					
23-25 25 13			Gastroenterology Equipment							
23-25 25 15			Gastroenterology Prefabricated Structures							
23-25 25 17			Gastroenterology Devices							
23-25 27 00		General Internal Medicine Products								
23-25 27 11			General Internal Medicine Furnishings							
23-25 27 11 11				Intravenous Transport Products						
23-25 27 11 11 11					Intravenous Equipment Hangers					
23-25 27 11 11 13					Intravenous Infusion Gravity Systems Mounted Racks					
23-25 27 11 11 15					Intravenous Infusion Gravity Systems Mounted Tracks					
23-25 27 11 11 17					Intravenous Line Poles					
23-25 27 11 11 19					Intravenous Line Stands					
23-25 27 11 11 21					Intravenous Wheelchair Poles					
23-25 27 13			General Internal Medicine Equipment							
23-25 27 13 11				Endoscopy Carts						
23-25 27 13 11 11					Fiberoptic Endoscopy Carts					
23-25 27 13 11 11 11					Basic Fiberoptic Endoscopy Carts					
23-25 27 13 11 11 13					Fiberoptic Endoscopy Carts With Video Accessories					
23-25 27 13 11 11 15					Fiberoptic Endoscopy Carts With Video Accessories And Information Management					
23-25 27 13 11 13					Video Endoscopy Carts					
23-25 27 13 11 13 11						Video Endoscopy Carts CCD Scope And Information Management				
23-25 27 13 13				Intravenous Pump Products						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 27 13 13 11					General Use Intravenous Pumps					
23-25 27 13 13 13					Intravenous Infusion Pump Analyzers					
23-25 27 13 13 15					Intravenous Infusion Pump Sensors					
23-25 27 13 13 17					Intravenous Infusion Pump Transducers					
23-25 27 13 13 19					Intravenous Syringe Pumps					
23-25 27 13 13 21					Multichannel Intravenous Pumps					
23-25 27 13 15				Urological Products						
23-25 27 13 15 11					Cystometry Transducers					
23-25 27 13 15 13					Urethral Sound Sets					
23-25 27 13 15 15					Urethral Stone Remover Sets					
23-25 27 13 15 17					Urodynamic Catheters					
23-25 27 13 15 19					Urological Perculators					
23-25 27 13 17				Endoscopes Products						
23-25 27 13 17 11					Rigid Endoscopes					
23-25 27 13 17 13					Flexible Endoscopes					
23-25 27 13 17 15					Cystourethroscopes					
23-25 27 13 17 17					Resectoscopes					
23-25 27 13 17 19					Laparoscopes					
23-25 27 13 17 21					Laparoscopic Telescopes					
23-25 27 13 17 23					Cystoscopes					
23-25 27 13 17 25					Endoscopic Sphincterotomes					
23-25 27 13 17 27					Duodenoscopes					
23-25 27 13 17 27 11						Combination Duodenoscope and Choledochoscopes				
23-25 27 13 17 27 13						Therapeutic Duodenoscopes				
23-25 27 13 17 27 15						Fiberoptic Therapeutic Duodenoscopes				
23-25 27 13 17 27 17						Video Therapeutic Duodenoscopes				
23-25 27 13 17 29					Esophagoscopes					
23-25 27 13 17 31					Endoscopic Equipment Sets					
23-25 27 13 17 33					Endoscopic Heater Probe Units					
23-25 27 13 17 35					Endoscopic Imaging Equipment					
23-25 27 13 17 37					Endoscopic Insufflation Units					
23-25 27 13 17 39					Endoscopic Distention Units					
23-25 27 13 17 41					Endoscopic Printers					
23-25 27 13 17 43					Endoscopic Video Cameras					
23-25 27 13 17 45					Endoscopic Recorders					
23-25 27 13 17 47					Enteroscopes					
23-25 27 13 17 47 11						Therapeutic Fiberoptic Enteroscopes				
23-25 27 13 17 47 13						Therapeutic Video Enteroscopes				
23-25 27 13 19				Gastroscope Products						
23-25 27 13 19 11						Therapeutic Fiberoptic Gastrosopes				
23-25 27 13 19 13						Therapeutic Video Gastrosopes				
23-25 27 13 21				Sigmoidoscope Products						
23-25 27 13 21 11						Therapeutic Sigmoidoscopes				
23-25 27 13 21 13						Fiberoptic Therapeutic Sigmoidoscopes				
23-25 27 13 21 15						Video Therapeutic Sigmoidoscopes				
23-25 27 13 23				Colonoscopy Products						
23-25 27 13 23 11						Mobile Colonoscopy System With Accessories				
23-25 27 13 23 13						Therapeutic Colonoscopes				
23-25 27 13 23 13 11						Fiberoptic Therapeutic Colonoscopes				
23-25 27 13 23 13 13						Video Therapeutic Colonoscopes				
23-25 27 15				General Internal Medicine Prefabricated Structures						
23-25 29 00				Therapeutic and Physical Therapy Products						
23-25 29 11				Therapeutic and Physical Therapy Furnishings						
23-25 29 11 11				Therapeutic Baths						
23-25 29 11 11 11						Hydrotherapy Baths				
23-25 29 11 11 11 11						Body Hydrotherapy Baths				
23-25 29 11 11 11 13						Burn Hydrotherapy Baths				
23-25 29 11 11 11 15						Burn Hydrotherapy With Lift Baths				
23-25 29 11 11 11 17						Hydrotherapy With Elevating Tub Baths				
23-25 29 11 11 11 19						Sitting Hydrotherapy Baths				
23-25 29 11 11 13						Therapeutic Refrigerated Circulating Water Baths				
23-25 29 11 13				Therapeutic Tables						
23-25 29 11 13 11						Chiropractic Tables				
23-25 29 11 13 13						Therapeutic Massage Tables				
23-25 29 11 13 15						Traction Physical Therapy Tables				
23-25 29 13				Therapeutic and Physical Therapy Equipment						
23-25 29 13 11						Physical Therapy Traction Equipment				

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 29 13 11 11					Traction Appliances Carts					
23-25 29 13 13				Therapeutic Exercise Equipment						
23-25 29 13 13 11					Balance Beams					
23-25 29 13 13 13					Therapeutic Exercise Balance Boards					
23-25 29 13 13 15					Therapeutic Exercise Balance Bolsters					
23-25 29 13 13 17					Therapeutic Exercise Balance Rockers					
23-25 29 13 13 19					Therapeutic Exercise Climbing Equipment					
23-25 29 13 13 21					Therapeutic Exercise Continuous Passive Motion CPM Equipment					
23-25 29 13 13 23					Therapeutic Exercise Skates					
23-25 29 13 13 25					Therapeutic Exercise Free Weights					
23-25 29 13 13 27					Therapeutic Lung Exercisers					
23-25 29 13 13 29					Therapeutic Exercise Mats					
23-25 29 13 13 31					Therapeutic Exercise Platforms					
23-25 29 13 13 33					Therapeutic Exercise Pulleys					
23-25 29 13 13 35					Therapeutic Exercise Resistive Equipment					
23-25 29 13 13 37					Therapeutic Exercise Skateboards					
23-25 29 13 13 39					Therapeutic Exercise Therapeutic Balls					
23-25 29 13 13 41					Therapeutic Exercise Treadmills					
23-25 29 13 13 43					Therapeutic Exercise Vestibular Motion Equipment					
23-25 29 13 13 45					Therapeutic Exercise Weight Belts					
23-25 29 13 13 47					Therapeutic Exercise Weight Machines					
23-25 29 13 13 49					Therapeutic Exercise Wrist Exercisers					
23-25 29 13 15				Gait Training Products						
23-25 29 13 15 11					Gait Training Bars					
23-25 29 13 15 13					Gait Training Bikes					
23-25 29 13 15 15					Gait Training Parallel Bars					
23-25 29 13 15 17					Gait Training Ramps					
23-25 29 13 15 19					Gait Training Stairs					
23-25 29 13 15 21					Gait Training Walkers					
23-25 29 13 17				Electrotherapy Equipment						
23-25 29 13 17 11					Electrotherapy Combination Units					
23-25 29 13 17 13					Galvanic Stimulators					
23-25 29 13 17 15					Faradic Stimulators					
23-25 29 13 17 17					Neuromuscular Stimulators					
23-25 29 13 17 17 11						Multi Channel Neuromuscular Stimulators				
23-25 29 13 17 17 13						interferential Neuromuscular Stimulators				
23-25 29 13 17 17 15						Portable Neuromuscular Stimulators				
23-25 29 13 17 19					Therapeutic Short Wave Diathermy Units					
23-25 29 13 17 21					Transcutaneous Electric Nerve Stimulation Units					
23-25 29 13 19				Heat Cold Therapy Products						
23-25 29 13 19 11					Therapeutic Cold Storage Chilling Units					
23-25 29 13 19 13					Therapeutic Heat Lamps					
23-25 29 13 19 15					Therapeutic Hydrocollators					
23-25 29 13 19 17					Therapeutic Combination Heating Cooling Units					
23-25 29 13 19 19					Therapeutic Cooling Blankets					
23-25 29 13 19 21					Therapeutic Cooling Drapes					
23-25 29 13 19 23					Therapeutic Cooling Units					
23-25 29 13 19 25					Therapeutic Cryo Compression Equipment					
23-25 29 13 19 27					Therapeutic Heating Blankets					
23-25 29 13 19 29					Therapeutic Heating Drapes					
23-25 29 13 19 31					Therapeutic Heating Units					
23-25 29 13 19 33					Therapeutic Paraffin Baths					
23-25 29 13 21				Hydrotherapy Products						
23-25 29 13 21 11					Extremity Hydrotherapy Baths					
23-25 29 13 21 13					Extremity Hydrotherapy Tanks					
23-25 29 13 21 15					Full Body Immersion Hydrotherapy Baths					
23-25 29 13 21 17					Full Body Immersion Hydrotherapy Tanks					
23-25 29 13 21 19					Hydrotherapy Bath Chairs					
23-25 29 13 23				Hypothermia and Hyperthermia Units						
23-25 29 13 23 11					Combination Hyperthermia and Hypothermia Units					
23-25 29 13 23 13					Hyperthermia Units					
23-25 29 13 23 15					Hypothermia Units					
23-25 29 13 23 17					Mobile Combination Hyperthermia and Hypothermia Units					
23-25 29 13 23 19					Mobile Hyperthermia Units					
23-25 29 13 23 21					Mobile Hypothermia Units					
23-25 29 15				Health Exercise and Physical Therapy Prefabricated Structures						
23-25 29 15 11				Nourishment Stations						
23-25 31 00		Hematology Products								

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23-25 31 11			Hematology Furnishings							
23-25 31 11 11				Blood Refrigerators and Freezers						
23-25 31 11 11 11					Blood Bank Refrigerators					
23-25 31 11 11 13					Blood Freezers					
23-25 31 11 11 13 11						Double Compartment Blood Freezers				
23-25 31 11 11 13 13						Blood Plasma Freezers				
23-25 31 11 11 15					Dry Tissue Freezers					
23-25 31 11 11 17					Plasma Storage Freezers					
23-25 31 11 13			Hematology Baths							
23-25 31 11 13 11					Serology Water Baths					
23-25 31 11 13 13					Tissue Processing Water Baths					
23-25 31 11 15			Hematology Cabinets							
23-25 31 11 15 11					Paraffin Block Cabinets					
23-25 31 13			Hematology Equipment							
23-25 31 13 11				Hematology Analyzers						
23-25 31 13 11 11					Blood Lead Analyzers					
23-25 31 13 11 13					BUN Analyzers					
23-25 31 13 11 13 11						Discrete BUN Analyzers				
23-25 31 13 11 15					PH Blood Gas Analyzers					
23-25 31 13 11 17					Blood Typing Centrifuges					
23-25 31 13 13				Blood And Transfusion Products						
23-25 31 13 13 11					Blood Conservation Equipment					
23-25 31 13 13 13					Blood Containers					
23-25 31 13 13 15					Blood Transfusion Equipment					
23-25 31 13 13 17					Blood Warming and Transfusion Equipment					
23-25 31 13 13 19					Blood Warming Equipment					
23-25 31 13 13 21					Blood Waste Collection Equipment					
23-25 31 15			Hematology Prefabricated Structures							
23-25 31 15 11				Blood Bank Workcenters						
23-25 31 15 13				Hematology Workcenters						
23-25 33 00		Medical Gas Products								
23-25 33 11			Medical Air Pressure Control Cabinets							
23-25 33 13			Medical Gas Alarm Modules							
23-25 33 15			Medical Gas Cylinder Carts							
23-25 33 17			Medical Gas Cylinder Stands							
23-25 33 19			Medical Gas Delivery Columns							
23-25 33 21			Medical Gas Filtering Equipment							
23-25 33 23			Medical Gas Manifolds							
23-25 33 25			Medical Gas Outlets							
23-25 33 27			Medical Gas Service Tracks							
23-25 33 29			Medical Gas Shutoff Valves							
23-25 33 31			Medical Gas Treatment Equipment							
23-25 33 33			Medical Gas Valve Boxes							
23-25 35 00		Nursing Products								
23-25 35 11			Nursing Furnishings							
23-25 35 11 11				Freestanding Nursing Table Bath and Showers						
23-25 35 13			Nursing Equipment							
23-25 35 13 11				Nursing Station Telecommunications Equipment						
23-25 35 13 11 11					Nurse Communication Modules					
23-25 35 13 11 13					Nurse Intercoms					
23-25 35 13 11 15					Nurse Room Control Equipment					
23-25 35 13 11 17					Nurse Room Control Exit Monitors					
23-25 35 15			Nursing Prefabricated Structures							
23-25 35 15 11				Nurse Stations						
23-25 37 00		Obstetrics and Gynecology Products								
23-25 37 11			Obstetrics and Gynecology Furnishings							
23-25 37 11 11				Obstetrics and Gynecology Beds						
23-25 37 11 11 11					Birthing Beds					
23-25 37 11 11 13					Electric Birthing Beds					
23-25 37 11 13				Obstetrics and Gynecology Tables						
23-25 37 11 13 11					Beast Biopsy Tables					
23-25 37 11 13 13					Gynecological Exam Tables					
23-25 37 11 13 15					Obstetrical Examination Tables					
23-25 37 13			Obstetrics and Gynecology Equipment							
23-25 37 13 11				Obstetrics and Gynecology Carts						
23-25 37 13 11 11					Fetal Monitoring Carts					
23-25 37 13 13				Breast Biopsy Products						

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23-25 37 13 13 11					Minimally Invasive Breast Biopsy Premium Loading Units					
23-25 37 13 13 13					Minimally Invasive Breast Biopsy Vacuum Units					
23-25 37 15					Obstetrics and Gynecology Prefabricated Structures					
23-25 39 00					Ophthalmology Products					
23-25 39 11					Ophthalmology Furnishings					
23-25 39 11 11					Ophthalmology Tables					
23-25 39 11 11 11					Ophthalmologic Instrument Tables					
23-25 39 11 13					Ophthalmology Cabinets					
23-25 39 11 13 11					Lens Measuring Instrument Cabinets					
23-25 39 13					Ophthalmology Equipment					
23-25 39 13 11					Ophthalmic Diagnostic Exam Products					
23-25 39 13 11 11					Autorefractors					
23-25 39 13 11 13					Binocular Vision Test Sets					
23-25 39 13 11 15					Chart Projectors					
23-25 39 13 11 17					Color Perception Testing Lanterns					
23-25 39 13 11 19					Combination Refractor Keratometers					
23-25 39 13 11 21					Contact Lens Gonioscope					
23-25 39 13 11 23					Corneal Topographers					
23-25 39 13 11 25					Corneal Topography Units					
23-25 39 13 11 27					Depth Perception Units					
23-25 39 13 11 29					Electronystagmographs					
23-25 39 13 11 31					Electroretinogram Systems					
23-25 39 13 11 33					Exophthalmometers					
23-25 39 13 11 35					Eye Occluders					
23-25 39 13 11 37					Keratometer Ophthalmometers					
23-25 39 13 11 39					Keratoscopes					
23-25 39 13 11 41					Ophthalmic Colorimeters					
23-25 39 13 11 43					Ophthalmic Distometers					
23-25 39 13 11 45					Ophthalmic Drums					
23-25 39 13 11 47					Ophthalmic Euthyscopes					
23-25 39 13 11 49					Ophthalmic Eye Test Lenses					
23-25 39 13 11 51					Ophthalmic Instrument Pads					
23-25 39 13 11 53					Ophthalmic Instrument Tables					
23-25 39 13 11 55					Ophthalmic Lens Holders					
23-25 39 13 11 57					Ophthalmic Lensometers					
23-25 39 13 11 57 11						Ophthalmic Soft Contact Lensometers				
23-25 39 13 11 59					Ophthalmic Perimeters					
23-25 39 13 11 61					Ophthalmic Photometers					
23-25 39 13 11 63					Ophthalmic Prisms					
23-25 39 13 11 65					Ophthalmic Retinoscope Accessories					
23-25 39 13 11 67					Ophthalmic Retinoscopes					
23-25 39 13 11 69					Ophthalmic Slit Lamps					
23-25 39 13 11 71					Ophthalmic Spectrophotometers					
23-25 39 13 11 73					Ophthalmic Speculas					
23-25 39 13 11 75					Ophthalmic Tonometers					
23-25 39 13 11 75 11						Ophthalmic Applanation Tonometers				
23-25 39 13 11 75 13						Ophthalmic Noncontact Tonometers				
23-25 39 13 11 77					Ophthalmic Transilluminators					
23-25 39 13 11 79					Ophthalmic Visual Field Plotters					
23-25 39 13 11 81					Ophthalmic Visual Function Analyzers					
23-25 39 13 11 83					Ophthalmic Visuometers					
23-25 39 13 11 85					Ophthalmodynamometers					
23-25 39 13 11 87					Ophthalmometers					
23-25 39 13 11 89					Ophthalmometer Base Plates					
23-25 39 13 11 91					Pachymeters					
23-25 39 13 11 91 11						Ultrasound Pachymeters				
23-25 39 13 11 91 13						Corneal Ultrasound Pachymeters				
23-25 39 13 11 92					Phoropter Units					
23-25 39 13 11 93					Pseudoisochromatic Plate Sets					
23-25 39 13 11 94					Tachistoscopes					
23-25 39 13 11 95					Tangent Screens					
23-25 39 13 11 96					Viewing Stands For Vision Acuity Testing					
23-25 39 13 11 97					Vision Testing Stereoscopes					
23-25 39 13 13					Ophthalmic Equipment					
23-25 39 13 13 11					Lens Edging Machines					
23-25 39 13 13 11 11						Lens Edging Automatic Beveling Machines				
23-25 39 13 13 11 13						Lens Edging Automatic Machines				
23-25 39 13 13 13					Ophthalmic Lasers					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 39 13 13 11						Dual Fiber Photocoagulation	Ophthalmic Lasers			
23-25 39 13 13 13						Ophthalmic Laser With	Ophthalmoscopes			
23-25 39 13 13 15						Ophthalmic Laser With	Slit Lamps			
23-25 39 13 13 17						Semiconductor Diode	Ophthalmic Lasers			
23-25 39 13 13 15						Phacofragmentation (Cusa)	Units			
23-25 39 13 15				Obstetrical And Gynecological		Kits				
23-25 39 13 15 11						Amniocentesis Kits				
23-25 39 13 15 13						Obstetrical Extraction	Units			
23-25 39 13 15 15						Gynecology Drainage	Kits			
23-25 39 15										
23-25 41 00										
23-25 41 11										
23-25 41 11 11				Orthopedics		Furnishings				
23-25 41 11 11 11						Orthopedics Tables				
23-25 41 11 11 11 11						Medical Casting	Tables			
23-25 41 11 11 13						Orthopedic Operating	Tables			
23-25 41 11 11 15						Orthopedic Fracture	Operating Tables			
23-25 41 11 13						Orthopedics	Sinks			
23-25 41 11 13 11						Plaster	Sinks			
23-25 41 13										
23-25 41 13 11						Orthopedics	Carts			
23-25 41 13 11 11						Plaster	Carts			
23-25 41 15										
23-25 41 15 11										
23-25 41 15 11 11										
23-25 41 15 11 13										
23-25 41 15 11 15										
23-25 41 15 11 17										
23-25 41 15 11 19										
23-25 41 15 11 21										
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23-25 41 15 11 25										
23-25 41 15 11 27										
23-25 41 15 11 29										
23-25 41 15 13										
23-25 41 15 13 11										
23-25 41 15 13 13										
23-25 41 15 13 15										
23-25 41 17										
23-25 43 00										
23-25 43 11										
23-25 43 13										
23-25 43 13 11										
23-25 43 13 11 11										
23-25 43 13 11 13										
23-25 43 13 11 15										
23-25 43 13 11 17										
23-25 43 13 11 19										
23-25 43 13 13										
23-25 43 13 13 11										
23-25 43 13 15										
23-25 43 13 15 11										
23-25 43 15										
23-25 45 00										
23-25 45 11										
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23-25 45 11 11 13										
23-25 45 11 11 15										
23-25 45 11 11 17										
23-25 45 11 13										
23-25 45 11 13 11										
23-25 45 11 13 13										
23-25 45 11 15										
23-25 45 11 17										
23-25 45 11 17 11										
23-25 45 11 17 13										
23-25 45 11 19										

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 45 11 19 11					Hospital Recliners					
23-25 45 11 19 13					Patient Chairs					
23-25 45 11 21				Physically Challenged	Transport Equipment					
23-25 45 11 21 11					Physically Challenged Multifunctional Mobility Devices					
23-25 45 11 21 13					Physically Challenged Positioning Devices					
23-25 45 11 21 15					Physically Challenged Standing Aids					
23-25 45 11 21 17					Physically Challenged Whole Body Sliding Devices					
23-25 45 11 21 19					Physically Challenged Whole Body Turning Devices					
23-25 45 11 21 21					Rollators					
23-25 45 11 21 23					Walkers					
23-25 45 11 23				Physically Challenged	Baths and Showers					
23-25 45 11 23 11					Physically Challenged Bath Chairs					
23-25 45 11 23 13					Physically Challenged Bath Lifts					
23-25 45 11 23 15					Physically Challenged Bath Safety Rails					
23-25 45 11 23 17					Physically Challenged Bathboards					
23-25 45 11 23 19					Physically Challenged Shower Seats					
23-25 45 11 23 21					Physically Challenged Showers					
23-25 45 11 23 23					Physically Challenged Sitz Baths					
23-25 45 11 25				Physically Challenged	Baths and Showers					
23-25 45 11 25 11					Physically Challenged Toilet Arm Supports					
23-25 45 11 25 13					Physically Challenged Toilet Frames					
23-25 45 11 25 15					Physically Challenged Toilet Grab Bars					
23-25 45 11 25 17					Physically Challenged Toilet Seat Lifters					
23-25 45 11 25 19					Physically Challenged Toilet Seats					
23-25 45 11 25 21					Physically Challenged Toilets					
23-25 45 13					Patient Care Equipment					
23-25 45 15					Patient Care Prefabricated Structures					
23-25 47 00		Patient Clinical Diagnostic Products								
23-25 47 11			Patient Clinical Diagnostic Furnishings							
23-25 47 11 11				Privacy Screens						
23-25 47 11 11 11					Patient Cubicle Curtain Tracks					
23-25 47 11 11 13					Patient Cubicle Curtains					
23-25 47 11 11 15					Patient Cubicle Screens					
23-25 47 11 13				Patient Clinical Diagnostic	Tables					
23-25 47 11 13 11					Examination Treatment Tables					
23-25 47 11 13 13					Medical Procedure Tables					
23-25 47 11 13 15					Minor Surgical Tables					
23-25 47 11 13 17					Treatment Tables					
23-25 47 11 15				Patient Clinical Diagnostic	Sinks					
23-25 47 11 15 11					Clinic Sinks					
23-25 47 11 15 13					Clinic Scrub Sinks					
23-25 47 11 17				Patient Clinical Diagnostic	Storage Products					
23-25 47 11 17 11					Patient Records Shelving Units					
23-25 47 11 19				Patient Clinical Diagnostic	Seating					
23-25 47 11 19 11					Clinical Examination Chairs					
23-25 47 11 19 13					Physician Stools					
23-25 47 11 21				Patient Clinical Diagnostic	Cabinets					
23-25 47 11 21 11					Exam Room Cabinets					
23-25 47 11 21 13					Pass Through Specimen Cabinets					
23-25 47 11 21 15					Treatment Cabinets					
23-25 47 11 23				Patient Clinical Diagnostic	Monitor Arms					
23-25 47 11 23 11					Medical Facility Monitor Ceiling Arms					
23-25 47 11 23 13					Medical Facility Monitor Wall Arms					
23-25 47 13				Patient Clinical Diagnostic Equipment						
23-25 47 13 11					Blood Pressure Units And Related Products					
23-25 47 13 11 11					Aneroid Blood Pressure Units					
23-25 47 13 11 13					Aneroid Sphygmomanometers					
23-25 47 13 11 15					Blood Pressure Recording Units					
23-25 47 13 11 17					Electronic Blood Pressure Units					
23-25 47 13 11 19					Mercury Blood Pressure Units					
23-25 47 13 11 21					Sphygmomanometers					
23-25 47 13 13					Electrocardiography EKG Units And Related Products					
23-25 47 13 13 11					Electrocardiography Units			EKG		
23-25 47 13 13 11 11						Multiple Channel Electrocardiograph Units		EKG		
23-25 47 13 13 11 13						Single Channel Electrocardiograph Units		EKG		
23-25 47 13 13 13					Electrocardiography Cable Lead Testers			EKG		
23-25 47 13 13 15					Electrocardiography Graphic Recorders			EKG		
23-25 47 13 13 17					Electrocardiography Monitors			EKG		

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 47 13 13 19					Electrocardiography Unit Analyzers			EKG		
23-25 47 13 13 21					Long Term Continuous Electrocardiography Monitoring Units			Holter Monitoring Unit		
23-25 47 13 13 23					Electrocardiography Transmitters			EKG		
23-25 47 13 15				Pulse Dosimeters Products						
23-25 47 13 15 11					Co Oximeters					
23-25 47 13 15 13					Pulse Oximeter Cables					
23-25 47 13 15 15					Pulse Oximeter Probes					
23-25 47 13 15 17					Pulse Oximeter Sensors					
23-25 47 13 15 19					Pulse Oximeter Units					
23-25 47 13 17				Medical Exam Diagnostic Products						
23-25 47 13 17 11					Angioscopes					
23-25 47 13 17 13					Anoscopes					
23-25 47 13 17 15					Binocular Ophthalmoscopes					
23-25 47 13 17 15 11						Direct Binocular Ophthalmoscopes				
23-25 47 13 17 15 13						Indirect Binocular Ophthalmoscopes				
23-25 47 13 17 17					Body Composition Analyzer					
23-25 47 13 17 19					Bronchoscopes					
23-25 47 13 17 21					Colposcopes					
23-25 47 13 17 23					Dermatoscopes					
23-25 47 13 17 25					Electroencephalograph EEG					
23-25 47 13 17 27					Electromyographs					
23-25 47 13 17 29					Electronic Stethoscopes					
23-25 47 13 17 31					Fiberoptic Bronchoscopes					
23-25 47 13 17 31 11						Adult Fiberoptic Bronchoscopes				
23-25 47 13 17 31 13						Adult Large Channel Fiberoptic Bronchoscopes				
23-25 47 13 17 31 15						Adult Slim Casing Fiberoptic Bronchoscopes				
23-25 47 13 17 31 17						Examination Fiberoptic Bronchoscopes				
23-25 47 13 17 31 19						Pediatric Fiberoptic Bronchoscopes				
23-25 47 13 17 31 21						Therapeutic Fiberoptic Bronchoscopes				
23-25 47 13 17 33					Goniometers					
23-25 47 13 17 35					Hand Held Vascular Dopplers					
23-25 47 13 17 37					Mechanical Stethoscopes					
23-25 47 13 17 39					Nasopharyngoscopes					
23-25 47 13 17 41					Neurological Discriminators					
23-25 47 13 17 43					Neurological Sensors					
23-25 47 13 17 45					Ophthalmoscopes					
23-25 47 13 17 47					Otoscopes					
23-25 47 13 17 49					Patient Thermoregulators					
23-25 47 13 17 51					Proctoscopes					
23-25 47 13 17 53					Stethoscopic Phonocardiographs					
23-25 47 13 17 55					Therapeutic Bronchoscopes					
23-25 47 13 17 57					Vaginoscopes					
23-25 47 13 19				Patient Weight Scales						
23-25 47 13 19 11					Diaper Weight Scales					
23-25 47 13 19 13					Infant Scales					
23-25 47 13 19 15					Patient Bed Scales					
23-25 47 13 19 17					Patient Chair Scales					
23-25 47 13 19 19					Patient Floor Scales					
23-25 47 13 19 21					Patient Sling Scales					
23-25 47 13 19 23					Patient Table Scales					
23-25 47 13 19 25					Wheelchair Platform Scales					
23-25 47 13 21				Patient Clinical Diagnostic Analyzers						
23-25 47 13 21 11					Amino Acid Analyzers					
23-25 47 13 21 13					Bilirubinometers					
23-25 47 13 21 15					Blood Bank Analyzers					
23-25 47 13 21 17					Blood Gas Analyzers					
23-25 47 13 21 19					Blood Chemistry Analyzers					
23-25 47 13 21 21					Chemistry Analyzers					
23-25 47 13 21 23					Coagulation Analyzers					
23-25 47 13 21 23 11						Automatic Coagulation Analyzers				
23-25 47 13 21 23 13						Fibrometers				
23-25 47 13 21 25					Deoxyribonucleic Sequence Analyzers					
23-25 47 13 21 27					Toxicology Analyzers					
23-25 47 13 21 29					Hematology Analyzers					
23-25 47 13 21 29 11						Differential Hematology Analyzers				
23-25 47 13 21 31					Histology Analyzers					
23-25 47 13 21 33					Breath Hydrogen Analyzers					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 47 13 21 35					Immunology Analyzers					
23-25 47 13 21 37					Microbiology Analyzers					
23-25 47 13 21 39					Protein Analyzers					
23-25 47 13 21 41					Radioisotopic Analyzers					
23-25 47 13 21 43					Urinalysis Analyzers					
23-25 47 13 21 43 11						Advanced Urinalysis Analyzers				
23-25 47 13 21 43 13						Basic Urinalysis Analyzers				
23-25 47 13 21 45					Glucose Analyzers					
23-25 47 13 21 47					Drug Screening Chemistry Analyzers					
23-25 47 13 21 49					High Capacity Strat Chemistry Analyzers					
23-25 47 13 21 51					Multichannel Chemistry Analyzer					
23-25 47 13 21 53					Stat Chemistry Analyzers					
23-25 47 13 21 55					Enzyme Immuni Assay Analysis Units					
23-25 47 13 21 55 11						Advanced Enzyme Immuni Assay Analysis Units				
23-25 47 13 21 55 13						Basic Enzyme Immuni Assay Analysis Units				
23-25 47 13 21 55 15						Plate Washer Enzyme Immuni Assay Analysis Units				
23-25 47 13 21 55 17						Hemoglobinometers				
23-25 47 13 23				Patient Clinical Testing Products						
23-25 47 13 23 11					Cholesterol Meters					
23-25 47 13 23 13					Cholesterol Monitors					
23-25 47 13 23 15					Glucose Meters					
23-25 47 13 23 17					Glucose Monitors					
23-25 47 15				Patient Clinical Diagnostic Prefabricated Structures						
23-25 47 15 11				Exam Work Centers						
23-25 47 15 13				Gross Pathology Stations						
23-25 47 15 15				Hospital equipment power columns						
23-25 47 15 17				Medical Preparation Work Centers						
23-25 49 00		Patient Transportation and Lifting Equipment							Medical equipment used to transport or lift patients.	
23-25 49 11			Patient transport products							
23-25 49 11 11				Patient Transport Trolleys						
23-25 49 11 13				Patient Gurneys						
23-25 49 11 15				Geriatric Chairs						
23-25 49 11 17				Patient Transport Incubators						
23-25 49 11 19				Patient Scooters						
23-25 49 11 21				Patient Stretchers						
23-25 49 11 21 11					Cadaver Transport Stretchers					
23-25 49 11 21 13					Labor Recover Stretchers					
23-25 49 11 21 15					MRI Compatible Stretchers					
23-25 49 11 21 17					Surgical Recovery Stretchers					
23-25 49 11 23				Patient Mobile Stretchers						
23-25 49 11 23 11					Tapered Head Mobile Stretchers					
23-25 49 11 23 13					9 Position Mobile Stretchers					
23-25 49 11 25				Wheelchairs						
23-25 49 11 25 11					Electric Wheelchairs					
23-25 49 11 25 13					Manual Wheelchairs					
23-25 49 11 27				Patient Shifting Boards						
23-25 49 11 29				Patient Transfer Mats						
23-25 49 13			Patient lifts							
23-25 49 13 11				Patient Scissor Lifts						
23-25 49 13 13				Clinical Hydraulic Lifts						
23-25 49 13 15				Patient Suspended Seats						
23-25 49 13 17				Patient Suspended Slings						
23-25 49 13 19				Patient Ceiling Hoists						
23-25 49 13 21				Clinical Infant Slings						
23-25 49 13 21 11					Patient Hoists					
23-25 51 00		Pediatrics Products								
23-25 51 11			Pediatrics Furnishings							
23-25 51 11 11				Pediatric Beds						
23-25 51 11 11 11					Pediatric Bassinets					
23-25 51 11 11 13					Pediatric Beds					
23-25 51 11 11 15					Pediatric Cribs					
23-25 51 11 11 17					Pediatric Examination Tables					
23-25 51 11 11 19					Pediatric Incubators					
23-25 51 11 11 21					Pediatric Infant Positioning Cradles					
23-25 51 11 11 23					Pediatric Infant Warmers					
23-25 51 13			Pediatrics Equipment							
23-25 51 13 11				Pediatrics Ventilators						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 51 13 11 11					Pediatric Intensive Care Ventilators					
23-25 51 13 11 13					Infant Intensive Care Ventilators					
23-25 51 15				Pediatrics Prefabricated Structures						
23-25 51 15 11				Infant Prefabricated Service Columns						
23-25 53 00		Pharmacology Products								
23-25 53 11			Pharmacology Furnishings							
23-25 53 11 11				Pharmacy Shelving Units						
23-25 53 11 13				Pharmacology Cabinets						
23-25 53 11 13 11					Medicine Cabinets					
23-25 53 11 13 13					Narcotic Cabinets					
23-25 53 11 13 13 11						Narcotic Cabinets With Safe				
23-25 53 13			Pharmacology Equipment							
23-25 53 13 11				Pharmacology Carts						
23-25 53 13 11 11					Medication Carts					
23-25 53 13 11 13					Unit Dose Medication Carts					
23-25 53 13 13				Tablet Products						
23-25 53 13 13 11					Tablet Crushers					
23-25 53 13 13 13					Tablet Crusher Dispensers					
23-25 53 13 13 15					Tablet Cutters					
23-25 53 15			Pharmacology Prefabricated Structures							
23-25 53 15 11				Pharmacy Stations						
23-25 55 00		Psychiatric and Psychology Products								
23-25 55 11			Psychiatric and Psychology Furnishings							
23-25 55 11 11				Psychiatric Beds						
23-25 55 11 11 11					Psychiatric Patient Showers					
23-25 55 11 11 13					Psychiatric Platform Bed Without Visible Legs					
23-25 55 11 11 15					Psychiatric Platform Beds					
23-25 55 11 11 17					Psychiatric Platform Beds					
23-25 55 13			Psychiatric and Psychology Equipment							
23-25 55 15			Psychiatric and Psychology Prefabricated Structures							
23-25 57 00		Sterilization Medical Products								
23-25 57 11			Sterilizer Equipment							
23-25 57 11 11				Chemical Sterilizers						
23-25 57 11 13				Dry Heat Sterilizers						
23-25 57 11 15				Filter Sterilizers						
23-25 57 11 17				Gas Sterilizers						
23-25 57 11 19				Glass Bead Sterilizers						
23-25 57 11 21				Hot Air Sterilizers						
23-25 57 11 23				Needle Sterilizers						
23-25 57 11 25				Powered Instrument Cleaning Devices						
23-25 57 11 27				Radiation Sterilizers						
23-25 57 11 29				Sanitizer Heaters						
23-25 57 11 31				Steam Autoclaves						
23-25 57 11 33				Steam Sterilizers						
23-25 57 11 35				Sterilization Cabinets						
23-25 57 11 37				Sterilization Lamps						
23-25 57 11 39				Sterilization Water Recovery Equipment						
23-25 57 11 41				Double Chamber Ultrasonic Cleaners						
23-25 57 11 43				Single Chamber Ultrasonic Cleaners						
23-25 59 00		Surgical Products								
23-25 59 11			Surgical Furnishings							
23-25 59 11 11				Surgical Beds						
23-25 59 11 11 11					Surgical Bedside Rails					
23-25 59 11 13				Surgical Sinks						
23-25 59 11 13 11					Surgeon Scrub Sinks					
23-25 59 11 13 13					Surgeon's Instrument Sinks					
23-25 59 11 15				Surgical Tables						
23-25 59 11 15 11					Surgical Instrument Tables					
23-25 59 11 15 13					Spinal Operating Tables					
23-25 59 11 15 15					Surgical Operating Tables					
23-25 59 11 15 17					Straddle Instrument Tables					
23-25 59 11 15 19					Medical Dressing Instrument Tables					
23-25 59 11 15 21					Cesarean Section Patient Procedure Tables					
23-25 59 11 15 23					Delivery Room Patient Procedure Tables					
23-25 59 11 15 25					Surgical Instrument Tables					
23-25 59 11 15 27					Operating Room Patient Fracture Tables					
23-25 59 11 15 29					Operating Room Patient Procedure Tables					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 59 11 15 31					Surgical Equipment Stands					
23-25 59 11 17				Surgical Seating						
23-25 59 11 17 11					Surgeon Stools					
23-25 59 11 17 13					Rolling Surgeons Stools					
23-25 59 11 17 15					Surgical Step Stools					
23-25 59 11 19				Surgical Cabinets						
23-25 59 11 19 11					Surgical Instrument Cabinets					
23-25 59 13			Surgical Equipment							
23-25 59 13 11				Surgical Carts						
23-25 59 13 11 11					Sterilizable Loading Carts					
23-25 59 13 11 13					Surgical Case Carts					
23-25 59 13 11 15					Surgical Dressing Carts					
23-25 59 13 11 17					Operating Room Case Carts					
23-25 59 13 13				Cardiovascular Products						
23-25 59 13 13 11					Heart And Lung Machines					
23-25 59 13 13 13					Intraaortic Balloon Pumps					
23-25 59 13 13 15					Intracardiac Suction Devices					
23-25 59 13 13 17					Perfusion Blood Parameter Monitors					
23-25 59 13 13 19					Perfusion Bubble Traps					
23-25 59 13 13 21					Perfusion Cardioplegia Sets					
23-25 59 13 13 23					Perfusion Cardiotomy Reservoirs					
23-25 59 13 13 25					Perfusion Centrifugal Equipment					
23-25 59 13 13 27					Perfusion Heaters					
23-25 59 13 13 29					Perfusion Coolers					
23-25 59 13 13 31					Perfusion Dual Heater And Cooler Units					
23-25 59 13 13 33					Perfusion Haemoconcentrators					
23-25 59 13 13 35					Perfusion Oxygen Saturation Monitors					
23-25 59 13 13 37					Perfusion Oxygenators					
23-25 59 13 13 39					Perfusion Pump Heads					
23-25 59 13 13 41					Perfusion Venous Reservoirs					
23-25 59 13 13 43					Ventricular Assist Devices					
23-25 59 13 13 45					Perfusion Pumps					
23-25 59 13 13 47					Cardiovascular Reservoirs					
23-25 59 13 13 49					Surgical Coronary Artery Blowers					
23-25 59 13 13 51					Surgical Coronary Artery Misters					
23-25 59 13 15				Surgical Equipment						
23-25 59 13 15 11					Surgical Basin Stands					
23-25 59 13 15 13					Cryosurgery Equipment					
23-25 59 13 15 15					Electrocautery Equipment					
23-25 59 13 15 17					Ophthalmic Irrigation Equipment					
23-25 59 13 15 19					Ophthalmic Surgery Phacoemulsification Equipment					
23-25 59 13 15 21					Ophthalmic Surgery Extrusion Equipment					
23-25 59 13 15 23					Surgical Irrigation Pumps					
23-25 59 13 15 25					Pulsed Lavage Units With Suction					
23-25 59 13 15 27					Pulsed Lavage Units With Out Suction					
23-25 59 13 15 29					Surgical Lasers					
23-25 59 13 15 29 11						CO2 Surgical Lasers				
23-25 59 13 15 29 13						KTP Surgical Lasers				
23-25 59 13 15 31				Surgical Lithotripters						
23-25 59 13 15 31 11						Extracorporeal Lithotripters				
23-25 59 13 15 31 13						Ultrasound Lithotripters				
23-25 59 13 15 33				Surgical Microscopes						
23-25 59 13 15 35				Surgical Magnifiers						
23-25 59 13 15 37				Surgical Pneumatic Tourniquets						
23-25 59 13 15 39				Surgical Electric Tourniquets						
23-25 59 13 15 41				Surgical Aspirators						
23-25 59 13 15 41 11						General Purpose Aspirator Pressure Units				
23-25 59 13 15 41 13						Low Pressure High Volume Suction Chest and Abdomen Aspirators				
23-25 59 13 15 41 15						Low Pressure Low Volume Suction Surgical Aspirators				
23-25 59 13 15 41 17						Mobile Uterine Aspirators				
23-25 59 13 15 43				Surgical Urological Tables						
23-25 59 13 15 45					Vitreo Retinal Fragmatome Surgery Equipment					
23-25 59 13 15 47					Microsurgery Equipment					
23-25 59 13 15 49					Operating Room Medication Dispensers					
23-25 59 13 15 51					Surgical Dermatomes					
23-25 59 13 15 53					Surgical Dermabraders					
23-25 59 13 15 55					Surgical Dermameshers					
23-25 59 13 15 57					Surgical Pneumatic Saws					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 59 13 15 59					Surgical Pneumatic Drills					
23-25 59 13 15 61					Surgical Power Pin Drivers					
23-25 59 13 15 63					Surgical Power Saws					
23-25 59 13 15 65					Surgical Power Drills					
23-25 59 13 15 67					Surgical Power Pin Drivers					
23-25 59 13 15 69					Surgical Reamers					
23-25 59 13 15 71					Surgical Shavers					
23-25 59 13 15 73					Electrosurgical Units					
23-25 59 13 15 73 11						Dual Output Electrosurgical Units				
23-25 59 13 15 73 13						Endoscopy Electrosurgical Units				
23-25 59 13 15 73 15						Monopolar Electrosurgical Units				
23-25 59 13 15 73 17						Unblended Mobile Electrosurgical Units				
23-25 59 13 17				Surgical Lighting Fixtures						
23-25 59 13 17 11					Surgical Operating Room Lighting Fixtures					
23-25 59 13 19				Surgical Support Products						
23-25 59 13 19 11					Surgical Basin Sets					
23-25 59 13 19 13					Surgical Bone Cement Mixing Equipment					
23-25 59 13 19 15					Surgical Suction Canisters					
23-25 59 13 19 17					Surgical Glove Drying Or Powdering Equipment					
23-25 59 13 19 19					Surgical Fluid Decanting Devices					
23-25 59 15				Surgical Prefabricated Structures						
23-25 59 15 11					Surgical Prefabricated Service Columns					
23-25 61 00		Veterinary and Animal Products								
23-25 61 11			Veterinary and Animal Furnishings							
23-25 61 11 11				Veterinary Tables						
23-25 61 11 11 11					Veterinary Operating Tables					
23-25 61 11 11 13					Postmortem Animal Dissection Tables					
23-25 61 11 11 15					Necropsy Tables					
23-25 61 11 11 17					Veterinary Surgical Tables					
23-25 61 11 13				Veterinary Sinks						
23-25 61 11 13 11					Animal Cage Washing Sinks					
23-25 61 11 15				Veterinary Storage Chests						
23-25 61 13			Veterinary and Animal Equipment							
23-25 61 13 11				Animal Containment Products						
23-25 61 13 11 10					Cage Washers					
23-25 61 13 11 11					Small Animal Laboratory Cages					
23-25 61 13 11 13					Large Animal Laboratory Cages					
23-25 61 13 11 15					Large Animal Mobile Kennels					
23-25 61 13 11 15 11						Intensive Care Large Animal Mobile Kennels				
23-25 61 13 11 17					Small Animal Mobile Kennels					
23-25 61 13 11 17 11						Intensive Care Small Animal Mobile Kennels				
23-25 61 13 11 19					Aquaria Equipment					
23-25 61 13 11 21					Animal Catching Devices					
23-25 61 13 11 23					Fish Aeration Systems					
23-25 61 15			Veterinary Equipment							
23-25 61 15 11				Veterinary Blood Pressure Testers						
23-25 61 15 13				Veterinary Kymograph Testers						
23-25 61 15 15				Veterinary Pyrogenic Testers						
23-25 61 15 17				Veterinary Stereotoxic Equipment						
23-25 61 15 19				Veterinary Electrocardiographs ECG						
23-25 61 17				Veterinary and Animal Prefabricated Structures						
23-25 63 00		X Ray and Imagery Products								
23-25 63 11			X Ray and Imagery Furnishings							
23-25 63 11 11				X Ray and Imagery Sinks						
23-25 63 11 11 11					Film Processing Sinks					
23-25 63 11 11 13					Lead Lined Sinks					
23-25 63 11 11 13 11						Lead Lined With Decay Storage Sinks				
23-25 63 11 13				X Ray and Imagery Protective Barriers						
23-25 63 11 13 11					X Ray Protective Screens					
23-25 63 11 13 13					Radiofrequency Proective Screens					
23-25 63 11 13 15					Radiological Shielding Apron Racks					
23-25 63 11 13 17					Portable Radioactive Materials Containers					
23-25 63 11 13 19					Radiological Shielding Freestanding Screens					
23-25 63 11 13 21					Radiological Shielding Wall					
23-25 63 11 13 23					Radiological Shielding Ceiling Panels					
23-25 63 11 13 25					Radiological Shielding Floor Installed Panels					
23-25 63 11 15				X Ray and Imagery Storage Units						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 63 11 15 11					Lead Lined Storage Cabinets					
23-25 63 11 15 13					Photographic Slides Storage Cabinets					
23-25 63 13				X Ray and Imagery Equipment						
23-25 63 13 11				X Ray and Imagery Carts						
23-25 63 13 11 11					Radium Transport Carts					
23-25 63 13 13				Computed Tomography	CT and CAT Products					
23-25 63 13 13 11					Computed Tomography CT Complete Stationary Units					
23-25 63 13 13 13					Computed Tomography CT Mobile Units					
23-25 63 13 13 15					Computed Tomography CT Van Units					
23-25 63 13 13 17					Computed Tomography CT Consoles					
23-25 63 13 13 19					Computed Tomography CT Power Conditioners					
23-25 63 13 13 21					Computed Tomography CT Tables					
23-25 63 13 13 23					Computed Tomography CT Chairs					
23-25 63 13 13 25					Computed Tomography CAT Complete Stationary Units					
23-25 63 13 13 27					Computed Tomography CAT Mobile Units					
23-25 63 13 13 29					Computed Tomography CAT Transportable Units					
23-25 63 13 13 31					Computed Tomography CAT Van Units					
23-25 63 13 13 33					Computed Tomography CAT Consoles					
23-25 63 13 13 35					Computed Tomography CAT Power Conditioners					
23-25 63 13 13 37					Computed Tomography CAT Tables					
23-25 63 13 13 39					Computed Tomography CAT Chairs					
23-25 63 13 13 41					Computerized Tomography Phantoms					
23-25 63 13 13 41 11						Body Computerized Tomography Phantoms				
23-25 63 13 13 41 13						Head Computerized Tomography Phantoms				
23-25 63 13 13 41 15						Performance Computerized Tomography Phantoms				
23-25 63 13 13 43					Computed Tomography CT Radiotherapy Simulators					
23-25 63 13 13 45					Computed Tomography CAT Radiotherapy Simulators					
23-25 63 13 15				Magnetic Resonance Imaging Products				MRI		
23-25 63 13 15 11					Medical Magnetic Resonance Imaging Complete Stationary Unit Installation					
23-25 63 13 15 13					Medical Magnetic Resonance Imaging Mobile Units					
23-25 63 13 15 15					Medical Magnetic Resonance Imaging Transportable Units					
23-25 63 13 15 17					Medical Magnetic Resonance Imaging Van Units					
23-25 63 13 15 19					Medical Magnetic Resonance Imaging Monitors					
23-25 63 13 15 21					Medical Magnetic Resonance Imaging Scanners					
23-25 63 13 15 23					Medical Magnetic Resonance Imaging Tables					
23-25 63 13 17				Ultrasound Doppler And Echo Imaging Products						
23-25 63 13 17 11					Cardiac Ultrasound Units					
23-25 63 13 17 13					Cardiac Doppler Units					
23-25 63 13 17 15					Cardiac Echo Units					
23-25 63 13 17 17					Cardioscopes					
23-25 63 13 17 19					Fetal Ultrasound Units					
23-25 63 13 17 21					Fetal Echo Units					
23-25 63 13 17 23					Gynecological Ultrasound Units					
23-25 63 13 17 25					Gynecological Echo Units					
23-25 63 13 17 27					Mammographic Ultrasound Units					
23-25 63 13 17 29					Mammographic Echo Units					
23-25 63 13 17 31					Medical Ultrasound Bone Densitometers					
23-25 63 13 17 33					Medical Ultrasound Or Doppler Or Echo Monitors					
23-25 63 13 17 35					Medical Ultrasound Or Doppler Or Echo Printers					
23-25 63 13 17 37					Medical Ultrasound Transducers					
23-25 63 13 17 39					Medical Doppler Transducers					
23-25 63 13 17 41					Medical Echo Transducers					
23-25 63 13 17 43					Medical General Use Ultrasound Units					
23-25 63 13 17 45					Medical General Use Doppler Units					
23-25 63 13 17 47					Medical General Use Pulse Echo Units					
23-25 63 13 17 49					Medical General Use Echography Units					
23-25 63 13 17 51					Thesiometers					
23-25 63 13 17 53					Vaginal Ultrasound Or Echo Probes					
23-25 63 13 17 55					Vascular Ultrasound Units					
23-25 63 13 17 57					Medical Ultrasound Ophthalmic Scanners					
23-25 63 13 19				X Ray Products						
23-25 63 13 19 11					Chest X Ray Equipment					
23-25 63 13 19 13					Mammography X Ray Equipment					
23-25 63 13 19 15					Medical C Arm X Ray Units					
23-25 63 13 19 17					Medical Cine Fluoroscopy Equipment					
23-25 63 13 19 19					Medical Radiology And Fluoroscopy RF Equipment					
23-25 63 13 19 21					Medical Radioisotope Scanners					
23-25 63 13 19 23					Medical X Ray Buckys					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 63 13 19 25					Medical X Ray Quality Assurance Calibration Devices					
23-25 63 13 19 27					Medical X Ray Tables					
23-25 63 13 19 29					Medical X Ray Stands					
23-25 63 13 19 31					Medical X Ray Chairs					
23-25 63 13 19 33					Medical X Ray Cabinets					
23-25 63 13 19 35					Medical X Ray Tomography Units					
23-25 63 13 19 37					Medical Diagnostic Use X Ray Units					
23-25 63 13 19 39					Medical Xeroradiography Units					
23-25 63 13 19 41					X Ray Bone Densitometers					
23-25 63 13 19 43					Medical X Ray Intensifying Screens					
23-25 63 13 19 45					Medical X Ray Water Coolers					
23-25 63 13 19 47					Medical Imaging Procedure Trays					
23-25 63 13 19 49					Medical X Ray Film Hot Spot Lights					
23-25 63 13 19 51					Medical X Ray Film Large Rack Viewing Systems					
23-25 63 13 19 53					Medical X Ray Film View Boxes					
23-25 63 13 19 55					Medical X Ray Film Illuminator Windows					
23-25 63 13 19 57					Medical X Ray Film Illuminator Screens					
23-25 63 13 19 59					Medical X Ray Film Stereoscopes					
23-25 63 13 21				Gamma Cameras Products						
23-25 63 13 21 11					Medical General Use Gamma Cameras					
23-25 63 13 21 13					Lymphatic Mapping Navigator Equipment					
23-25 63 13 21 15					Lymphatic Mapping Probes					
23-25 63 13 21 17					Lymphatic Mapping Collimators					
23-25 63 13 23				Gamma Radiation Therapy Products						
23-25 63 13 23 11					Radiosurgical Gamma Knife Collimators					
23-25 63 13 23 13					Radiosurgical Gamma Knife Units					
23-25 63 13 23 15					Radiosurgical Gamma Scintillators					
23-25 63 13 25				Linear Accelerator Intensity Modulated Radiation Therapy Units				IMRT Units		
23-25 63 13 25 11					Medical Linear Accelerator Intensity Modulated Radiation Therapy IMRT Two Dimensional Units					
23-25 63 13 25 13					Medical Linear Accelerator Intensity Modulated Radiation Therapy IMRT Three Dimensional Units					
23-25 63 13 25 15					Medical Linear Accelerator Intensity Modulated Radiation Therapy IMRT Collimators					
23-25 63 13 25 17					Dual Energy Linear Accelerator					
23-25 63 13 27				Medical Positron Emission Tomography Units				PET		
23-25 63 13 27 11					Medical Positron Emission Tomography PET Units					
23-25 63 13 29				Medical Single Photon Emission Computed Tomography Units				SPECT		
23-25 63 13 29 11					Medical Single Photon Emission Computed Tomography SPECT Units					
23-25 63 13 31				Radiotherapy Teletherapy Products						
23-25 63 13 31 11					Radiotherapy Teletherapy Cobalt 60 Equipment					
23-25 63 13 31 13					Radiotherapy Teletherapy Linear Accelerators					
23-25 63 13 31 15					Radiotherapy Teletherapy Orthovoltage X Ray Machines					
23-25 63 13 31 17					Radiotherapy Teletherapy Superficial X Ray Machines					
23-25 63 13 31 19					Radiotherapy Cutters					
23-25 63 13 31 19 11						Radiotherapy Beam Block Cutters				
23-25 63 13 31 19 13						Radiotherapy Compensator Cutters				
23-25 63 13 33				Radiographic Fluoroscopic Units						
23-25 63 13 33 11					Computerized Tomography Radiographic Fluoroscopic Units					
23-25 63 13 33 13					Digital Angio Biplane Radiographic Fluoroscopic Units					
23-25 63 13 33 15					Digital Cardiac Radiographic Fluoroscopic Units					
23-25 63 13 33 17					Digital Chest Radiographic Fluoroscopic Units					
23-25 63 13 33 19					Mammographic Radiographic Fluoroscopic Units					
23-25 63 13 33 21					Non Tilt Table Radiographic Units					
23-25 63 13 33 23					Table Radiographic Fluoroscopic Units					
23-25 63 13 33 23 11						Remote Table Radiographic Fluoroscopic Units				
23-25 63 13 33 25					Urologic Radiographic Fluoroscopic Units					
23-25 63 13 33 25 11						Computerized Tomography Urologic Radiographic Fluoroscopic Units				
23-25 63 13 35				Radiation Detection Or Monitoring Products						
23-25 63 13 35 11					Radiation Dosimeters					
23-25 63 13 35 13					Radiation Badges					
23-25 63 13 35 15					Radiation Detectors					
23-25 63 15				X Ray and Imagery Prefabricated Structures						
23-25 63 15 11					Radiological Shielding Chambers					
23-25 63 15 13					Radiological Shielding Rooms					
23-25 63 15 15					Radiological Shielding Safes					
23-25 63 17				Specialized Medical Computer Equipment						
23-25 63 17 11					Computer Assisted Cardiology Management System					
23-25 63 17 13					Nuclear Medicine Clinical Computers					
23-25 63 17 15					DIN PACS Computer System					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 63 17 17				Hoiter Monitor Analysis Computer System						
23-25 63 17 19				Mean Cell Volume Computers						
23-25 63 17 21				Radiation Therapy Treatment Planning Computers						
23-25 65 00				Biological Protection and Preservation Products					Furnishings specific to medical and laboratory.	
23-25 65 11				Biological Safety Cabinets						
23-25 65 11 11				Biological Safety Class I Cabinets						
23-25 65 11 13				Biological Safety Class II Cabinets						
23-25 65 11 15				Biological Safety Class III Cabinets						
23-25 65 11 17				Cryogenic Freezers						
23-25 65 11 19				Biological Freezers						
23-25 65 11 21				Biological Refrigerators						
23-25 65 13				Cabinet Bases						
23-25 65 13 11				Biological Safety Class I Cabinet Bases						
23-25 65 13 13				Biological Safety Class II Cabinet Bases						
23-25 65 13 15				Biological Safety Class III Cabinet Bases						
23-25 67 00				Hazardous Materials Products						
23-25 67 11				Hazardous Materials Cabinets						
23-25 67 11 11				Acid Storage Cabinets						
23-25 67 11 13				Flammable Storage Cabinets						
23-25 67 13				Hazardous Materials Refrigerators and Freezers						
23-25 67 13 11				Flammable Material Storage Refrigerators						
23-25 67 13 13				Flammable Material Storage Freezers						
23-25 67 13 15				Flammable Material Storage Refrigerator Freezers						
23-25 67 13 17				Explosion Proof Refrigerators						
23-25 67 13 19				Explosion Proof Refrigerator Freezers						
23-25 69 00				Laboratory and Scientific Products					Fume and debris hoods specific to medical and laboratory.	
23-25 69 11				Laboratory Furnishings						
23-25 69 11 11				Laboratory Tables						
23-25 69 11 11 11					Microscope Tables					
23-25 69 11 13				Laboratory Seating						
23-25 69 11 15				Laboratory Fume hoods						
23-25 69 11 15 11				Bench Fume hoods						
23-25 69 11 15 11 11					Horizontal Laminar Flow Bench Fume hoods					
23-25 69 11 15 13				Floor Standing Fume hoods						
23-25 69 11 15 13 11					Horizontal Laminar Flow Free Standing Fume hoods					
23-25 69 11 15 13 13					Explosion Proof Floor Standing Fume hoods					
23-25 69 11 15 13 15					Perchloric Floor Standing Fume Hoods					
23-25 69 11 15 15					Histopathology Staining Fume Hoods					
23-25 69 11 15 17					Horizontal Laminar Flow Fume Hoods					
23-25 69 13				Laboratory And Scientific Equipment						
23-25 69 13 11				Microscopes						
23-25 69 13 11 11					Acoustic Microscopes					
23-25 69 13 11 13					Binocular Microscopes					
23-25 69 13 11 13 11						Phase Contrast Binocular Microscopes				
23-25 69 13 11 13 13						Binocular Light Compound Microscopes				
23-25 69 13 11 15					Bore scope Inspection Equipment					
23-25 69 13 11 17					Combination Electron And Light Microscopes					
23-25 69 13 11 19					Dark field Microscopes					
23-25 69 13 11 21					Digital Image Vantyping Microscopes					
23-25 69 13 11 23					Dissecting Light Microscopes					
23-25 69 13 11 25					Electron Microscopes					
23-25 69 13 11 27					Fluorescence Microscopes					
23-25 69 13 11 29					Fluorescent Microscopes					
23-25 69 13 11 31					Inverted Microscopes					
23-25 69 13 11 33					Ion Microscopes					
23-25 69 13 11 35					Laser Scanning Microscopes					
23-25 69 13 11 37					Metallurgical Microscopes					
23-25 69 13 11 39					Monocular Microscopes					
23-25 69 13 11 41					Operating Microscopes					
23-25 69 13 11 43					Photographic Fluorescent Microscopes					
23-25 69 13 11 45					Photographic Microscopes					
23-25 69 13 11 47					Polarizing Microscopes					
23-25 69 13 11 49					Projection Microscopes					
23-25 69 13 11 51					Scanning Electron Microscopes					
23-25 69 13 11 53					Scanning Light Microscopes					
23-25 69 13 11 55					Scanning Probe Microscopes					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 69 13 11 57					Spinning Disk Microscopes					
23-25 69 13 11 59					Stereo Microscopes					
23-25 69 13 11 61					Tissue Culture Inverted Microscopes					
23-25 69 13 11 63					Transmission Electron Microscopes					
23-25 69 13 11 65					Trinocular Microscopes					
23-25 69 13 11 67					Wide Field Microscopes					
23-25 69 13 13				Optical Equipment						
23-25 69 13 13 11					Telescopes					
23-25 69 13 13 13					Binoculars					
23-25 69 13 13 15					Videoscopes					
23-25 69 13 13 17					Fiberscopes					
23-25 69 13 15				Laboratory Disruption Equipment						
23-25 69 13 15 11					French Pressure Cells					
23-25 69 13 15 13					Homogenizers					
23-25 69 13 15 15					Laboratory Blenders					
23-25 69 13 15 17					Laboratory Crushers					
23-25 69 13 15 19					Laboratory Disintegrators					
23-25 69 13 15 21					Laboratory Emulsifiers					
23-25 69 13 15 23					Laboratory Mills					
23-25 69 13 15 25					Laboratory Presses					
23-25 69 13 15 27					Laboratory Pulverizers					
23-25 69 13 15 29					Laboratory Tissue Grinders					
23-25 69 13 15 31					Liquid Measuring Cans					
23-25 69 13 15 33					Mortars					
23-25 69 13 15 35					Pestles					
23-25 69 13 17				Laboratory Heating Drying Equipment						
23-25 69 13 17 11					Laboratory Dry Baths					
23-25 69 13 17 13					Bunsen Burner			Gas Burner		
23-25 69 13 17 15					Laboratory Hotplates					
23-25 69 13 17 17					Laboratory Incinerators					
23-25 69 13 17 19					Laboratory Infrared Dryers					
23-25 69 13 17 21					Laboratory Spirit Burners					
23-25 69 13 17 23					Laboratory Temperature Cycling Chambers					
23-25 69 13 17 25					Laboratory Thermal Cyclers					
23-25 69 13 17 27					Laboratory Warming Cabinets					
23-25 69 13 17 29					Stirring Hotplates					
23-25 69 13 19				Histology Equipment						
23-25 69 13 19 11					Tissue Embedding Stations					
23-25 69 13 19 13					Embedding Molds					
23-25 69 13 19 15					Embedding Capsules					
23-25 69 13 19 17					Embedding Compounds					
23-25 69 13 19 19					Histological Staining Units					
23-25 69 13 19 21					Tissue Processors					
23-25 69 13 19 21 11						Automatic Tissue Processors				
23-25 69 13 19 21 13						Electron Microscopy Tissue Processors				
23-25 69 13 19 21 15						Vacuum Tissue Processors				
23-25 69 13 19 23					Tissue Culture Units					
23-25 69 13 19 25					Ultrasonic Tissue Disintegrators					
23-25 69 13 19 27					Microtomes					
23-25 69 13 19 27 11						Tilt Rotary Microtomes				
23-25 69 13 19 27 13						Refrigerated Tilt Rotary Microtomes				
23-25 69 13 19 29					Slide Warmers					
23-25 69 13 19 31					Slide Dryers					
23-25 69 13 19 33					Slide Stainers					
23-25 69 13 21				Laboratory Cooling Equipment						
23-25 69 13 21 11					Liquid Nitrogen Dewars					
23-25 69 13 21 13					Ultra Cold Upright Cabinets					
23-25 69 13 21 15					Ultra Cold Freezers					
23-25 69 13 21 17					Ultralow Upright Cabinets					
23-25 69 13 21 19					Ultralow Freezers					
23-25 69 13 21 21					Ultra Cold Chest Freezers					
23-25 69 13 21 23					Ultralow Chest Freezers					
23-25 69 13 21 25					Liquid Nitrogen Freezers					
23-25 69 13 21 27					Laboratory Cold Water Circulators					
23-25 69 13 21 29					Chromatography Refrigerators					
23-25 69 13 21 31					Laboratory Plate Freezers					
23-25 69 13 21 33					Laboratory Cold Traps					
23-25 69 13 23				Centrifuges						
23-25 69 13 23 11					Benchtop Centrifuges					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-25 69 13 23 13					Centrifuge Buckets					
23-25 69 13 23 15					Centrifuge Rotors					
23-25 69 13 23 17					Cytology Centrifuges					
23-25 69 13 23 19					Floor Centrifuges					
23-25 69 13 23 21					Microcentrifuges					
23-25 69 13 23 23					Microhematocrit Centrifuges					
23-25 69 13 23 25					Refrigerated Benchtop Centrifuges					
23-25 69 13 23 27					Refrigerated Floor Centrifuges					
23-25 69 13 23 29					Refrigerated Microcentrifuges					
23-25 69 13 23 31					Serological Centrifuges					
23-25 69 13 23 31 11						Multiple Speed Serological Centrifuges				
23-25 69 13 23 33					Tabletop Centrifuges					
23-25 69 13 23 35					Ultracentrifuges					
23-25 69 13 23 37					Vacuum Centrifuges					
23-25 69 13 25				Incubators						
23-25 69 13 25 11					CO2 Incubators					
23-25 69 13 25 13					Cooled Biological Oxygen Demand BOD Incubators					
23-25 69 13 25 15					Dry Wall Dual Chamber Carbon Dioxide Incubators					
23-25 69 13 25 17					Dry Wall Dual Chamber Carbon Dioxide Incubators With Humidity Control					
23-25 69 13 25 19					Dry Wall Dual Chamber Three Gas Incubators					
23-25 69 13 25 21					Dry Wall Dual Chamber Three Gas Incubators With Humidity Control					
23-25 69 13 25 23					Dry Wall Single Chamber Carbon Dioxide Incubators					
23-25 69 13 25 25					Dry Wall Single Chamber Carbon Dioxide Incubators With Humidity Control					
23-25 69 13 25 27					Dry Wall Single Chamber Three Gas Incubators					
23-25 69 13 25 29					Dry Wall Single Chamber Three Gas Incubators With Humidity Control					
23-25 69 13 25 31					Forced Air General Purpose Incubators					
23-25 69 13 25 33					Gravity Convection General Purpose Incubators					
23-25 69 13 25 35					Mechanical Convection General Purpose Incubators					
23-25 69 13 25 37					Multipurpose Incubators					
23-25 69 13 25 39					Plate Incubators					
23-25 69 13 25 41					Refrigerated Incubators					
23-25 69 13 25 43					Shaking Incubators					
23-25 69 13 25 45					Water Jacketed Dual Chamber Carbon Dioxide Incubators					
23-25 69 13 25 47					Water Jacketed Dual Chamber Carbon Dioxide Incubators With Humidity Control					
23-25 69 13 25 49					Water Jacketed Dual Chamber Three Gas Incubators					
23-25 69 13 25 51					Water Jacketed Dual Chamber Three Gas Incubators With Humidity Control					
23-25 69 13 25 53					Water Jacketed Single Chamber Carbon Dioxide Incubators					
23-25 69 13 25 55					Water Jacketed Single Chamber Carbon Dioxide Incubators With Humidity Control					
23-25 69 13 25 57					Water Jacketed Single Chamber Three Gas Incubators					
23-25 69 13 25 59					Water Jacketed Single Chamber Three Gas Incubators With Humidity Control					
23-25 69 13 27				Laboratory Ovens						
23-25 69 13 27 11					Laboratory Ageing Ovens					
23-25 69 13 27 13					Laboratory Cleanroom Ovens					
23-25 69 13 27 15					Laboratory Drying Cabinets					
23-25 69 13 27 17					Laboratory Drying Ovens					
23-25 69 13 27 19					Laboratory Gravity Convection Ovens					
23-25 69 13 27 21					Laboratory Induction Dryers					
23-25 69 13 27 23					Laboratory Mechanical Convection Ovens					
23-25 69 13 27 25					Laboratory Vacuum Ovens					
23-25 69 13 29				Laboratory Distillers						
23-25 69 13 29 11					Laboratory Water Distillers					
23-27 00 00	General Facility Services Products								Facility Service products that have uses in multiple disciplines.	Includes piping, pumps, motors, and integrated control systems.
23-27 11 00	General Instruments and Controls								Instruments and controls used in multiple disciplines.	
23-27 11 11			Temperature Measuring Instrument And Controls							
23-27 11 11 11				Temperature Alarm Modules						
23-27 11 11 13				Temperature Control Modules						
23-27 11 11 15				Temperature Controllers						
23-27 11 11 15 11					Digital Temperature Controllers					
23-27 11 11 15 13					Electric Temperature Controllers					
23-27 11 11 15 15					Pneumatic Hating Controllers					
23-27 11 11 15 17					Hydraulic Temperature Controllers					
23-27 11 11 17				Temperature Detectors						
23-27 11 11 17 11					Thermocouple Detectors					
23-27 11 11 17 13					RTD Detectors					
23-27 11 11 19				Temperature Indicators						
23-27 11 11 21				Temperature Recorders						
23-27 11 11 23				Temperature Sensors						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-27 11 11 23 11					Thermocouple Probes					
23-27 11 13				Pressure Measuring Instrument And Controls						
23-27 11 13 11				Pressure Alarm Modules						
23-27 11 13 13				Pressure Control Modules						
23-27 11 13 15				Pressure Controllers						
23-27 11 13 15 11					Digital Pressure Controllers					
23-27 11 13 15 13					Electric Pressure Controllers					
23-27 11 13 15 15					Pneumatic Hating Controllers					
23-27 11 13 15 17					Hydraulic Pressure Controllers					
23-27 11 13 17				Pressure Detectors						
23-27 11 13 19				Pressure Indicators						
23-27 11 13 21				Pressure Recorders						
23-27 11 13 23				Pressure Sensors						
23-27 11 13 25				Differential Pressure Alarm Modules						
23-27 11 13 27				Differential Pressure Control Modules						
23-27 11 13 29				Differential Pressure Controllers						
23-27 11 13 29 11					Digital Differential Pressure Controllers					
23-27 11 13 29 13					Electric Differential Pressure Controllers					
23-27 11 13 29 15					Pneumatic Hating Controllers					
23-27 11 13 29 17					Hydraulic Differential Pressure Controllers					
23-27 11 13 31				Differential Pressure Detectors						
23-27 11 13 33				Differential Pressure Indicators						
23-27 11 13 35				Differential Pressure Recorders						
23-27 11 13 37				Differential Pressure Sensors						
23-27 11 15				Flow Measuring Instrument And Controls						
23-27 11 15 11				Flow Alarm Modules						
23-27 11 15 13				Flow Control Modules						
23-27 11 15 15				Flow Controllers						
23-27 11 15 15 11					Digital Flow Controllers					
23-27 11 15 15 13					Electric Flow Controllers					
23-27 11 15 15 15					Pneumatic Hating Controllers					
23-27 11 15 15 17					Hydraulic Flow Controllers					
23-27 11 15 17				Flow Detectors						
23-27 11 15 19				Flow Indicators						
23-27 11 15 21				Flow Recorders						
23-27 11 15 23				Flow Sensors						
23-27 11 17				Concentration Measuring Instrument And Controls						
23-27 11 17 11				Humidity Concentration Measuring Instruments						
23-27 11 17 13				Carbon Dioxide (CO ₂) Concentration Measuring Instruments						
23-27 11 17 15				Ozone Concentration Measuring Instruments						
23-27 11 17 17				Other Gas Concentration Measuring Instruments						
23-27 11 19				Heat Measuring Instrument And Controls						
23-27 11 19 11				Heat Detectors						
23-27 11 19 13				Heating Controllers						
23-27 11 19 13 11					Digital Heating Controllers					
23-27 11 19 13 13					Electric Heating Controllers					
23-27 11 19 13 15					Pneumatic Hating Controllers					
23-27 11 19 13 17					Hydraulic Heating Controllers					
23-27 11 19 15				Heating Programmers						
23-27 11 19 17				Heating Optimizers				Heating Economizer		
23-27 11 21				Level Measuring Instrument And Controls						
23-27 11 21 11				Level Alarm Modules						
23-27 11 21 13				Level Control Modules						
23-27 11 21 15				Level Controllers						
23-27 11 21 15 11					Digital Level Controllers					
23-27 11 21 15 13					Electric Level Controllers					
23-27 11 21 15 15					Pneumatic Hating Controllers					
23-27 11 21 15 17					Hydraulic Level Controllers					
23-27 11 21 17				Level Detectors						
23-27 11 21 19				Level Indicators						
23-27 11 21 19 11					Level Gage Glasses					
23-27 11 21 19 13					Level Bull's Eyes					
23-27 11 21 21				Level Recorders						
23-27 11 21 23				Level Sensors						
23-27 11 23				Weighing Instrument And Controls						
23-27 11 23 11				Weight Alarm Modules						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-27 11 23 13				Weight Control Modules						
23-27 11 23 15				Weight Detectors						
23-27 11 23 17				Weight Indicators						
23-27 11 23 19				Weight Recorders						
23-27 11 23 21				Weight Sensors						
23-27 11 25				Metal Concentration Instrument And Controls						
23-27 11 25 11				Metal Detectors						
23-27 11 27				Gas Instrument And Controls						
23-27 11 27 11				Gas Alarm Modules						
23-27 11 27 13				Gas Control Modules						
23-27 11 27 15				Gas Controllers						
23-27 11 27 15 11					Digital Gas Controllers					
23-27 11 27 15 13					Electric Gas Controllers					
23-27 11 27 15 15					Pneumatic Hating Controllers					
23-27 11 27 15 17					Hydraulic Gas Controllers					
23-27 11 27 17				Gas Detectors						
23-27 11 27 17 11					Air Pollution Detectors					
23-27 11 27 17 13					Radon Detectors					
23-27 11 27 17 15					Carbon Dioxide Detectors					
23-27 11 27 17 17					Hydrogen Detectors					
23-27 11 27 17 19					Oxygen Detectors					
23-27 11 27 17 21					Halon Detectors					
23-27 11 27 19				Gas Indicators						
23-27 11 27 21				Gas Analyzers						
23-27 11 29				Infrared Instrument And Controls						
23-27 11 29 11				Photoelectric Cells						
23-27 11 29 13				Infrared Control Modules						
23-27 11 29 15				Infrared Controllers						
23-27 11 29 15 11					Digital Infrared Controllers					
23-27 11 29 15 13					Electric Infrared Controllers					
23-27 11 29 15 15					Pneumatic Hating Controllers					
23-27 11 29 15 17					Hydraulic Infrared Controllers					
23-27 13 00		Control and Monitoring Boards Panels								Control and monitoring boards panels used in multiple disciplines.
23-27 13 11			Internal Climate Monitoring and Control Panel							
23-27 13 13			Building Control Systems							
23-27 13 13 11				Building Automated Control Panels						
23-27 13 13 13				Building Automated Systems						
23-27 13 13 15				Building Monitoring Control Panels						
23-27 13 15			Process Control Panels							
23-27 13 15 11				Gaseous Waste Monitoring and Control Panels						
23-27 15 00		Building Automation and Control								Building automation and control equipment used in multiple disciplines.
23-27 15 11			Building Clock Controls							
23-27 15 13			Building Door Controls							
23-27 15 15			Elevator Monitoring and Controls							
23-27 15 17			Energy Monitoring and Controls							
23-27 15 19			Building Environmental Controls							
23-27 15 21			Building Lighting Controls							
23-27 15 21 11				Building Lighting Control Panel						
23-27 15 21 13				Lighting Relay Control Panel						
23-27 15 23			HVAC Controls							
23-27 15 23 11				HVAC Main Control Panels						
23-27 15 23 13				HVAC Local Control Panels						
23-27 15 23 15				HVAC Control Clocks						
23-27 15 25			Equipment Control Panels							
23-27 17 00		Pumps								Devices used to move fluids, such as liquids or gases.
23-27 17 11			Axial Split Pumps							
23-27 17 13			Centrifugal Pumps							
23-27 17 15			Diaphragm Pumps							
23-27 17 17			Duplex Pumps							
23-27 17 19			Gear Pumps							
23-27 17 21			Liquid Ring Pumps							
23-27 17 23			Macerator Pumps							
23-27 17 23 11				Combined Macerator Pumps						
23-27 17 25			Progressive Cavity Pumps							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-27 17 27			Ram Pumps							
23-27 17 29			Reciprocating Pumps							
23-27 17 31			Rotary Pumps							
23-27 17 31 11				Rotary Cam Pumps						
23-27 17 31 13				Rotary Lobe Pumps						
23-27 17 31 15				Rotary Screw Pumps						
23-27 17 31 17				Rotary Vane Pumps						
23-27 17 33			Rotating Piston Pumps							
23-27 17 35			Sewage Ejectors							
23-27 17 35 11				Submersible Sewage Ejectors						
23-27 17 37			Simplex Pumps							
23-27 17 39			Sliding Vane Pumps							
23-27 17 41			Turbine Pumps							
23-27 17 43			Worm Gear Pumps							
23-27 17 45			Pump Components							
23-27 19 00		Engines							Machines designed to convert energy into useful mechanical motion	
23-27 19 11			Reciprocating Engines							
23-27 19 13			Rotary Engines							
23-27 19 15			Turbine Engines					Turbine		
23-27 21 00		Compressors							Mechanical products that increase the pressure of a gas by reducing its volume.	
23-27 21 11			Axial Flow Compressors							
23-27 21 13			Centrifugal Compressors							
23-27 21 15			Reciprocating Compressors							
23-27 21 15 11				Diaphragm Reciprocating Compressors				Piston Compressor		
23-27 21 15 13				Double Acting Reciprocating Compressors				Piston Compressor		
23-27 21 15 15				Single Acting Reciprocating Compressors				Piston Compressor		
23-27 21 17			Rotary Compressors							
23-27 21 17 11				Rotary Liquid Ring Compressors						
23-27 21 17 13				Rotary Lobe Compressors						
23-27 21 17 15				Rotary Screw Compressors						
23-27 21 17 17				Rotary Scroll Compressors				Barrel Compressor		
23-27 21 17 19				Rotary Vane Compressors						
23-27 23 00		Heat Exchangers							Products built for efficient heat transfer from one medium to another.	
23-27 23 11			Heat Exchanger Economizers							
23-27 23 13			Plate and Frame Heat Exchangers							
23-27 23 13 11				Plate and Frame Regenerative Heat Exchangers						
23-27 23 15			Shell and Tube Heat Exchangers							
23-27 23 15 11				Shell and Tube Regenerative Heat Exchangers						
23-27 23 17			Tube and Fin Heat Exchangers							
23-27 23 19			Spiral Heat Exchangers							
23-27 23 19 11				Heat Exchangers for Ventilation Air						
23-27 23 21			Adiabatic Wheel Heat Exchangers					Air Preheater		
23-27 23 23			Plate and Fin Heat Exchangers							
23-27 23 23 11				Straight Fin Plate and Fin Heat Exchangers						
23-27 23 23 13				Offset Fin Plate and Fin Heat Exchangers						
23-27 23 23 15				Wavy Fin Plate and Fin Heat Exchangers						
23-27 23 25			Fluid Heat Exchangers						Heat exchanger with a gas passing upwards through a shower of fluid.	
23-27 25 00		Heaters for Supplied Liquids							Products used to heat supplied liquids.	
23-27 25 11			Liquid Electric Heaters							
23-27 25 13			Liquid Gas Heaters							
23-27 25 15			Liquid Steam Heaters							
23-27 25 17			Liquid Fuel Oil Heaters							
23-27 25 17 11				Fuel Oil Pre Heaters						
23-27 27 00		Pressure Reducing Stations							Products used to reduce pressure at a station.	
23-27 27 11			Multiple Stage Pressure Reducing Stations					Steam/Water/Gas Pressure Reducing Station		
23-27 27 13			Single Stage Pressure Reducing Stations					Steam/Water/Gas Pressure Reducing Station		
23-27 29 00		Tanks and Storage Structures							Prefabricated structures used to hold fluids or gases.	
23-27 29 11			Reservoirs							
23-27 29 13			Tank Foundations							
23-27 29 13 11				Tank Support Structures						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-27 29 13 13				Tank Foundation Slabs						
23-27 29 15			Specialized Tanks							
23-27 29 15 11				Cryogenic Tanks						
23-27 29 15 13				Flash Tanks						
23-27 29 15 13 11					Steam Flash Tanks					
23-27 29 15 15				Septic Tanks						
23-27 29 15 17				Siphon Tanks						
23-27 29 17			Storage Constructions							
23-27 29 17 11				Water Towers						
23-27 29 17 13				Silos						
23-27 29 17 15				Storage Bunkers						
23-27 29 19			Tanks							
23-27 29 19 11				Multiple Wall Tanks						
23-27 29 19 11 11					Multiple Walled Pressure Tanks					
23-27 29 19 11 13					Multiple Walled Vacuum Tanks					
23-27 29 19 11 15					Multiple Walled Vented Tanks					
23-27 29 19 13				Single Walled Tanks						
23-27 29 19 13 11					Single Walled Pressure Tanks					
23-27 29 19 13 13					Single Walled Vacuum Tanks					
23-27 29 19 13 15					Single Walled Vented Tanks					
23-27 29 21			Tank Containments					Berm		
23-27 29 21 11				Aboveground Tank Containments						
23-27 29 21 11 11					Aboveground Primary Tank Containments					
23-27 29 21 11 13					Aboveground Secondary Tank Containments					
23-27 29 21 11 15					Aboveground Tertiary Tank Containments					
23-27 29 21 13				Underground Tank Containments						
23-27 29 21 13 11					Underground Primary Tank Containments					
23-27 29 21 13 13					Underground Secondary Tank Containments					
23-27 29 21 13 15					Underground Tertiary Tank Containments					
23-27 29 23			Tank Linings							
23-27 29 23 11				Tank Bladders						
23-27 29 23 13				Rubber Tank Linings						
23-27 29 25			Tank Components							
23-27 29 25 11				Overflow Regulators						
23-27 29 25 13				Fill and Valve Caps						
23-27 29 25 15				Tank Vents						
23-27 31 00		Valves							Products regulating the flow fluids by opening, closing, or partially obstructing various passageways. See: Plumbing Specific Products and Equipment.	
23-27 31 11			Backflow Preventors					Double Check Valve		
23-27 31 13			Balancing Valves							
23-27 31 13 11				Gate Balancing Valves						
23-27 31 13 13				Butterfly Balancing Valves						
23-27 31 13 15				Plug Balancing Valves						
23-27 31 13 17				Globe Balancing Valves						
23-27 31 13 19				Check Balancing Valves						
23-27 31 13 21				Diaphragm Balancing Valves						
23-27 31 15			Ball Valves						All valves are controlled in some fashion either manually or automatically. The addition of a valve actuator defines the control.	
23-27 31 17			Butterfly Valves							
23-27 31 17 11				Lug Pattern Butterfly Valves						
23-27 31 17 13				Wafer Pattern Butterfly Valves						
23-27 31 19			Check Valves							
23-27 31 19 11				Ball Check Valves						
23-27 31 19 13				Clapper CheckValves				Fire Sprinkler Check Valve, flush valves		
23-27 31 19 15				Cone Type Check Valves						
23-27 31 19 17				Demand Check Valves				Quick Disconnect Check Valve		
23-27 31 19 19				Diaphragm Check Valves						
23-27 31 19 21				Lift Check Valves						
23-27 31 19 23				Spring Type Check Valves						
23-27 31 19 25				Stop Check Valves						
23-27 31 19 27				Swing Check Valves						
23-27 31 21			Diaphragm Valves							
23-27 31 23			Float Valves							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-27 31 25			Gate Valves							
23-27 31 27			Globe Valves							
23-27 31 29			Mixing Valves							
23-27 31 29 11				Manual Mixing Valves						
23-27 31 29 13				Pressure Balanced Controlled Mixing Valves						
23-27 31 29 15				Thermostatically Controlled Mixing Valves						
23-27 31 31			Needle Valves							
23-27 31 33			Orifice Valves							
23-27 31 35			Pinch Valves							
23-27 31 37			Plug Drain Valves					Mud Valve		
23-27 31 39			Plug Valves							
23-27 31 41			Poppet Valves							
23-27 31 43			Post Indicator Valves						Used in Fire Sprinkler Systems	
23-27 31 45			Preaction Valves					Deluge Valve		
23-27 31 45 11				Electronic Actuated Preaction Valves				Deluge Valve		
23-27 31 45 13				Water Seal Enabled Preaction Valves				Deluge Valve		
23-27 31 47			Pressure Regulating Valves					Pressure Reducing Valve. Component of Pressure Reducing Station		
23-27 31 49			Relief Valves						Automatically regulating, protection valve that maintains design system pressure by slowly opening and closing.	
23-27 31 49 11				Pressure Relief Valves						
23-27 31 49 13				Pressure Temperature Relief Valves						
23-27 31 51			Rupture Disks							
23-27 31 53			Safety Valves						Valve that pops open when system pressure exceeds design criteria.	
23-27 31 53 11				Pressure Safety Valves						
23-27 31 53 13				Pressure Temperature Safety Valves						
23-27 31 55			Sentinel Valves							
23-27 31 57			Slider Valves							
23-27 31 59			Slush Valves							
23-27 31 61			Thermostatic Expansion Valves							
23-27 31 63			Valves Boxes						Prefab box with ball valves. Primarily used in medical gas applications	
23-27 33 00		Valve Actuators							Products utilizing a source of power to operate a valve. All Valve Actuators are DDC or non-DDC.	
23-27 33 11			Electrical Valve Actuators					Inductive Coil. Magnetic-driven Valve Actuator		
23-27 33 11 11				Solenoid Valve Actuators				Electronic Valve Actuator		
23-27 33 13			Hydraulic Valve Actuators							
23-27 33 15			Motor Operated Valve Actuators							
23-27 33 17			Pneumatic Valve Actuators							
23-27 35 00		Variable Speed Drives							Products used for controlling the rotational speed of an alternating current (AC) electric motor by controlling the electrical power supplied to the motor.	
23-27 35 11			Hydraulic Variable Speed Drives					Transmission		
23-27 35 11 11				Hydrodynamic Variable Speed Drives				Fluid Couplings Drive Transmission		
23-27 35 11 13				Hydrostatic Variable Speed Drives				Hydraulic Drive Transmission		
23-27 35 11 15				Hydroviscous Variable Speed Drives				Oil Film Disc Drive Transmission		
23-27 35 13			Variable Pitch Drives					Transmission		
23-27 35 13 11				Pulley Variable Pitch Drives				Transmission		
23-27 35 13 13				Traction Variable Pitch Drives				Transmission	Typically rollers that are moved or diameter changed to change speed.	
23-27 35 15			Transmission Devices							
23-27 35 15 11				Fluid Drive Transmissions						
23-27 35 15 13				Gear Boxes						
23-27 37 00		Liquid Traps							Products which trap liquids.	
23-27 37 11			Grease Traps							
23-27 37 13			Oil Traps							
23-27 37 15			Steam Traps							
23-27 37 15 11				Disc Steam Traps						
23-27 37 15 13				Float and Thermostatic Steam Traps						
23-27 37 15 15				Float Steam Trap						
23-27 37 15 17				Inverted Basket Steam Traps						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-27 37 15 19				Orifice Steam Traps						
23-27 39 00		Piping							Systems of pipes used to convey fluids from one location to another.	
23-27 39 11			Double Walled Pipes							
23-27 39 11 11				Aboveground Double Walled Pipes						
23-27 39 11 13				Underground Double Walled Pipes						
23-27 39 13			Single Walled Pipes							
23-27 39 13 11				Aboveground Single Walled Pipes						
23-27 39 13 13				Underground Single Walled Pipes						
23-27 41 00		Pipe Repair Equipment							Equipment used to repair pipes.	
23-27 41 11			Pipe Band It Kits							
23-27 43 00		Pipe Fittings							Products used in pipe and plumbing systems to connect straight pipe or tubing sections, to adapt to different sizes or shapes, and to sometimes regulate fluid flow.	
23-27 43 11			Mechanical Pipe Fasteners							
23-27 43 13			Mechanical Pipe Supports							
23-27 43 15			Pipe Expansion Joints							
23-27 43 17			Water Hammer Arrestors							
23-27 43 19			Pipe Expansion Compensators							
23-27 45 00		Pipe Flanges							a ridge that prevents a sliding motion or a projecting rim or rib for strength or for attachments.	
23-27 45 11			Blind Pipe Flanges							
23-27 45 13			Lap Joint Pipe Flanges							
23-27 45 15			Orifice Pipe Flanges							
23-27 45 17			Plate Pipe Flanges							
23-27 45 19			Reducing Pipe Flanges							
23-27 45 21			Slip On Pipe Flanges							
23-27 45 23			Socket Weld Pipe Flanges							
23-27 45 25			Spectacle Pipe Flanges							
23-27 45 27			Threaded Pipe Flanges							
23-27 45 29			Weldneck Pipe Flanges							
23-27 47 00		Pipe Adapters							A product used for connecting two parts such as two different diameters of an apparatus.	
23-27 47 11			Female Pipe Adapters							
23-27 47 13			Male Pipe Adapters							
23-27 47 15			Terminal Pipe Adapters							
23-27 47 17			Hi Low Converter Pipe Adapters							
23-27 47 19			Twist To Lock Y Cord Pipe Adapters							
23-27 47 21			Auto Converter Pipe Adapters							
23-27 47 23			Conduit Box Pipe Adapters							
23-27 47 25			Reduce Drive Pipe Adapters							
23-27 47 27			Red Pipe Adapters							
23-27 49 00		Pipe Couplings							a short collar consisting of a threaded sleeve to connect two pipes.	
23-27 49 11			Rigid Pipe Couplings							
23-27 49 13			Flexible Pipe Couplings							
23-27 49 13 11				Coil Spring Pipe Couplings						
23-27 49 13 13				Double Loop Pipe Couplings						
23-27 49 13 15				Tire Pipe Couplings						
23-27 49 13 17				Flexible Link Pipe Couplings						
23-27 49 13 19				Multi Jaw Pipe Couplings						
23-27 49 13 21				Helical Flex Pipe Couplings						
23-27 49 13 23				Magnetic Pipe Couplings						
23-27 49 13 25				Metal Bellows Pipe Couplings						
23-27 49 13 27				Diaphragm Pipe Couplings						
23-27 49 13 29				Roller Chain Pipe Couplings						
23-27 49 13 31				Schmidt Pipe Couplings						
23-27 49 13 33				Shear Pipe Couplings						
23-27 49 13 35				Sliding Block Pipe Couplings						
23-27 49 13 37				Steel Grid Pipe Couplings						
23-27 49 13 39				Spider Pipe Couplings						
23-27 49 13 41				Flexible Disc Pipe Couplings						
23-27 51 00		Pipe Elbows							installed between two lengths of pipe or tube allowing a change of direction, and can be 90° or 45°.	
23-27 51 11			45 Degree Pipe Elbows							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-27 51 13			90 Degree Pipe Elbows							
23-27 51 15			Reducing Pipe Elbows							
23-27 53 00		Pipe Caps							A type of pipe fitting which covers the end of a pipe.	
23-27 53 11			Threaded Pipe Caps							
23-27 53 13			Tapered Pipe Caps							
23-27 53 15			Anti-roll Pipe Caps							
23-27 53 17			Knurled Pipe Caps							
23-27 53 19			Slotted Head Pipe Caps							
23-27 53 21			Retaining Ring Pipe Caps							
23-27 53 23			Tear Tab Pipe Caps							
23-27 53 25			Hanger Tip Pipe Caps							
23-27 53 27			Pull Tab Pipe Caps							
23-27 53 29			Vented Pipe Caps							
23-27 55 00		Liquid Treatment Components							Components used in the process of treating liquids.	
23-27 55 11			Liquid Filters							
23-27 55 11 11				Water Filters						
23-27 55 13			Liquid Sterilizers							
23-27 55 15			Liquid Salinators							
23-27 55 17			Liquid Chlorinators							
23-27 55 19			Liquid Ionizers					Ozone Treatment		
23-27 55 21			Liquid Deionizers							
23-27 55 23			Liquid Deaerators							
23-27 55 23 11				Centrifugal Liquid Deaerators						
23-27 55 23 13				Spray Type Liquid Deaerators						
23-27 55 23 15				Tray Type Liquid Deaerators						
23-27 55 25			Liquid Disinfecting Ultraviolet Lighting							
23-27 55 27			Liquid Softeners							
23-27 55 27 11				Water Softeners						Equipment, not the salt
23-27 55 29			Liquid Strainers							
23-27 55 29 11				Basket Strainers						
23-27 55 29 13				Conical Strainers						
23-27 55 29 15				Tee Strainers						
23-27 55 29 17				Y Strainers						
23-27 55 29 19				Reverse Osmosis Units						
23-27 55 29 21				Solid Separators						
23-27 55 31			Liquid Chemical Feeders							
23-27 55 31 11				Liquid Chemical Feeders						
23-27 55 31 13				Solid Chemical Feeders						
23-27 55 31 15				Gas Chemical Feeders						
23-27 55 33			Liquid Treatment Package Units							
23-27 55 33 11				Water Treatment Package Units						
23-27 55 35			Liquid Separators						Separators to remove air from liquid or separate liquids, such as oil water separator	
23-27 55 35 11				Centrifuge Liquid Separators						
23-27 55 35 13				Demister Pad Liquid Separators						
23-27 55 35 15				Electrical Cyclone Liquid Separators						
23-27 55 35 17				Hydro Cyclone Liquid Separators						
23-27 55 35 19				Mechanical Liquid Separators						
23-27 55 35 21				Mist Eliminator Liquid Separators						
23-27 55 35 23				Tangential Liquid Separators						
23-27 55 35 25				Magnetic Electronic Water Treatment						
23-27 55 35 27				Oil Water Curtain Separators						
23-27 57 00		Gas Treatment Components							Components used in the treatment of supplied liquid gas.	
23-27 57 11			Vapor Traps					P Trap		
23-27 57 13			Extractors							
23-27 57 13 11				Extractors for Process Air						
23-27 57 15			Air Injectors							
23-27 57 17			Air Ejectors							
23-27 57 19			Air Scrubbers							
23-27 57 19 11				Dual Throat Air Scrubbers						
23-27 57 19 13				Multiple Venture Air Scrubbers						
23-27 57 19 15				Packed Bed Air Scrubbers						
23-27 57 21			Supply Gas Treatment							
23-27 57 21 11				Steam Treatment						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-27 57 21 13				Fuel Gas Treatment						
23-27 57 21 13 11					Gas Filters					
23-27 57 23			Electronic Air Purifiers							
23-27 57 25			Mechanically Aided Air Scrubbers							
23-27 57 27			Air Filters							
23-27 57 27 11				Air Filter Components						
23-27 57 27 11 11					Air Filter Media					
23-27 57 27 11 13					Control Air Filter Assemblies					
23-27 57 27 13				High Efficiency Air Filters						
23-27 57 27 15				ULPA Filters						
23-27 57 27 17				HEPA Filters						
23-27 57 27 19				Bag Filters						
23-27 57 27 21				Air Filter Housings						
23-27 57 27 23				Air Charcoal Filters						
23-27 57 27 25				Roll Type Filters						
23-27 57 29			Dust Collectors							
23-27 57 31			Electronic Air Cleaners							
23-27 57 33			Air Fresheners							
23-27 57 35			Air Treatment Components							
23-27 57 35 11				Air Deodorization Products						
23-27 57 35 13				Moisture Absorbents						
23-27 59 00		Recycling Equipment							Equipment used in the recycling process.	
23-27 59 11			Recycling Balers							
23-27 59 11 11				Recycling Cardboard Balers						
23-27 59 11 13				Recycling Paper Balers						
23-27 59 11 15				Recycling Plastic Balers						
23-27 59 11 17				Recycling Wood Balers						
23-27 59 13			Recycling Bins							
23-27 59 15			Recycling Compactors							
23-27 59 15 11				Cardboard Compactors						
23-27 59 15 13				Metal Compactors						
23-27 59 15 15				Paper Compactors						
23-27 59 15 17				Plastic Compactors						
23-27 59 15 19				Trash Compactors				Mixed Waste Compactor, Pulper		
23-27 59 15 21				Wood Compactors						
23-27 61 00		Incinerators							A waste treatment product that involves the combustion of organic materials and/or substances. A furnace for incinerating (especially to dispose of refuse of a substance).	
23-27 61 11			Trash Incinerators							
23-27 61 13			Document Incinerators							
23-27 63 00		Mechanical Insulation and Linings							Equipment used for mechanical insulation and lining.	
23-27 63 11			Pipe Insulation							
23-27 63 13			Equipment Insulation Blankets							
23-27 65 00		Equipment Acoustic Insulation							Equipment used for acoustic insulation.	
23-27 65 11			Sound Dampening Equipment Mounts							
23-27 67 00		Corrosion Proofing Equipment							Equipment used to prevent corrosion.	
23-27 67 11			Zinc Bars							
23-27 67 13			Zinc Tapes							
23-27 69 00		Antivibration Mountings							Mounts used for reducing vibration.	
23-27 69 11			Vibration Equipment Mounts							
23-27 71 00		Building Maintenance Equipment							Equipment used in the maintenance of the building.	
23-27 71 11			Window Washing Systems							
23-27 71 13			Building Maintenance Cradles and Platforms							
23-27 71 15			Roof Trolley Systems							
23-27 71 17			Traveling Ladder Systems							
23-27 71 19			Ancillary Building Maintenance Items							
23-27 71 19 11				Building Safety Tracks						
23-27 71 19 13				Anchors for Building Maintenance						
23-27 71 21			Fall Arrest Systems							
23-29 00 00	Facility and Occupant Protection Products								Products intended to protect both the occupant and facility from harm.	Includes environmental detectors, spill kits, fire safety items, sprinklers, defibrillators, detectors, alarms, and access control. See also "Information and Communication Specific Products and Equipment".

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-29 11 00		Security Detection and Monitoring							Products used to detect and monitor the facility or it's occupants.	
23-29 11 11			Closed Circuit Television Equipment							
23-29 11 11 11				Infra Red CCTV Cameras						
23-29 11 11 13				Visual Light Wavelength CCTV Cameras						
23-29 11 11 15				CCTV Camera Enclosures						
23-29 11 11 17				Security Camera Controllers						
23-29 11 11 19				Security Camera Multiplexors						
23-29 11 11 21				Security Camera Monitoring System Panels						
23-29 11 13			Security Video Imaging System Equipment							
23-29 11 13 11				Security Video Monitors						
23-29 11 13 13				Security Video Recorders						
23-29 11 13 13 11					Security Analog Video Recorders					
23-29 11 13 13 13					Security Digital Video Recorders					
23-29 11 15			Explosive Detectors							
23-29 11 15 11				Explosive Detector Sniffers						
23-29 11 15 11 11					Chemical Explosive Detectors					
23-29 11 15 11 13					Particulate Explosive Detectors					
23-29 11 15 13				Explosive Detector Spectral Analyzers						
23-29 11 17			Security Metal Detectors							
23-29 11 17 11				Security Weather Resistant Walk Through Metal Detectors						
23-29 11 17 13				Security Indoor Walk Through Metal Detectors						
23-29 11 17 15				Security Hand Held Metal Detectors						
23-29 11 19			Security X Ray Machines							
23-29 11 19 11				Security X Ray Conveyor Machines						
23-29 11 19 13				Security Personnel X Ray Machines						
23-29 11 21			Security Sensors							
23-29 11 21 11				Audio Security Sensors				Glass Beak Sensor		
23-29 11 21 13				Security Ground Loop Sensors						
23-29 11 21 15				Infra Red Security Sensors						
23-29 11 21 17				Ultrasonic Security Sensors						
23-29 11 21 19				Security Vibration Sensors						
23-29 11 23			Intrusion Detection Devices							
23-29 11 23 11				Intrusion Detection Buried Cables						
23-29 11 23 13				Intrusion Detection Fiber Optic Fence Line Loops						
23-29 11 23 15				Intrusion Detection Microwave Alarms						
23-29 11 23 17				Intrusion Detection Photoelectric Sensors						
23-29 11 23 19				Intrusion Detection Door Monitoring Switches						
23-29 11 23 21				Pressure Mats						
23-29 11 23 23				Door Micro Switch Contacts						
23-29 11 23 25				Window Micro Switch Contacts						
23-29 11 23 27				Break Glass Detection						
23-29 11 23 29				Movement Vibration Detection						
23-29 11 23 31				Infra Red Radiation Personnel Detectors						
23-29 11 23 33				Microwave Personnel Detectors						
23-29 11 23 35				Security Autodialers						
23-29 11 25			Presence Detection Registration							
23-29 11 25 11				Personnel Clocking In and Recording Equipment						
23-29 11 25 13				Surveillance Mirrors						
23-29 11 25 15				Manual Alert Control						
23-29 11 25 17				Security Door Bells						
23-29 11 25 19				Security Buzzers						
23-29 11 27			Security Keypads							
23-29 11 27 11				Alarm Keypads						
23-29 11 27 13				Security Keypads						
23-29 11 29			Vehicle Inspection Devices							
23-29 11 29 11				Undercarriage Inspection Lighting						
23-29 13 00		Security Access Controls							Equipment used to protect the occupants and the facility through access control.	
23-29 13 11			Personnel Biometric Readers							
23-29 13 11 11				Fingerprint Readers						
23-29 13 11 13				Hand Geometry Readers						
23-29 13 11 15				Iris Scanners						
23-29 13 11 17				Retinal Scanners						
23-29 13 11 19				Vein Recognition Readers						
23-29 13 13			Personnel Card Readers							
23-29 13 13 11				Personnel Contact Card Readers						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-29 13 13 11 11					Mag Stripe Personnel Contact Card Readers					
23-29 13 13 11 13					Smart Card Personnel Contact Card Readers					
23-29 13 13 11 15					Weigand Personnel Contact Card Readers					
23-29 13 13 13				Personnel Contactless Card Readers						
23-29 13 13 13 11					Barcode Personnel Contactless Card Readers					
23-29 13 13 13 13					Near Field Proximity Personnel Contactless Card Readers			Personal Identity Verification		
23-29 13 13 13 15					Proximity Personnel Contactless Card Readers					
23-29 13 15			Personnel Counting Equipment							
23-29 13 17			Security Door Answering Controls							
23-29 13 19			Electronic Key Equipment							
23-29 13 21			Security Personnel Access Keypads							
23-29 13 23			Access Control Turnstiles					baffle gate		
23-29 13 23 11				Waist Height Turnstiles						
23-29 13 23 13				Full Height Turnstiles				Rotary Gate, Full-height comb version		
23-29 13 23 15				Portable Post and Railing Barriers						
23-29 15 00		Secure Storage Structures and Products							Storage structures and products using security measures.	
23-29 15 11			Vaults							
23-29 15 11 11				Prefabricated Room Vaults						
23-29 15 11 13				Commercial Vaults						
23-29 15 11 15				Residential Vaults						
23-29 15 13			Safes							
23-29 15 13 11				Commercial Safes						
23-29 15 13 13				Residential Safes						
23-29 15 15			Lockers							
23-29 15 15 11				Metal Lockers						
23-29 15 15 13				Wood Lockers						
23-29 15 15 15				Plastic Laminate Clad Lockers						
23-29 15 15 17				Plastic Lockers						
23-29 15 15 19				Glass Lockers						
23-29 15 15 21				Wire Mesh Storage Lockers						
23-29 17 00		Property Storage Locks							Locks used for property storage.	
23-29 17 11			Bicycle Locks							
23-29 17 13			Padlocks							
23-29 17 13 11				Combination Padlocks						
23-29 17 13 13				Pin Tumbler Padlocks						
23-29 19 00		Chemical Biological Radiological Protection							Products used to protect occupants and the building from chemical, biological, and radiological threats.	
23-29 19 11			Prefabricated Mail Screening Products							
23-29 19 13			Biological Safety Cabinets							
23-29 21 00		Equipment for Security of Information							Equipment used for the security of information.	
23-29 21 11			Centralized Code Reading Equipment							
23-29 23 00		Fireproofing Components							Products used to fireproof the facility.	
23-29 23 11			Fireproofing Gaskets							
23-29 23 13			Fireproofing Fillers for Threaded Couplings							
23-29 23 15			Fireproof Pipe Sleeves							
23-29 23 17			Smoke Seals for Ductwork							
23-29 25 00		Fire Fighting Equipment							Equipment used to fight off a fire.	
23-29 25 11			Fire Fighting Terminals							
23-29 25 11 11				Fire Fighting Terminal Components						
23-29 25 11 13				Water Fire Fighting Terminals						
23-29 25 11 15				Gaseous Fire Fighting Terminals						
23-29 25 11 17				Foam Fire Fighting Terminals						
23-29 25 11 19				Powder Fire Fighting Terminals						
23-29 25 11 21				Fire Fighting Media					Note: Powder, Foam	
23-29 25 11 23				Fire Fighting Gas Terminals						
23-29 25 13			Fire Hydrants							
23-29 25 13 11				Dry Barrel Fire Hydrants						
23-29 25 13 13				Wet Barrel Fire Hydrants						
23-29 25 15			Fire Hose Equipment							
23-29 25 15 11				Fire Hoses						
23-29 25 15 13				Fire Hose Outlets						
23-29 25 15 15				Cabinets for Fire Hoses						
23-29 25 15 17				Fire Hose Reels						

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23-29 25 15 19				Fire Hose Connectors						
23-29 25 15 19 11					Fire Fighting Standpipes					
23-29 25 15 19 13					Fire Fighting Pumper Connections					
23-29 25 17			Fire Nozzles							
23-29 25 17 11				Fire Fog Nozzles						
23-29 25 17 13				Fire Stream Nozzles						
23-29 25 17 15				Fire Electrical Rated Nozzles						
23-29 25 19			Fire Extinguishers							
23-29 25 19 11				Stored Pressure Fire Extinguishers						
23-29 25 19 11 11					Stored Pressure Fire Extinguishers With Gauge					
23-29 25 19 13				Non Stainless Steel Fire Extinguishers						
23-29 25 19 15				Non Rechargeable Fire Extinguishers						
23-29 25 19 17				Gas Cart Fire Extinguishers				Gas Cylinder		
23-29 25 19 17 11					Gas Cart Fire Extinguishers With Gauge					
23-29 25 19 19				Foam Fire Extinguishers						
23-29 27 00		Fire Ventilation Equipment								Equipment used to ventilate in the event of fire.
23-29 27 11			Fire Fighting Smoke Extractors					Tornado Blowers		
23-29 29 00		Fire Detection Devices								Products used to detect a fire.
23-29 29 11			Fire Alarm Pull Stations					Fire Alarm Box		
23-29 29 11 11				Addressable Fire Alarm Pull Stations						
23-29 29 11 13				Non Addressable Fire Alarm Pull Stations						
23-29 29 13			Fire Detectors							
23-29 29 13 11				Smoke Detectors						
23-29 29 13 11 11					Spot Type Photoelectric Smoke Detectors					
23-29 29 13 11 13					Spot Type Ionization Smoke Detectors					
23-29 29 13 11 15					Spot Type Duct Photoelectric Smoke Detectors					
23-29 29 13 11 17					Spot Type Duct Ionization Smoke Detectors					
23-29 29 13 11 19					Beam Type Smoke Detectors					
23-29 29 13 13				Heat Detectors						
23-29 29 13 13 11					Fixed Temperature Heat Detectors					
23-29 29 13 13 13					Rate of Rise Heat Detectors					
23-29 29 13 15				Flame Detectors						
23-29 29 13 17				Spark and Ember Detectors						
23-29 29 13 19				Radiant Energy Detectors						
23-29 29 15			Fire Switches							
23-29 29 15 11				Pressure Fire Alarm Water Flow Switches						
23-29 29 15 13				Paddle Fire Alarm Water Flow Switches						
23-29 29 15 15				Fire Tamper Switches						
23-29 31 00		Fire Notification Appliances								Appliances used in fire notification.
23-29 31 11			Fire Alarm Annunicator Panels							
23-29 31 11 11				Audible Fire Alarm Annunicator Panels						
23-29 31 11 13				Visible Fire Alarm Annunicator Panels						
23-29 31 11 15				Combination Fire Alarm Annunicator Panels						
23-29 31 13			Fire Alarm Control Panels							
23-29 31 13 11				Main Fire Alarm Control Panels						
23-29 31 13 13				Secondary Fire Alarm Control Panels						
23-29 31 13 15				Fire Alarm Audio Control Panels						
23-29 31 13 17				Fire Alarm Smoke Control Panels						
23-29 31 15			Audible Fire Notification Devices							
23-29 31 15 11				Audible Fire Notification Devices Bell						
23-29 31 15 13				Audible Fire Notification Devices Horn						
23-29 31 15 15				Audible Fire Notification Devices Chime						
23-29 31 15 17				Audible Fire Notification Devices Speaker						
23-29 31 17			Visible Fire Notification Devices							
23-29 31 17 11				Visible Fire Notification Device Lights						
23-29 31 19			Combination Audible and Visible Fire Notification Devices							
23-29 31 21			Fire Alarm Communicators							
23-29 31 23			Fire Alarm Central Stations							
23-29 31 23 11				Fire Alarm Central Station Transmitters						
23-29 31 23 13				Fire Alarm Central Station Receivers						
23-29 31 23 15				Fire Alarm Central Station Combination Transmitter and Receivers						
23-29 31 25			Fire Alarm Event Recorders							
23-29 31 27			Fire Alarm Event Printers							
23-29 31 29			Fire Alarm Remote Controllers							
23-29 31 31			Fire Alarm Remote Amplifiers							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-29 31 33			Fire Pump Controllers							
23-29 31 35			Jockey Pump Controllers							
23-29 33 00		Fire Suppression System Components							Components specific to fire suppression when protecting the facility and occupant from harm.	
23-29 33 11			Water Based Suppression Equipment							
23-29 33 11 11				Pendant Sprinkler Heads						
23-29 33 11 11 11					Wet Pendant Sprinkler Heads					
23-29 33 11 11 13					Dry Pendant Sprinkler Heads					
23-29 33 11 11 15					Open Pendant Sprinkler Heads					
23-29 33 11 13				Upright Sprinkler Heads						
23-29 33 11 13 11					Wet Upright Sprinkler Heads					
23-29 33 11 13 13					Dry Upright Sprinkler Heads					
23-29 33 11 13 15					Open Upright Sprinkler Heads					
23-29 33 11 15				Side Wall Sprinkler Heads						
23-29 33 11 15 11					Wet Side Wall Sprinkler Heads					
23-29 33 11 15 13					Dry Side Wall Sprinkler Heads					
23-29 33 11 17				Dry Pipe Valves				Deluge Valve		
23-29 33 11 19				Water Mist Systems						
23-29 33 13			Non Water Based Suppression Equipment							
23-29 33 13 11				Clean Agent Gaseous Suppression Equipment						
23-29 33 13 13				Carbon Dioxide Suppression Equipment						
23-29 33 13 15				Halon Suppression Equipment						
23-29 33 13 17				Wet Chemical Fire Suppression Equipment						
23-29 33 13 19				Dry Chemical Fire Suppression Equipment						
23-29 33 13 21				Foam Fire Suppression Equipment						
23-29 33 15			Fire Blankets							
23-29 35 00		Fire Rescue Component							Products used in fire rescue when protecting the facility and occupant from harm.	
23-29 35 11			Evacuation Chairs							
23-29 35 13			Evacuation Slides							
23-29 37 00		Occupational Safety and Health Equipment							Equipment specific to occupational safety and health equipment when protecting the facility and occupant from harm.	
23-29 37 11			Emergency Drench Hoses							
23-29 37 13			Emergency Eye Wash Stations							
23-29 37 13 11				Counter Top Eye Wash Stations						
23-29 37 13 13				Floor Mounted Eye Wash Stations						
23-29 37 13 15				Combination Emergency Eye Wash Stations						
23-29 37 13 17				Dedicated Emergency Eye Wash Stations						
23-29 37 15			Emergency Showers							
23-29 37 15 11				Combination Emergency Showers						
23-29 37 15 13				Dedicated Emergency Showers						
23-29 39 00		Environmental Safety Equipment							Equipment specific to environmental safety, when protecting the facility and occupant from harm.	
23-29 39 11			Environmental Spill Kits							
23-29 39 13			Pollution Monitoring and Control							
23-29 39 13 11				Air Pollution Monitoring Systems						
23-29 39 13 13				Water Pollution Monitoring Systems						
23-29 39 15			Built In Failure Detection							
23-29 39 15 11				Infiltration Detection						
23-29 39 15 13				Service Leak Detection						
23-29 39 15 13 11					Gas Leak Detection Agents					
23-29 39 15 13 13					Water Leak Detection					
23-31 00 00	Plumbing Specific Products and Equipment								Products specifically related to plumbing.	Includes toilets, sinks, faucets, drains, and plumbing fixtures and equipment. See "General Facility Services Products" for pipes, hangers, and pumps.
23-31 11 00		Faucets							is a valve controlling release of liquids or gas.	
23-31 11 11			Ball Faucets						Ball faucets are easy to identify since they have a single handle that attaches to the faucet base with a round base. The ball shaped control has chambers built into it to control water volume and mix hot and cold.	
23-31 11 11 11				Sink Ball Faucets						
23-31 11 11 13				Bathtub Ball Faucets						
23-31 11 11 15				Shower Ball Faucets						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-31 11 13			Compression Faucets						Compression faucets are the traditional old style faucets with two handles, one each for cold and hot. Inside each handle is a valve that opens to allow water to flow and close to block the flow. A rubber washer on the base of the valve gets "compressed"	
23-31 11 13 11				Sink Compression Faucets						
23-31 11 13 13				Bathtub Compression Faucets						
23-31 11 13 15				Shower Compression Faucets						
23-31 11 15			Cartridge Faucets						Cartridge faucets can be either single handled or two handled. The inside of the faucet has a stem cartridge that moves up and down to control water flow. Single handled cartridge faucets operate up and down to regulate water flow, and left and right to c	
23-31 11 15 11				Sink Cartridge Faucets						
23-31 11 15 13				Bathtub Cartridge Faucets						
23-31 11 15 15				Shower Cartridge Faucets						
23-31 11 17			Disc Faucets						Disc faucets are single handled with a cylindrical shaped body. Inside the faucet are ceramic discs that slide over each other, controlling flow and temperature.	
23-31 11 17 11				Sink Disc Faucets						
23-31 11 17 13				Bathtub Disc Faucets						
23-31 11 17 15				Shower Disc Faucets						
23-31 11 19			Faucet Mixing Valves					Anti Scalding Device	Faucet mixing valves are used to mix hot and cold water inputs to the faucet to ensure that personnel are prevented from being scalded.	
23-31 11 19 11				Thermostatically Controlled Faucet Mixing Valves						
23-31 11 19 13				Pressure Sensitive Faucet Mixing Valves						
23-31 11 19 15				Pressure Balanced Faucet Mixing Valves						
23-31 13 00		Sinks						Lavatory	is a bowl-shaped fixture that is used for washing the hands or small objects.	
23-31 13 11			Single Sinks							
23-31 13 13			Dual Sinks							
23-31 13 15			Multiple Sinks							
23-31 13 17			Sink Components							
23-31 13 17 11				Sink Splashbacks						
23-31 13 17 13				Sink Drains						
23-31 13 19			Specialty Sinks							
23-31 13 19 11				Sacristy						
23-31 13 19 13				Darkroom Sinks						
23-31 13 19 15				Hairdressing Sinks						
23-31 13 19 17				Mop Sinks						
23-31 13 19 19				Service Sinks						
23-31 15 00		Bathtubs							is a plumbing fixture used for bathing	
23-31 15 11			Bath Shower Units							
23-31 15 13			Sitz Baths							
23-31 15 15			Jacuzzi Baths							
23-31 15 17			Bathtub Components							
23-31 15 17 11				Bathtub Enclosures						
23-31 15 17 13				Bathtub Splashbacks						
23-31 15 17 15				Bathtub Panels						
23-31 15 17 17				Bathtub Seats						
23-31 15 17 19				Bathtub Screens						
23-31 15 17 21				Bathtub Grab Bars						
23-31 15 17 23				Bathtub Drains						
23-31 17 00		Showers							is an area in which one bathes underneath a spray of water.	
23-31 17 11			Shower Compartments							
23-31 17 13			Shower Receptors					Shower Pan		
23-31 17 15			Shower Enclosure Bases							
23-31 17 17			Shower Enclosures							
23-31 17 19			Shower Head Fixtures							
23-31 17 21			Shower Splashbacks							
23-31 17 23			Shower Seats							
23-31 17 25			Shower Screens							
23-31 17 27			Shower Curtains							
23-31 17 29			Shower Drains							
23-31 17 31			Shower Rods							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-31 19 00		Toilets							a plumbing fixture and disposal system primarily intended for the disposal of the bodily wastes	
23-31 19 11			Combination Toilets							Note: Combination Water Closet and Lavatory
23-31 19 11 11				Detention Combination Toilets						
23-31 19 13			Incinerating Toilets							
23-31 19 15			Tankless Toilets							
23-31 19 15 11				Floor Mounted Tankless Toilets						
23-31 19 15 13				Wall Mounted Tankless Toilets						
23-31 19 17			Toilets With Tank							
23-31 19 17 11				Floor Mounted Toilets With Tank						
23-31 19 17 13				Wall Mounted Toilets With Tank						
23-31 19 19			Water Closets						room which contains a flush toilet, usually accompanied by a washbowl or sink	
23-31 19 19 11				Water Operated Water Closets						
23-31 19 19 13				Chemical Biological Sanitary Disposal Units						
23-31 19 19 15				Sanitary Macerators						
23-31 19 19 17				Water Closet Seats						
23-31 19 19 19				Water Closet Tanks						
23-31 19 19 21				Sanitary Disposal Connectors						
23-31 21 00		Urinals							is a specialized toilet for urinating into generally used by males from a standing position.	
23-31 21 11			Incinerating Urinals							
23-31 21 13			Water Flush Urinals							
23-31 21 13 11				Floor Water Flush Urinals						
23-31 21 13 13				Wall Mounted Water Flush Urinals						
23-31 21 15			Waterless Urinals							
23-31 21 15 11				Floor Waterless Urinals						
23-31 21 15 13				Wall Mounted Waterless Urinals						
23-31 23 00		Bidets							is a low-mounted plumbing fixture or type of sink intended for washing the genitalia & inner buttocks.	
23-31 25 00		Toilet and Bath Specialties							Basically specialties found in toilet and bath.	
23-31 25 11			Restroom Partitions							
23-31 25 11 11				Toilet Partitions						
23-31 25 11 13				Toilet Door Partitions						
23-31 25 11 15				Urinal Partitions						
23-31 25 11 17				Shower Partitions						
23-31 25 13			Bathroom Cabinets							
23-31 25 15			Hand Dryers							
23-31 25 17			Hair Dryers							
23-31 25 19			Restroom Paper Towel Accessories							
23-31 25 19 11				Paper Towel Dispensers						
23-31 25 19 13				Paper Towel Dispenser With Disposal Units						
23-31 25 21			Toilet Paper Dispensers							
23-31 25 23			Feminine Hygiene Components							
23-31 25 23 11				Sanitary Napkin Dispensers						
23-31 25 23 13				Sanitary Napkin Dispenser With Disposal Units						
23-31 25 23 15				Tampon Dispensers						
23-31 25 23 17				Tampon Dispenser With Disposal Units						
23-31 25 23 19				Combination Sanitary Napkin and Tampon Dispensers						
23-31 25 23 21				Combination Sanitary Napkin and Tampon Dispenser With Disposal Units						
23-31 25 25			Towel Bars							
23-31 25 25 11				Electric Heated Towel Bars						
23-31 25 25 13				Water Heated Towel Bars						
23-31 25 27			Robe Hooks							
23-31 25 29			Restroom Hand Soap Components							
23-31 25 29 11				Hand Soap Holders						
23-31 25 29 13				Hand Soap Dispensers						
23-31 25 31			Diaper Changing Units							
23-31 25 33			Bathroom Deodorizers							
23-31 27 00		Floor Drains							is a plumbing fixture installed in the floor of a structure or space, mainly designed to remove any standing water near it.	
23-31 27 11			Floor Drain Plugs							
23-31 27 13			Floor Drain Plug Chains							
23-31 27 15			Floor Drain Covers							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-31 29 00		Hot Water Heaters							A tank for heating and storing hot water.	
23-31 29 11			Instantaneous Hot Water Heaters					Tankless Hot Water Heater		Includes: Instantaneous Showers
23-31 29 11 11				Electric Instantaneous Hot Water Heaters						
23-31 29 11 13				Gas Instantaneous Hot Water Heaters						
23-31 29 13			Hot Water Tank Heaters							
23-31 29 13 11				Hot Water Tank Electric Heaters						
23-31 29 13 13				Hot Water Tank Gas Heaters						
23-31 29 13 15				Hot Water Tank Steam Heaters						
23-31 29 13 17				Hot Water Tank Fuel Oil Heaters						
23-31 31 00		Drinking Fountains						Water Cooler	A device which provides a jet of drinking water for public use.	
23-31 31 11			Drinking Fountain With Coolers						Drinking fountains that use water cooling condenser.	
23-31 31 13			Drinking Fountains With Direct Expansion Cooling						Drinking fountains with direct expansion refrigeration units.	
23-31 33 00		Complete Sanitary Suites							A prefabricated suite for sanitary use such as a port-a-potty.	
23-31 33 11			Complete Bathroom Suites							
23-31 35 00		Plumbing Tubing							Tubing used specifically to plumbing.	
23-31 35 11			Tubing Reducers							
23-31 35 13			Tubing Couplings							
23-31 35 15			Tubing Elbows							
23-31 35 17			Tubing Plugs							
23-31 35 19			Tubing Tees							
23-33 00 00	HVAC Specific Products and Equipment								Products specifically related to HVAC.	Includes complete cooling and heating systems, heat pumps, air handling units, air ductwork, and HVAC instrumentation and control devices. See "General Facility Services Products" for pipes, hangers, and pumps.
23-33 11 00		Commercial Boilers							a closed vessel in which water or other fluid is heated on a commercial scale	
23-33 11 11			Boiler Controls							
23-33 11 11 11				Boiler Control Panels						
23-33 11 11 13				Boiler Burner Controls						
23-33 11 13			Condensing Boilers							
23-33 11 15			Fire Tube Boilers							
23-33 11 15 11				High Pressure Steam Fire Tube Boilers						
23-33 11 15 13				High Temperature Hot Water Fire Tube Boilers						
23-33 11 15 15				Low Pressure Steam Fire Tube Boilers						
23-33 11 15 17				Low Temperature Hot Water Fire Tube Boilers						
23-33 11 17			Flexible Tube Boilers							
23-33 11 17 11				High Pressure Steam Flexible Tube Boilers						
23-33 11 17 13				High Temperature Hot Water Flexible Tube Boilers						
23-33 11 17 15				Low Pressure Steam Flexible Tube Boilers						
23-33 11 17 17				Low Temperature Hot Water Flexible Tube Boilers						
23-33 11 19			Sectionalized Cast Iron Boilers							
23-33 11 19 11				Low Pressure Steam Sectionalized Cast Iron Boilers						
23-33 11 19 13				Low Temperature Hot Water Sectionalized Cast Iron Boilers						
23-33 11 21			Water Tube Boilers							
23-33 11 21 11				High Pressure Steam Water Tube Boilers						
23-33 11 21 13				High Temperature Hot Water Tube Boilers						
23-33 11 21 15				Low Pressure Steam Water Water Tube Boilers						
23-33 11 21 17				Low Temperature Hot Water Water Tube Boilers						
23-33 11 22			Electric Boilers							
23-33 11 23			Boiler Components							
23-33 11 23 11				Boiler Joint Fillers and Sealants						
23-33 11 23 13				Boiler Fuel Burners						
23-33 11 23 15				Boiler Fuel Oil Filters						
23-33 11 23 17				Boiler Nozzles						
23-33 11 23 19				Boiler Induction Blowers						
23-33 11 23 21				Boiler Fuel Gas Heat Recovery Devices						
23-33 11 23 23				Boiler Draft Fans						
23-33 13 00		Furnaces							is a device used for heating.	
23-33 13 11			Furnace Controls							
23-33 13 11 11				Furnace Control Panels						
23-33 13 11 13				Furnace Burner Controls						
23-33 13 13			Coal Fired Furnaces							
23-33 13 15			Electric Resistance Furnaces							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-33 13 17			Natural Gas Fired Furnaces							
23-33 13 19			Gasoline Fired Furnaces							
23-33 13 21			Fuel Oil Fired Furnaces							
23-33 13 23			Oil Fired Furnaces							
23-33 13 25			Propane Fired Furnaces							
23-33 13 27			Furnace Components							
23-33 13 27 11				Furnace Joint Fillers and Sealants						
23-33 13 27 13				Furnace Fuel Burners						
23-33 13 27 15				Furnace Fuel Oil Filters						
23-33 13 27 17				Furnace Nozzles						
23-33 13 27 19				Furnace Fuel Gas Heat Recovery Devices						
23-33 15 00		HVAC Heating Units							any device or system for heating a building.	
23-33 15 11			Propane HVAC Heaters							
23-33 15 11 11				Indoor Propane HVAC Heaters						Propane Heater that is designed to be ducted to be directly vented outdoors.
23-33 15 11 13				Outdoor Propane HVAC Heaters						
23-33 15 13			Heating Stoves							
23-33 15 13 11				Cast Iron Heating Stoves						
23-33 15 13 13				Stone Heating Stoves						
23-33 15 13 15				Welded Steel Heating Stoves						
23-33 15 13 17				Heating Stove Components						
23-33 15 13 17 11					Heating Stove Fenders					
23-33 15 13 17 13					Heating Stove Hoods					
23-33 15 13 17 15					Heating Stove Pipes					
23-33 15 15			Specialized Surface Heating Products							
23-33 15 15 11				Heating Sheets						
23-33 15 15 11 11					Heating Sheets for Walls					
23-33 15 15 11 13					Heating Sheets for Ceilings					
23-33 15 15 11 15					Embedded Electric Heating Sheets					
23-33 15 15 11 17					Heating Sheets for Glazing					
23-33 15 15 13				Heating Cables						
23-33 15 15 15				Pipe Heat Tape						
23-33 15 15 17				Cable Heat Trace						
23-33 15 15 19				Heated Ceiling Panels				Convactor		
23-33 15 15 21				Pipe Heat Tracing						
23-33 15 17			Fuel Fired HVAC Heaters							
23-33 15 17 11				Fuel Fired HVAC Duct Heaters						
23-33 15 17 13				Fuel Fired HVAC Radiant Heaters				Salmander Heater		
23-33 15 17 15				Fuel Fired HVAC Unit Heaters						
23-33 15 17 17				Fuel Fired HVAC Air Heaters						
23-33 15 19			Forced Air Fuel Fired HVAC Heaters							
23-33 15 19 11				Forced Air Fuel Fired HVAC Duct Heaters						
23-33 15 19 13				Forced Air Fuel Fired HVAC Radiant Heaters				Salmander Heater		
23-33 15 19 15				Forced Air Fuel Fired HVAC Unit Heaters						
23-33 15 19 17				Forced Air Fuel Fired HVAC Air Heaters						
23-33 15 21			Hydronic HVAC Heaters							Hydronic heaters use either steam or water to provide heating using pipes usually arranged with fins or elongated sections to increase surface area.
23-33 15 21 11				Cast Iron Radiators						
23-33 15 21 13				Finned Tube Radiators						
23-33 15 21 15				Plate Radiators						
23-33 15 21 17				Radiation Heating Panels						
23-33 15 23			Forced Air Hydronic HVAC Heaters							Hydronic heaters use either steam or water to provide heating using pipes usually arranged with fins or elongated sections to increase surface area.
23-33 15 23 11				Forced Air Cast Iron Radiators						
23-33 15 23 13				Forced Air Finned Tube Radiators						
23-33 15 23 15				Forced Air Plate Radiators						
23-33 15 23 17				Forced Air Radiation Heating Panels						
23-33 15 25			Electric HVAC Heaters							
23-33 15 25 11				Halogen Electric HVAC Heaters				Convectors		
23-33 15 25 13				Infrared Plate HVAC Heaters				Convactor		
23-33 15 25 15				Ultraviolet HVAC Heaters				Convactor		
23-33 15 25 17				Electric HVAC Resistive Unit Heaters						
23-33 15 27			Forced Air Electric HVAC Heaters							
23-33 15 27 11				Forced Air Halogen Electric HVAC Heaters				Convactor		

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23-33 15 27 13				Forced Air Infrared Plate HVAC Heaters				Convactor		
23-33 15 27 15				Forced Air Ultraviolet HVAC Heaters				Convactor		
23-33 15 27 17				Forced Air Electric HVAC Resistive Unit Heaters						
23-33 15 29			HVAC Steam Hot Water Converters							
23-33 17 00		Heat Pumps							a device that moves heat from one location (the 'source') to another location (the 'sink' or 'heat sink') using mechanical work.	
23-33 17 11			Packaged Heat Pumps							
23-33 17 11 11				Air Source Packaged Heat Pumps						
23-33 17 11 13				Water Source Packaged Heat Pumps						
23-33 17 13			Split System Heat Pumps							
23-33 17 13 11				Air Source Split System Heat Pumps						
23-33 17 13 13				Water Source Split System Heat Pumps						
23-33 19 00		Cooling and Freeze Components							Components used in the cooling and freezing cycle.	
23-33 19 11			Cooling Freeze Plant Accessories							
23-33 19 11 11				Refrigerant Liquid						
23-33 21 00		Chillers							is a product that removes heat from a liquid via a vapor-compression or absorption refrigeration cycle.	
23-33 21 11			Absorption Chillers							
23-33 21 11 11				Direct Fired Absorption Chillers				Gas Fired Absorption Chiller		
23-33 21 11 13				Steam Absorption Chillers						
23-33 21 13			Chillers							
23-33 21 13 11				Central Package Unit Chillers						
23-33 21 13 13				Centrifugal Chillers						
23-33 21 13 13 11					Packaged Centrifugal Chillers					
23-33 21 13 13 13					Split System Centrifugal Chillers					
23-33 21 13 15				Reciprocating Chillers						
23-33 21 13 15 11					Packaged Reciprocating Chillers					
23-33 21 13 15 13					Split System Reciprocating Chillers					
23-33 21 13 17				Rotary Chillers						
23-33 21 13 17 11					Packaged Rotary Chillers					
23-33 21 13 17 13					Split System Rotary Chillers					
23-33 21 13 19				Rotary Screw Chillers						
23-33 21 13 19 11					Packaged Rotary Screw Chillers					
23-33 21 13 19 13					Split System Rotary Screw Chillers					
23-33 21 13 21				Screw Chillers						
23-33 21 13 21 11					Packaged Screw Chillers					
23-33 21 13 21 13					Split System Screw Chillers					
23-33 21 13 23				Scroll Chillers						
23-33 21 13 23 11					Packaged Scroll Chillers					
23-33 21 13 23 13					Split System Scroll Chillers					
23-33 23 00		Cooling Towers							heat removal devices used to extract waste heat to the atmosphere.	
23-33 23 11			Mechanical Draft Cooling Towers							
23-33 23 13			Natural Draft Cooling Towers							
23-33 23 15			Cooling Ponds							
23-33 25 00		Air Handling Units							is a device used to condition and circulate air as part of an HVAC system.	
23-33 25 11			Built Up Air Handling Units							
23-33 25 11 11				Built Up Indoor Air Handling Units						
23-33 25 11 13				Built Up Rooftop Air Handling Units						
23-33 25 13			Customized Air Handling Units							
23-33 25 13 11				Customized Indoor Air Handling Units						
23-33 25 13 13				Customized Rooftop Air Handling Units						
23-33 25 15			Heating and Ventilating Units						Type of AHU, without cooling	
23-33 25 17			Modular Air Handling Units							
23-33 25 17 11				Modular Indoor Air Handling Units						
23-33 25 17 13				Modular Rooftop Air Handling Units						
23-33 25 19			Pre Fabricated Air Handling Units							
23-33 27 00		Air Humidity Control Equipment							Equipment used in the control of humidity.	
23-33 27 11			Air Washers							
23-33 27 11 11				Convection Air Washers						
23-33 27 11 13				Evaporative Air Washers						
23-33 27 13			Dehumidifiers							
23-33 27 13 11				Dehumidifiers						
23-33 27 13 11 11					Swimming Pool Dehumidification Units					

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23-33 27 13 13				Permanently Installed Dehumidifiers						
23-33 27 13 15				Portable Dehumidifiers						
23-33 27 15			Air Humidifiers							
23-33 27 17			Vaporizers							
23-33 29 00		HVAC Dampers							Devices deadens, restrains, or depresses in HVAC.	
23-33 29 11			3 Way Diverter Dampers						For changing over gas flow or simultaneously isolating one duct.	
23-33 29 13			Backdraft Dampers							
23-33 29 13 11				Opposed Blade Backdraft Dampers						
23-33 29 13 11 11					Spring Loaded Opposed Blade Backdraft Dampers					
23-33 29 13 11 13					Counter Weight Balanced Opposed Blade Backdraft Dampers					
23-33 29 13 13				Parallel Backdraft Dampers						
23-33 29 13 13 11					Spring Loaded Parallel Backdraft Dampers					
23-33 29 13 13 13					Counter Weight Balanced Parallel Backdraft Dampers					
23-33 29 15			Bi Plane Dampers						Two dampers in one. The blades are designed as hollow, which when closed and fitted with seals, form compartments which can be pressurized with seal air.	
23-33 29 17			Butterfly Dampers							
23-33 29 17 11				Automatically Control Butterfly Dampers						
23-33 29 17 13				Manual Butterfly Dampers						
23-33 29 19			Dampers							
23-33 29 19 11				Automatically Control Dampers						
23-33 29 19 13				Manual Dampers						
23-33 29 21			Diffuser Firestop Flaps							
23-33 29 23			Fire Dampers							
23-33 29 23 11				Manual Fire Dampers						
23-33 29 23 13				Automatic Fire Dampers						
23-33 29 25			Smoke Dampers							
23-33 29 25 11				Manual Smoke Dampers						
23-33 29 25 13				Automatic Smoke Dampers						
23-33 29 27			Non Return Dampers					Flap Isolators	For geometrical reasons these are two bladed and open towards the center of the duct.	
23-33 29 29			Guillotine Dampers						For shut-off use.	
23-33 29 31			Louvre Dampers						With parallel blade motion. Used for isolation and flow control. The blades rotate in the same direction.	
23-33 29 31 11				Louvre Dampers with Opposed Blade Motion					Single blade dampers. Used for on/off flow control.	
23-33 29 33			Movable Blade Wall Louvers							
23-33 29 33 11				Double Panel Wall Louvers						
23-33 29 35			Static Pressure Regulating Dampers						Application Manages Excess Static Pressure In Zone Systems	
23-33 29 37			Volume Control Dampers							
23-33 29 37 11				Opposed Blade Volume Control Dampers						
23-33 29 37 11 11					Manual Opposed Blade Volume Control Dampers					
23-33 29 37 11 13					Automatic Opposed Blade Volume Control Dampers					
23-33 29 37 13				Parallel Volume Control Dampers						
23-33 29 37 13 11					Manual Parallel Volume Control Dampers					
23-33 29 37 13 13					Automatic Parallel Volume Control Dampers					
23-33 29 39			Fire Shutters for Air Ductwork							
23-33 31 00		Air Circulators							Products used for the movement of air in a circulator or circuit.	
23-33 31 11			Air Curtains					Specialized Blower		
23-33 31 11 11				Heated Air Curtains				Specialized Blower		
23-33 31 11 13				Non Heated Air Curtains				Specialized Blower		
23-33 31 13			Blowers							
23-33 31 13 11				Permanently Installed Blowers						
23-33 31 13 13				Portable Blowers						
23-33 31 15			Exhaust Hoods						Exhaust hoods are specialized ventilation systems that include fans and ducting to ensure a safe environment.	
23-33 31 15 11				Canopy Exhaust Hoods						
23-33 31 15 13				Chemical Fume Hoods						
23-33 31 15 15				Perchloric Acid Fume Hoods						
23-33 31 15 17				Radio Isotope Fume Hoods						
23-33 31 15 19				Snorkel Exhaust Hoods						
23-33 31 15 21				Grease Exhaust Hoods						
23-33 31 17			Exhaust Hood Fire Suppression System							

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23-33 31 17 11				Chemical Exhaust Hood Fire Suppression Systems					Product is sold as a complete system	
23-33 31 17 13				Gas Exhaust Hood Fire Suppression Systems					Product is sold as a complete system	
23-33 31 19			Fans							
23-33 31 19 11				Axial Fans						
23-33 31 19 11 11					Axial Plug Fans					
23-33 31 19 11 13					Axial Vane Fans					
23-33 31 19 11 15					Ceiling Fans					
23-33 31 19 11 17					Propeller Fans					
23-33 31 19 11 19					Tube Axial Fans					
23-33 31 19 11 21					Variable Pitch Axial Vane Fans					
23-33 31 19 13				Centrifugal Fans						
23-33 31 19 13 11					Centrifugal Plug Fans					
23-33 31 19 13 13					Double Inlet Centrifugal Fans					
23-33 31 19 13 15					Single Inlet Centrifugal Fans					
23-33 31 21			Power Ventilators							
23-33 31 21 11				Centrifugal Power Ventilators						
23-33 31 21 11 11					Down Blast Centrifugal Power Ventilators					
23-33 31 21 11 13					Up Blast Centrifugal Power Ventilators					
23-33 31 21 13				Propeller Power Ventilators						
23-33 31 21 13 11					Down Blast Propeller Power Ventilators					
23-33 31 21 13 13					Up Blast Propeller Power Ventilators					
23-33 33 00		HVAC Fan Coil Units							Devices consisting of a heating or cooling coil and a fan and controls the temperature of air in a space.	
23-33 33 11			Fan Coil Units						A fan coil unit (FCU) is a simple device consisting of a heating or cooling coil and fan	
23-33 33 11 11				Fan Coil Cooling Units					Wall Mount/Ceiling Mounted/Surface Mounted/Concealed Mounted/Floor Mounted	
23-33 33 11 11 11					2 Pipe Fan Coil Cooling Units					
23-33 33 11 11 13					4 Pipe Fan Coil Cooling Units					
23-33 33 11 13				Fan Coil Heating Units					Wall Mount/Ceiling Mounted/Surface Mounted/Concealed Mounted/Floor Mounted	
23-33 33 11 13 11					4 Pipe Fan Coil Heating Units					
23-33 33 11 13 13					2 Pipe Fan Coil Heating Units					
23-33 33 11 15				Fan Coil Heating and Cooling Units					Wall Mount/Ceiling Mounted/Surface Mounted/Concealed Mounted/Floor Mounted	
23-33 33 11 15 11					2 Pipe Fan Coil Heating and Cooling Units					
23-33 33 11 15 13					4 Pipe Fan Coil Heating and Cooling Units					
23-33 35 00		HVAC Coils							a series of loops specific to HVAC.	
23-33 35 11			HVAC Coils							
23-33 35 11 11				HVAC Glycol Coils						
23-33 35 11 13				HVAC Steam Coils						
23-33 35 11 15				HVAC Water Coils						
23-33 37 00		Refrigerant Condensing Units							Vapor condensers in a refrigeration system, where the refrigerant is liquefied and discharges its heat to the environment.	
23-33 37 11			Packaged Refrigerant Coils and Fan Units							
23-33 37 13			Refrigerant Condensing Coils							
23-33 37 15			Refrigerant Evaporators							
23-33 39 00		Air Conditioning Equipment							Equipment used for air conditioning purposes.	
23-33 39 11			Air Conditioners							
23-33 39 11 11				Room Air Conditioners						
23-33 39 13			High Pressure Air Conditioning Units						Air Handler that maintains more than 6 inches of static pressure	
23-33 39 15			Make Up Air Units							
23-33 39 15 11				Make Up Air Units With Heat					Hot Water would be a design power source attribute or captured by the coil associated with the MAU	
23-33 39 15 13				Make Up Air Units Without Heat						
23-33 39 17			Packaged Air Conditioners							
23-33 39 17 11				Dual Pack Packaged Air Conditioners						
23-33 39 17 11 11					Air Cooled Dual Pack Packaged Air Conditioners					
23-33 39 17 11 13					Water Cooled Dual Pack Packaged Air Conditioners					
23-33 39 17 13				Single Pack Packaged Air Conditioners						
23-33 39 17 13 11					Air Cooled Single Pack Packaged Air Conditioners					
23-33 39 17 13 13					Water Cooled Single Pack Packaged Air Conditioners					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-33 39 17 13 15					Unitary Air Conditioning Equipment					
23-33 39 19				Packaged Terminal Air Conditioning Units						
23-33 39 19 11					Fixed Packaged Terminal Air Conditioners					
23-33 39 19 11 11					Air Cooled Fixed Packaged Terminal Air Conditioners					
23-33 39 19 11 13					Water Cooled Fixed Packaged Terminal Air Conditioners					
23-33 39 19 13					Portable Packaged Terminal Air Conditioners					
23-33 39 19 13 11					Air Cooled Portable Packaged Terminal Air Conditioners					
23-33 39 19 13 13					Water Cooled Portable Packaged Terminal Air Conditioners					
23-33 39 19 15					Window Packaged Terminal Air Conditioners					
23-33 39 19 15 11					Air Cooled Window Packaged Terminal Air Conditioners					
23-33 39 19 15 13					Water Cooled Window Packaged Terminal Air Conditioners					
23-33 39 21										
23-33 41 00		HVAC Air Terminals								Units at the end of a branch duct through which air is transferred or delivered to the conditioned space.
23-33 41 11										
23-33 41 11 11										
23-33 41 11 11 11					Mixing Fan Powered Terminal Air Units					
23-33 41 11 11 13					Single Duct Mixing Fan Powered Terminal Air Units					
23-33 41 11 13					Dual Duct Mixing Fan Powered Terminal Air Units					
23-33 41 11 13 11					Non Mixing Fan Powered Terminal Air Units					
23-33 41 11 13 13					Single Duct Mixing Fan Powered Terminal Air Units					
23-33 41 13					Dual Duct Mixing Fan Powered Terminal Air Units					
23-33 41 13 11										
23-33 41 13 11 11					Constant Volume Air Induction Terminal Air Units					
23-33 41 13 11 13					Single Duct Constant Volume Air Induction Terminal Air Units					
23-33 41 13 13					Dual Duct Constant Volume Air Induction Terminal Air Units					
23-33 41 13 13 11					Variable Air Volume Induction Terminal Air Units					
23-33 41 13 13 13					Single Duct Variable Air Volume Induction Terminal Air Units					
23-33 41 15					Dual Duct Variable Air Volume Induction Terminal Air Units					
23-33 41 17										
23-33 41 17 11										
23-33 41 17 11 11					Constant Volume Air Terminal Units					
23-33 41 17 11 13					Dual Duct Constant Volume Air Terminal Units					
23-33 41 17 13					Single Duct Constant Volume Air Terminal Units					
23-33 41 17 13 11					Variable Air Volume Terminal Units					
23-33 41 17 13 13					Dual Duct Variable Air Volume Terminal Units					
23-33 41 19					Single Duct Variable Air Volume Terminal Units					
23-33 43 00										
23-33 43 11										
23-33 43 11 11										
23-33 43 11 13										
23-33 43 13										
23-33 43 15										
23-33 43 15 11										
23-33 43 15 13										
23-33 43 17										
23-33 43 17 11										
23-33 45 00										
23-33 45 11										
23-33 45 13										
23-33 47 00										
23-33 47 11										
23-33 47 13										
23-33 49 00										
23-33 49 11										
23-33 49 11 11										
23-33 49 11 11 11										
23-33 49 11 13										
23-33 49 11 15										
23-33 49 13										
23-33 49 13 11										
23-33 49 13 11 11										
23-33 49 13 13										

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23-33 49 15			Duct Access Panels							
23-33 49 17			Duct Insulation							
23-33 49 17 11				Duct Covering Insulation						
23-33 49 17 13				Duct Liner Insulation						
23-33 49 19			Ductwork Distribution Collectors							
23-33 49 21			Ductwork Expansion Vessels							
23-33 49 21 11				Air Outlets and Inlets						
23-33 49 21 13				Ductwork Guide Vanes						
23-33 49 21 15				Ductwork Air Mixers						
23-33 49 21 17				Ductwork Sound Attenuators						
23-33 49 23			Grilles							
23-33 49 23 11				Exhaust Air Grilles						
23-33 49 23 13				Return Air Grilles						
23-33 49 23 15				Supply Air Grilles						
23-33 49 23 17				Transfer Air Grilles						
23-33 49 25			Ventilation Registers							
23-33 49 25 11				Exhaust Air Ventilation Registers						
23-33 49 25 13				Return Air Ventilation Registers						
23-33 49 25 15				Supply Air Ventilation Registers						
23-33 49 27			Ventilators						See Air Circulator Section for Power Ventilators	
23-33 49 27 11				Gravity Ventilators						
23-33 49 27 13				Intake and Relief Ventilators						
23-33 49 27 15				Relief Ventilators						
23-33 49 27 17				Intake Ventilators						
23-33 49 29			Air Ductwork Accessories							
23-33 49 29 11				Access Fittings for Air Ductwork						
23-33 49 29 13				Couplings for Air Ductwork						
23-33 49 29 15				Hangers for Air Ductwork						
23-33 49 29 17				Supports for Air Ductwork						
23-33 49 29 19				Mechanical Fasteners for Air Ductwork						
23-33 51 00		HVAC Specialized Equipment							Specialized equipment for HVAC.	
23-33 51 11			Refrigerant Monitors							
23-33 51 13			Refrigerant Purge Units							
23-33 51 15			Ultraviolet Disinfection Lighting							
23-33 53 00		Solar Water Heating Equipment							Equipment used to heat water through solar power.	
23-33 53 11			Solar Water Heating Packaged Units							
23-33 53 13			Solar Water Heating Collector Components							
23-33 53 13 11				Solar Water Heating Absorber Plates						
23-33 53 13 13				Solar Water Heating Absorber Tubing						
23-33 53 13 15				Solar Water Heating Coatings and Surface Treatment						
23-33 53 13 17				Solar Water Heating Collector Insulation						
23-33 53 13 19				Solar Water Heating Glazing						
23-33 53 13 21				Solar Water Heating Housing and Framing						
23-33 53 13 23				Solar Water Heating Reflectors						
23-33 53 15			Solar Water Heating Collector Units							
23-33 53 15 11				Solar Water Heating Flat Plate Collectors						
23-33 53 15 13				Solar Water Heating Concentrating Collectors						
23-33 53 15 15				Solar Water Heating Vacuum Tube Collectors						
23-33 55 00		Energy HVAC Recovery Equipment							Equipment used to recover HVAC energy.	
23-33 55 11			Heat Pipes							
23-33 55 13			Heat Wheels							
23-35 00 00	Electrical and Lighting Specific Products and Equipment								Products specifically related to electricity and lighting.	Includes power transformers, filters, conditioners, luminaries, lighting, switches, and electrical and lighting control devices. See "General Facility Services Products" for conduits and wires.
23-35 11 00		Electrical Generators							Devices which convert mechanical energy to electrical energy	
23-35 11 11			Single Unit Electrical Generators							
23-35 11 11 11				Engine Electrical Generators					Electrical Generator setup to be direct coupled to an engine.	
23-35 11 11 13				Motor Electrical Generators					Electrical Generator setup to be directly coupled to a motor.	
23-35 11 12			Single Unit Electrical Generator Engines							
23-35 11 12 11				Electrical Generation Diesel Engines						
23-35 11 12 13				Electrical Generation Gas Engines						
23-35 11 12 15				Electrical Generation Natural Gas Engines						

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23-35 11 12 15 11					Electrical Generation Natural Gas Turbines					
23-35 11 12 17				Electrical Generation Steam Turbines						
23-35 11 13			Motor Generator Sets						Electromagnetic set with a mechanical driver	
23-35 11 13 11				Alternating Current Frequency Converters					AC to AC Frequency Converter	
23-35 11 13 13				Alternating Current Generator Sets					AC Generator with a motor driver	
23-35 11 13 15				Direct Current Generator Sets					DC Generator with a motor driver	
23-35 11 13 17				Multiple Frequency Electrical Generator Sets				Variable Frequency Electrical Generator		
23-35 11 13 19				Multiple Voltage Electrical Generator Sets				Variable Voltage Electrical Generator		
23-35 11 15			Engine Generator Sets							
23-35 11 15 11				Diesel Generator Sets					AC Generator with a diesel engine as the driver	
23-35 11 15 13				Gas Generator Sets					AC Generator with a gas engine as the driver	
23-35 11 15 15				Natural Gas Generator Sets					AC Generator with a natural gas engine as the driver	
23-35 11 15 17				Steam Turbine Generator Sets					AC Generator with a steam turbine as the driver	
23-35 11 15 19				Thermal Generator Sets				Geo-Thermal	AC Generator with a thermal turbine as the driver	
23-35 11 15 21				Hydro Turbine Generator Sets					AC Generator with a water turbine as the driver	
23-35 11 15 23				Wind Generator Sets					AC Generator with a wind turbine as the driver	
23-35 11 17			Photovoltaic Generators					Solar Generator	DC Generator using solar power, all solar power creates DC that is stored or converted in a DC to AC converter	
23-35 11 17 11				Photoelectric Cell						
23-35 11 17 12				Photoelectric Panel						
23-35 11 17 13				Photovoltaic Array						
23-35 11 17 15				Photovoltaic Collectors						
23-35 13 00		Transformers							is a device that transfers electrical energy from one circuit to another through inductively coupled conductors.	
23-35 13 11			Current Transformers							
23-35 13 13			Instrument Transformers					Control Transformer		
23-35 13 13 11				Current Instrument Transformers				Control Transformer		
23-35 13 13 13				Pulse Instrument Transformers				Control Transformer		
23-35 13 13 15				Voltage Instrument Transformers				Control Transformer		
23-35 13 15			Electrical Network Transformers					Distribution Transformer, Step-Up=Buck Boost		Typically High Voltage (over 600 Volts). Network in electrical distribution refers to the Utility side of the electrical network grid.
23-35 13 15 11				Electrical Network Isolation Transformers						Typically High Voltage (over 600 Volts).
23-35 13 15 11 11					Electrical Network Dry Isolation Transformers					Typically High Voltage (over 600 Volts).
23-35 13 15 11 13					Electrical Network Oil Filled Isolation Transformers					Typically High Voltage (over 600 Volts).
23-35 13 15 13				Electrical Network Step Down Transformers						Typically High Voltage (over 600 Volts).
23-35 13 15 13 11					Electrical Network Dry Step Down Transformers					Typically High Voltage (over 600 Volts).
23-35 13 15 13 13					Electrical Network Oil Filled Step Down Transformers					Typically High Voltage (over 600 Volts).
23-35 13 15 15				Electrical Network Step Up Transformers						Typically High Voltage (over 600 Volts).
23-35 13 15 15 11					Electrical Network Dry Step Up Transformers					Typically High Voltage (over 600 Volts).
23-35 13 15 15 13					Electrical Network Oil Filled Step Up Transformers					Typically High Voltage (over 600 Volts).
23-35 13 17			Power Transformers							
23-35 13 17 11				Power Harmonic Mitigation Transformers						Typically under 600 Volts
23-35 13 17 11 11					Power Dry Harmonic Mitigation Transformers					Typically under 600 Volts
23-35 13 17 11 13					Power Oil Filled Harmonic Mitigation Transformers					Typically under 600 Volts
23-35 13 17 13				Power Isolation Transformers						Typically under 600 Volts
23-35 13 17 13 11					Power Dry Isolation Transformers					Typically under 600 Volts
23-35 13 17 13 13					Power Oil Filled Isolation Transformers					Typically under 600 Volts
23-35 13 17 15				Power Step Down Transformers						Typically under 600 Volts
23-35 13 17 15 11					Power Dry Step Down Transformers					Typically under 600 Volts
23-35 13 17 15 13					Power Oil Filled Step Down Transformers					Typically under 600 Volts
23-35 13 17 17				Power Step Up Transformers						Typically under 600 Volts
23-35 13 17 17 11					Power Dry Step Up Transformers					Typically under 600 Volts
23-35 13 17 17 13					Power Oil Filled Step Up Transformers					Typically under 600 Volts
23-35 13 19			Transformer Accessories							
23-35 13 19 11				Transformer Commutators						
23-35 13 19 13				Transformer Ballasts						
23-35 15 00		Electric Motors							uses electrical energy to produce mechanical energy, usually through the interaction of magnetic fields and current-carrying conductors.	
23-35 15 11			Alternating Current (AC) Motors							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-35 15 11 11				Single Phase AC Motors						
23-35 15 11 11 11					Multi Speed Single Phase AC Motors					
23-35 15 11 11 13					Single Speed Single Phase AC Motors					
23-35 15 11 11 15					Synchronous Single Phase AC Motors					
23-35 15 11 13				Three Phase AC Motors						
23-35 15 11 13 11					Multi Speed Three Phase AC Motors					
23-35 15 11 13 13					Single Speed Three Phase AC Motors					
23-35 15 11 13 15					Synchronous Three Phase AC Motors					
23-35 15 13			Direct Current (DC) Motors							
23-35 15 13 11				Brushless DC Motors						
23-35 15 13 13				Compound Wound DC Motors						
23-35 15 13 15				Coreless DC Motors						
23-35 15 13 17				Limited Angle Torque DC Motors						
23-35 15 13 19				Linear DC Motors						
23-35 15 13 21				Permanent Magnetic DC Motors						
23-35 15 13 23				Series Wound DC Motors						
23-35 15 13 25				Shunt Wound DC Motors						
23-35 15 13 27				Step DC Motors						
23-35 15 15			DC Servo Motors							
23-35 15 17			Dynamotors							
23-35 15 19			Hydraulic Driven Motors							
23-35 15 21			Pneumatic Driven Motors							
23-35 15 23			Steam Driven Motors							
23-35 17 00		Variable Speed Drives							Electrical equipment used to control the speed of motors and machinery to reduce energy usage under lower loads.	
23-35 17 11			Direct Current Electronic Speed Controller Drives							
23-35 17 13			Slip Controlled Drives					Eddy Current Drive		
23-35 17 15			Variable Frequency Drives							
23-35 17 15 11				Pulse Width Variable Frequency Drives						
23-35 17 15 13				Current Source Input Variable Frequency Drives						
23-35 17 15 15				Variable Voltage Input Variable Frequency Drives						
23-35 19 00		Batteries							an array of electrochemical cells for electricity storage, either individually linked and stored in a single unit	
23-35 19 11			Battery Racks							
23-35 19 13			Non Rechargeable Batteries							
23-35 19 13 11				Alkaline Batteries						
23-35 19 13 13				Dry Cell Batteries						
23-35 19 13 15				Lithium Batteries						
23-35 19 13 17				Silver Oxide Batteries						
23-35 19 13 19				Zinc Air Batteries						
23-35 19 13 21				Zinc Coal Batteries				Zinc Carbon Battery		
23-35 19 15			Rechargeable Batteries							
23-35 19 15 11				Alkaline Batteries						
23-35 19 15 13				Lead Acid Batteries						
23-35 19 15 13 11					Sealed Lead Acid Batteries			Gel Cap Lead Acid Battery		
23-35 19 15 13 13					Wet Cell Lead Acid Batteries					
23-35 19 15 15				Lithium Batteries				Unsealed Lead Acid Battery		
23-35 19 15 17				Manganese Batteries						
23-35 19 15 19				Mercuric Oxide Batteries				Mercury Battery		
23-35 19 15 21				Nickel Cadmium Batteries						
23-35 19 15 23				Nickel Hydrogen Batteries						
23-35 19 15 25				Nickel Iron Batteries						
23-35 19 15 27				Nickel Metal Hydride Batteries						
23-35 19 15 29				Nickel Sodium Chloride Batteries						
23-35 19 15 31				Silver Oxide Batteries				Silver Zinc Battery		
23-35 21 00		Battery Chargers							a product used to put energy into a secondary cell or usually a rechargeable battery by forcing an electric current through it.	
23-35 23 00		Power Conditioning Equipment							Equipment intended to improve the quality of the power that is delivered to electrical load equipment	
23-35 23 11			Harmonic Control Devices							
23-35 23 11 11				Electric Interference Suppressor Filters						
23-35 23 11 13				Harmonic Filters						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-35 23 13			Power Converters						A converter is an electrical device that converts alternating current (AC) to direct current (DC)	
23-35 23 13 11				Rotary Converters						
23-35 23 15			Static Power Converters							
23-35 23 15 11				Static Rectifiers						
23-35 23 15 13				Ondulators						
23-35 23 15 15				Combined Converter Sets						
23-35 23 15 17				Direct Current (DC) Drive Controllers						
23-35 23 15 19				Slip Controllers						
23-35 23 15 21				Static Frequency Converters						
23-35 23 15 23				Static Uninterruptible Power Supplies						
23-35 23 15 25				Variable Frequency Controllers						
23-35 23 15 27				Frequency Changers						
23-35 23 15 29				Rotary Uninterruptible Power Units						
23-35 23 17			Power Inverters						An inverter is an electrical or electro-mechanical device that converts direct current (DC) to alternating current (AC)	
23-35 23 17 11				Commutator Inverters				Electric Rotary Converter Generator		
23-35 23 17 13				Solid State Inverters						
23-35 23 19			Powerfactor Correction Devices							
23-35 23 19 11				Capacitive and Inductive Power Correction Devices						
23-35 23 19 13				Capacitive Power Correction Devices						
23-35 23 19 15				Inductive Power Correction Devices						
23-35 23 19 17				Capacitors						
23-35 23 19 19				Power Factor Controls (Cosines Phi)						
23-35 23 21			Uninterrupted Power Supply (UPS) Units							
23-35 23 21 11				Uninterruptible Power Supply Component Systems						
23-35 23 21 13				Uninterruptible Power Supply Packaged Units						
23-35 25 00		Electrical Instrumentation and Controls							Instruments which measure and control electricity.	
23-35 25 11			Electrical Meters							
23-35 25 11 11				Power Meters					Power meters are kilowatt or watt meters that do not take into account hours.	
23-35 25 11 13				Voltage Meters						
23-35 25 11 15				Resistance Meters						
23-35 25 11 17				Frequency Meters						
23-35 25 11 19				Multi Meters						
23-35 25 11 21				Current Meters						
23-35 25 11 23				Amp Hour Meters						
23-35 25 11 25				Power Factor Meters						
23-35 25 11 27				Kilowatt Hour Meters						
23-35 25 11 27 11					Electromechanical Remote Kilowatt Hour Meters				Meters used to measure energy usage and determine utility costs. Remote Meters have communication ability to allow measuring energy usage from a remote location.	
23-35 25 11 27 13					Electromechanical Kilowatt Hour Meters				Meters used to measure energy usage and determine utility costs.	
23-35 25 11 27 15					Solid State Remote Kilowatt Hour Meters				Meters used to measure energy usage and determine utility costs. Remote Meters have communication ability to allow measuring energy usage from a remote location.	
23-35 25 11 27 17					Solid State Kilowatt Hour Meters				Meters used to measure energy usage and determine utility costs.	
23-35 25 11 29				Multiple Tariff Meters				Variable Rate Meter		
23-35 25 13			Electrical Energy Recording Devices							
23-35 25 13 11				Watt Hour Recorders				Electricity Usage Meters		
23-35 25 15			Electrical Network Protection Modules					High Voltage Protection Module		
23-35 25 17			Electrical Power Protection Modules					Low Voltage Protection Module		
23-35 25 19			Motor Starters							
23-35 25 21			Programmable Logic Controllers							
23-35 25 23			Electrical Control Panels							
23-35 25 25			Electrical Line Supervisor Sets							
23-35 27 00		Electrical Terminals								
23-35 27 11			Electrical Receptacles						Products used to prevent electrical shock or hazards to the occupants.	
23-35 27 11 11				Electrical Receptacle Terminal Units						
23-35 27 11 13				Ground Fault Receptacles						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-35 27 11 15				Electrical Extension Cords						
23-35 27 11 17				Electrical Receptacle Accessories						
23-35 27 11 17 11					Electrical Telltale Lamps					
23-35 27 11 17 13					Electrical Receptacle Protectors					
23-35 27 11 17 15					Electrical Receptacle Adapters					
23-35 27 13				Electrical Plug Connectors						Includes: Pin Plugs
23-35 29 00		Circuit Breakers							an automatic switch designed to protect an electrical circuit from damage caused by overload or short circuit.	
23-35 29 11				Air Circuit Breakers						
23-35 29 11 11					Network Distribution Air Circuit Breakers					
23-35 29 11 13					Power Distribution Air Circuit Breakers					
23-35 29 13				Gas Circuit Breakers						
23-35 29 13 11					Network Distribution Gas Circuit Breakers					
23-35 29 13 13					Power Distribution Gas Circuit Breakers					
23-35 29 15				Ground Fault Circuit Breakers						
23-35 29 17				Molded Case Circuit Breakers						
23-35 29 17 11					Shunt Molded Case Circuit Breakers					
23-35 29 19				Oil Circuit Breakers						
23-35 29 19 11					Network Distribution Oil Circuit Breakers					
23-35 29 19 13					Power Distribution Oil Circuit Breakers					
23-35 29 21				Vacuum Circuit Breakers						
23-35 29 21 11					Network Distribution Vacuum Circuit Breakers					
23-35 29 21 13					Power Distribution Vacuum Circuit Breakers					
23-35 29 23				Ground Fault Circuit Interrupters						
23-35 29 25				Network Protectors					Automatic network disconnect designed as a protection device.	
23-35 29 27				Electrical Disconnects					These disconnects are large network or transmission disconnects. Equipment disconnects can be found under disconnect switch	
23-35 29 27 11					Air Disconnects					
23-35 29 27 13					Vacuum Disconnects					
23-35 29 27 15					Gas Disconnects					
23-35 29 29				Fuses						
23-35 29 29 11					Fuse Panels					
23-35 29 29 13					Fuse Holders					
23-35 31 00		Electrical Power Distribution Devices							Devices used in electrical power distribution.	
23-35 31 11				Power Supply Devices						
23-35 31 13				Distribution Panel Boards					Primarily used for feeder circuits	
23-35 31 15				Electrical Distribution Control Panels						
23-35 31 17				Electrical Panel Boards					Primarily used for branch circuits. Commonly called Electrical Panels	
23-35 31 19				Electrical Panel Meter Sockets						
23-35 31 21				Load Centers						
23-35 31 23				Motor Control Centers						
23-35 31 25				Power Control and Monitoring Assemblies						
23-35 31 27				Power Distribution Units					A PDU is an electrical panel with an isolation transformer and is a self contained unit as brought off the shelf.	
23-35 31 27 11					Multiple Section Power Distribution Units					
23-35 31 27 13					Stand Alone Power Distribution Units					
23-35 31 29				Switchboards					Switchboard only contains high voltage breakers	
23-35 31 29 11					Distribution Switchboards					
23-35 31 29 13					Paralleling Switchboards					
23-35 31 31				Switchgear					Switchgear contains both high voltage breakers and their controls	
23-35 31 31 11					Distribution Switchgear					
23-35 31 31 11 11						Electronic Controlled Distribution Switchgear				
23-35 31 31 11 13						Mechanically Controlled Distribution Switchgear				
23-35 31 31 11 15						Remote Controlled Distribution Switchgear				
23-35 31 31 11 17						Time Controlled Distribution Switchgear				
23-35 31 31 13					Paralleling Switchgear					
23-35 31 31 13 11						Electronic Controlled Paralleling Switchgear				
23-35 31 31 13 13						Mechanically Controlled Paralleling Switchgear				
23-35 31 31 13 15						Remote Controlled Paralleling Switchgear				
23-35 31 31 13 17						Time Controlled Paralleling Switchgear				
23-35 31 33				Electrical Busbars						
23-35 31 33 11					Aluminum Electrical Busbars			Bus Bar, Busway		

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-35 31 33 13				Copper Electrical Busbars				Bus Bar, Busway		
23-35 31 35			Electrical Feeders						Denotes identification for electrical feeders into facilities.	
23-35 33 00		Electrical Ducting Wireways Components							Components used in electrical ducting wireways.	Includes: Trunking
23-35 33 11			Electrical Service Penetrations							
23-35 33 13			Electrical Conductor Components							
23-35 33 13 11				Electrical Conductor Rails						
23-35 33 13 13				Electrical Conductor Couplings						
23-35 33 13 15				Electrical Conductor Insulation						
23-35 33 13 17				Electrical Support Wires						
23-35 33 13 19				Conductor Mechanical Fasteners						
23-35 33 15			Electrical Junction Boxes							
23-35 33 15 11				Electrical Ceiling Junction Boxes						
23-35 33 15 13				Electrical Wall Junction Boxes						
23-35 33 17			Electrical Conduits							Note: Circular cross-section.
23-35 33 17 11				Electrical Cable Reels						
23-35 33 17 13				Mechanical Fasteners for Conduits						
23-35 33 17 15				Mechanical Fasteners for Trunking						
23-35 33 19			Electrical Cable Trays							Note: Telecomm and Electrical
23-35 33 21			Electrical Bus Ducts					Bus Duct		
23-35 33 21 11				Aluminum Electrical Bus Ducts				Bus Duct		
23-35 33 21 13				Copper Electrical Bus Ducts				Bus Duct		
23-35 33 23			Electrical Racks							Note: Telecomm and Electrical
23-35 33 23 11				Horizontal Electrical Racks						Note: Telecomm and Electrical
23-35 33 23 13				Vertical Electrical Racks						Note: Telecomm and Electrical
23-35 33 25			Electrical Wireways							Includes: Trunking Note: Non-circular cross-section
23-35 33 25 11				Underfloor Electrical Wireways						Includes: Trunking
23-35 33 25 13				Vertical Electrical Wire Raceways						
23-35 33 25 15				Horizontal Electrical Wire Raceways						
23-35 33 25 17				Ceiling Grid Electrical Systems						
23-35 33 25 17 11					Ceiling Grid Electrical Wire Tracks					
23-35 33 25 17 13					Ceiling Grid Electrical Wire Track Connectors					
23-35 35 00		Electrical Contactors							An electrically controlled switch used for switching a power or control circuit.	
23-35 37 00		Electrical Switches							device consisting of a mechanical or electrical or electronic device for making or breaking or changing the connections in a circuit	
23-35 37 11			Automatic Transfer Switches							
23-35 37 11 11				Normal Power Seeking Automatic Transfer Switches					Senses power loss, goes to backup power source	
23-35 37 11 13				Power Seeking Automatic Transfer Switches						
23-35 37 13			Manual Transfer Switches						Transfer circuit from one power source to another	
23-35 37 15			Barrel Switches						A switch that connects or disconnects multiple combinations of circuits.	
23-35 37 15 11				Barrel Key Switches						
23-35 37 17			Dimmer Control Switches						A variable or multi-stage switch used to control voltage or current. Usually used to control lighting levels.	
23-35 37 17 11				Lighting Dimmer Rheostats						
23-35 37 17 12				Ganged Lighting Dimmers						
23-35 37 17 13				Dimmers						
23-35 37 19			Disconnect Switches						Switch used to isolate equipment from power sources.	
23-35 37 19 11				Fused Disconnect Switches						
23-35 37 19 13				Non Fused Disconnect Switches						
23-35 37 21			Drum Switches					Drum Controller	Start, stop and change the speed and/or rotation of reversible AC and DC motors.	
23-35 37 23			Flow Switches						A fluid flow detector that creates a circuit when a paddle is pushed into position.	
23-35 37 25			Key Lock Switches						Key-operated switch	
23-35 37 27			Limit Switches							
23-35 37 27 11				Level Switches				Float Switch		
23-35 37 27 13				Reed Switches						
23-35 37 29			Modular Wiring System Switches							Note: Refer to electrical distribution system for Furniture/Lighting
23-35 37 31			Photocell Switches						Light-sensitive switch	
23-35 37 33			Pressure Switches							
23-35 37 33 11				Differential Pressure Switches					Pressure on both sides	
23-35 37 35			Rocker Switches							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-35 37 35 11				Mercury Switches				Rocker Switch	Makes an electronic contact when physically disturbed.	
23-35 37 37			Time Switches							
23-35 37 39			Foot Switches							
23-35 37 41			Joysticks							
23-35 37 43			Programmable Logic Control Switches							
23-35 37 45			Proximity Switches							
23-35 37 47			Pull Chain Switches							
23-35 37 49			Push Button Switches							
23-35 37 51			Radio Frequency Switches							
23-35 37 53			Rotary Switches							
23-35 37 55			Slide Switches							
23-35 37 57			Snap Switches							
23-35 37 59			Speed Switches							
23-35 37 61			Tamper Switches							
23-35 37 63			Temperature Switches							
23-35 37 65			Vacuum Switches							
23-35 39 00		Electric Power Protection Devices							Devices used in electric power protection.	
23-35 39 11			Electrical Grounding Device					Earth Ground		
23-35 39 13			Earth Connection Electrodes							
23-35 39 13 11				Electrical Ground Plates						
23-35 39 13 13				Electrical Ground Rods						
23-35 39 15			Lightning Protection							
23-35 39 15 11				Lightning Arresters						
23-35 39 15 13				Lightning Rods				Air Terminal		
23-35 39 17			Surge Protection Devices							
23-35 41 00		Electrical Isolation Equipment							Equipment used in electrical isolation.	
23-35 41 11			Electronic Chokes						AC Current Isolator on DC Circuits. Also used for security applications.	
23-35 41 13			Signal Converters					Instrumentation Transformer		
23-35 43 00		Electrical Relays							Relays are electrical devices that provide operation or protection and resulting control or alarm signal.	
23-35 43 11			Auxiliary Protective Relays							
23-35 43 13			Control Relays							
23-35 43 15			Current Differential Relays							
23-35 43 15 11				Current Differential Solid State Relays						
23-35 43 17			General Purpose Relays							
23-35 43 19			Ground Fault Relays							
23-35 43 19 11				Ground Fault Solid State Relays						
23-35 43 21			Load Shedding Relays							
23-35 43 23			Lockout Relays							
23-35 43 23 11				Automatic Reset Lockout Relays						
23-35 43 23 13				Manual Reset Lockout Relays						
23-35 43 25			Mercury Relays							
23-35 43 27			Over Current Relays							
23-35 43 27 11				Overcurrent Directional, Induction Disc Relays						
23-35 43 27 13				Over Current Induction Disc Relays						
23-35 43 27 15				Over Current Thermal Relays						
23-35 43 27 17				Over Current Solid State Relays						
23-35 43 29			Overload Relays							
23-35 43 29 11				Overload Solid State Relays						
23-35 43 31			Phase Failure Relays							
23-35 43 31 11				Phase Failure Solid State Relays						
23-35 43 33			Power Relays							
23-35 43 35			Time Relays							
23-35 43 35 11				Reverse Current Time Relays						
23-35 43 35 11 11					Reverse Current Solid State Time Relays					
23-35 43 35 13				Reverse Power Time Relays						
23-35 43 35 13 11					Reverse Power Solid State Time Relays					
23-35 43 35 15				Power Factor Time Relays						
23-35 43 35 15 11					Power Factor Solid State Time Relays					
23-35 43 37			Voltage Relays							
23-35 43 37 11				Under Voltage Relays						
23-35 43 37 11 11					Under Voltage Solid State Relays					
23-35 43 37 13				Over Voltage Relays						
23-35 43 37 13 11					Over Voltage Solid State Relays					

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-35 43 37 15				Over Under Voltage Relays						
23-35 43 37 15 11					Over Under Voltage Solid State Relays					
23-35 45 00		Non Electrical Lighting							Products not using electricity to light an area.	
23-35 45 11			Lanterns							
23-35 45 11 11				Alcohol Lanterns						
23-35 45 11 13				Butane Lanterns						
23-35 45 11 15				Kerosene Lanterns						
23-35 45 11 17				Natural Gas Lanterns						
23-35 45 11 19				Propane Lanterns						
23-35 45 13			Torches							
23-35 45 13 11				Alcohol Torches						
23-35 45 13 13				Butane Torches						
23-35 45 13 15				Kerosene Torches						
23-35 45 13 17				Natural Gas Torches						
23-35 45 13 19				Propane Torches						
23-35 45 15			Lamps							
23-35 45 15 11				Alcohol Lamps						
23-35 45 15 13				Butane Lamps						
23-35 45 15 15				Kerosene Lamps						
23-35 45 15 17				Natural Gas Lamps						
23-35 45 15 19				Propane Lamps						
23-35 45 17			Solar Tubes					Light Tube		
23-35 45 19			Strobe Light Fixtures							
23-35 47 00		Electrical Lighting							The application of light to achieve some aesthetic or practical effect.	
23-35 47 11			Lighting Fixtures							
23-35 47 11 11				Non Weather Rated Lighting Fixtures						
23-35 47 11 11 11					Non Weather Rated Fluorescent Lighting Fixtures					
23-35 47 11 11 13					Non Weather Rated Halogen Lighting Fixtures					
23-35 47 11 11 15					Non Weather Rated High Intensity Discharge Lighting Fixtures					
23-35 47 11 11 17					Non Weather Rated Incandescent Lighting Fixtures					
23-35 47 11 11 19					Non Weather Rated Light Emitting Diode Lighting Fixtures					
23-35 47 11 13				Submersible Lighting Fixtures						
23-35 47 11 13 11					Submersible Fluorescent Lighting Fixtures					
23-35 47 11 13 13					Submersible Halogen Lighting Fixtures					
23-35 47 11 13 15					Submersible High Intensity Discharge Lighting Fixtures					
23-35 47 11 13 17					Submersible Incandescent Lighting Fixtures					
23-35 47 11 13 19					Submersible Light Emitting Diode Lighting Fixtures					
23-35 47 11 15				Weather Rated Lighting Fixtures						
23-35 47 11 15 11					Weather Rated Fluorescent Lighting Fixtures					
23-35 47 11 15 13					Weather Rated Halogen Lighting Fixtures					
23-35 47 11 15 15					Weather Rated High Intensity Discharge Lighting Fixtures					
23-35 47 11 15 17					Weather Rated Incandescent Lighting Fixtures					
23-35 47 11 15 19					Weather Rated Light Emitting Diode Lighting Fixtures					
23-35 47 11 17				Chandelier						
23-35 47 11 18				Explosion Proof Lighting Fixtures						
23-35 47 11 18 11					Explosion Proof Fluorescent Lighting Fixtures					
23-35 47 11 18 13					Explosion Proof Halogen Lighting Fixtures					
23-35 47 11 18 15					Explosion Proof High Intensity Discharge Lighting Fixtures					
23-35 47 11 18 17					Explosion Proof Incandescent Lighting Fixtures					
23-35 47 11 18 19					Explosion Proof Light Emitting Diode Lighting Fixtures					
23-35 47 11 19				Hazardous Lighting Fixtures						
23-35 47 11 19 11					Hazardous Fluorescent Lighting Fixtures					
23-35 47 11 19 13					Hazardous Halogen Lighting Fixtures					
23-35 47 11 19 15					Hazardous High Intensity Discharge Lighting Fixtures					
23-35 47 11 19 17					Hazardous Incandescent Lighting Fixtures					
23-35 47 11 19 19					Hazardous Light Emitting Diode Lighting Fixtures					
23-35 47 11 20				Security Lighting Fixtures						
23-35 47 11 21				Specialized Lighting Fixtures						
23-35 47 11 21 11					Lighting Bollards					
23-35 47 11 21 13					Lighting Poles					
23-35 47 11 21 15					Lighting Posts					
23-35 47 11 21 17					Buried Uplights					
23-35 47 11 21 19					Floodlight Fixtures					
23-35 47 11 21 21					Spotlight Fixtures					
23-35 47 11 21 21 11						Focus Spotlight Fixture				

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-35 47 11 21 21 13						Follow Spotlight Fixture				
23-35 47 11 21 21 15						Spotlight Bank Fixture				
23-35 47 11 21 21 17						Pin Spotlight Fixture				
23-35 47 11 21 23						Street and Roadway Lighting Fixtures				
23-35 47 11 21 25						Aircraft Paving Lighting Fixtures				
23-35 47 13			Emergency Lighting							
23-35 47 13 11				Hard Wired Emergency Lighting						
23-35 47 13 13				Emergency Lighting With Battery Backup						
23-35 47 13 15				Passive Emergency Lighting Strips						
23-35 47 13 17				Emergency Lighting Strobe						
23-35 47 15			Exit Illuminated Signs							
23-35 47 15 11				Battery Backup Exit Illuminated Signs						
23-35 47 15 13				Hard Wired Backup Exit Illuminated Signs						
23-35 47 15 15				Self Illuminated Exit Illuminated Signs						
23-35 47 17			Fiber Optic Lighting							
23-35 47 19			Communication Lighting Specialties							
23-35 47 19 11				Illuminated Signs Boards						
23-35 47 21			Accessories for Lighting							
23-35 47 21 11				Lampholders						
23-35 47 21 13				Lighting Diffusers						
23-35 47 21 15				Lighting Ballasts						
23-35 47 21 17				Lighting Tracks						
23-35 47 21 19				Lampshades						
23-35 47 23			Lamps						a fixture emitting light	
23-35 47 23 11				Halogen Lamps						
23-35 47 23 13				Incandescent Lamps						Includes: Halogen-Incandescent Lamps
23-35 47 23 15				Discharge Lamps						
23-35 47 23 15 11					Fluorescent Lamps					
23-35 47 23 15 13					Compact Fluorescent Lamps					
23-35 47 23 15 15					Sodium Vapor Lamps					
23-35 47 23 15 17					High Pressure Discharge Lamps					
23-35 47 23 17				Light Emitting Diode Lamps						
23-37 00 00	Information and Communication Specific Products and Equipment								Products which aid in the collection & exchange of related data between one or more entities.	Includes speakers, microphones, video monitors, audio/visual products, and IT equipment. See "General Facility Services Products" for conduits and wires.
23-37 11 00		Information Technology and Telecommunications Ducting Wireways Components							Telecommunications includes telephone, audio, cable, video, and information technology. Information Technology is split out under certain areas due to shielding and specialized requirements between telecommunications and information technology.	
23-37 11 11			Communication Service Penetrations							
23-37 11 13			Communication Cable Trays							
23-37 11 15			Communication Racks							
23-37 11 15 11				Information Technology Racks						
23-37 11 15 13				Telephone Racks						
23-37 11 15 15				Fiber Optic Equipment						
23-37 11 15 15 11					Fiber Optic Cabinets					
23-37 11 15 15 13					Fiber Adapter Panels					
23-37 11 17			Communication Wireways							
23-37 11 17 11				Information Technology Wireways						
23-37 11 17 11 11					Underfloor Information Technology Wireways					
23-37 11 17 11 13					Vertical Information Technology Wire Raceways					
23-37 11 17 11 15					Horizontal Information Technology Wire Raceways					
23-37 11 17 13				Telecommunications Wireways						
23-37 11 17 13 11					Underfloor Telecommunications Wireways					
23-37 11 17 13 13					Vertical Telecommunications Wire Raceways					
23-37 11 17 13 15					Horizontal Telecommunications Wire Raceways					
23-37 11 17 15				Complete Visual Signaling						
23-37 11 17 15 11					Mechanical Signal Equipment					
23-37 13 00		Information Technology Equipment							Computer based equipment systems designed to aid in the collection or exchange of related data between one or more entities.	
23-37 13 11			Personal Computer Equipment							
23-37 13 11 11				Desktop Personal Computers						
23-37 13 11 13				Laptop Personal Computers						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-37 13 11 15				Tablet Personal Computers						
23-37 13 11 17				Tower Stack Personal Computers						
23-37 13 11 19				Workstation Personal Computers						
23-37 13 11 21				Personal Digital Assistants				PDA, Organizer		
23-37 13 11 23				Internal Computing Components						
23-37 13 11 23 11					Computer Processing Units			CPU		
23-37 13 11 23 13					Computer Controller Cards					
23-37 13 11 23 15					Computer Memory Cards					
23-37 13 11 23 17					Personal Computer Modem Cards					
23-37 13 11 23 19					Personal Computer Network Interface Cards					
23-37 13 11 23 21					Personal Computer Video Cards					
23-37 13 13				Personal Computer and Network Security Devices						
23-37 13 13 11				Computer Firewalls						
23-37 13 13 13				Computer Intrusion Detection Devices				IDS		
23-37 13 13 15				Computer Intrusion Protection Devices				IPS		
23-37 13 15				Local Area Network Devices				LAN		
23-37 13 15 11				Local Area Network Bridges						
23-37 13 15 13				Local Area Network Communication Hardware						
23-37 13 15 15				Local Area Network Disk Drives						
23-37 13 15 17				Local Area Network Hubs						
23-37 13 15 19				Local Area Network Load Balancers						
23-37 13 15 21				Local Area Network Routers						
23-37 13 15 23				Local Area Network Servers						
23-37 13 15 25				Local Area Network Switches						
23-37 13 15 27				Local Area Network Tape Drives						
23-37 13 15 29				Local Area Network Wireless Devices						
23-37 13 17				Wide Area Network Devices				WAN		
23-37 13 17 11				Wide Area Network Bridges						
23-37 13 17 13				Wide Area Network Communication Hardware						
23-37 13 17 15				Wide Area Network Disk Drives						
23-37 13 17 17				Wide Area Network Hubs						
23-37 13 17 19				Wide Area Network Load Balancers						
23-37 13 17 21				Wide Area Network Routers						
23-37 13 17 23				Wide Area Network Servers						
23-37 13 17 25				Wide Area Network Switches						
23-37 13 17 27				Wide Area Network Tape Drives						
23-37 13 17 29				Wide Area Network Wireless Devices						
23-37 13 19				Computer Storage Devices						
23-37 13 19 11				Computer Optic Drives						
23-37 13 19 11 11					Compact Disk Drives			CD, Compact Disc		
23-37 13 19 11 13					Digital Video Disc Drives			Digital Versatile Disc, Digital Video Disc		
23-37 13 19 11 15					Combination Compact Disk and Digital Video Disc Drives					
23-37 13 19 13				Hard Disk Drives				Hard Drive		
23-37 13 19 15				Flash Memory Drives						
23-37 13 19 17				Computer Tape Drives						
23-37 13 21				Computer Monitors						
23-37 13 21 11				Computer Liquid Crystal Display Monitors						
23-37 13 21 13				Computer Catho Ray Tube Monitors						
23-37 13 23				Computer Printers						
23-37 13 23 11				Computer Laser Printers						
23-37 13 23 13				Computer Inkjet Printers						
23-37 13 23 15				Computer Plotter Printers						
23-37 13 25				Computer Scanners						
23-37 13 27				Computer Video Conferencing Equipment						
23-37 15 00		Audio Visual Equipment							Equipment involving the use of sound and visuals to aid in the collection or exchange of related data between one or more entities.	
23-37 15 11				Cameras						
23-37 15 11 11				Analog Cameras						
23-37 15 11 13				Digital Cameras						
23-37 15 13				Camera Recorders						
23-37 15 13 11				Digital Camcorders						
23-37 15 13 13				Film Camcorders						
23-37 15 15				Digital Music Players						
23-37 15 17				Projection Equipment						

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23-37 15 17 11				Projection Screens						
23-37 15 17 13				Projection Screen Stands						
23-37 15 19			Video Projectors							
23-37 15 19 11				Video Slide Projectors						
23-37 15 19 13				Video Overhead Projectors						
23-37 15 19 15				Video Film Projectors						
23-37 15 19 17				Video Slide Projectors						
23-37 15 19 19				Video Digital Projectors						
23-37 15 21			Audio Visual Recorders					Camcorder		
23-37 15 21 11				Audio Recorders						
23-37 15 21 13				Video Recorders						
23-37 15 21 15				Audio Video Recorders						
23-37 15 23			Stereo Equipment							
23-37 15 23 11				Stereo Amplifiers						
23-37 15 23 13				Stereo Patch Panels						
23-37 15 23 15				Stereo Speakers						
23-37 15 25			Televisions							
23-37 15 25 11				Cathode Tube Televisions						
23-37 15 25 13				Liquid Crystal Display Televisions						
23-37 15 25 15				Plasma Display Televisions						
23-37 15 25 17				Projection Screen Televisions						
23-37 15 25 19				Television Mounts						
23-37 15 27			Video Recording Equipment							
23-37 15 29			Audio Equipment							
23-37 15 29 11				Sound Reinforcement Equipment						
23-37 15 29 11 11					Microphones					
23-37 15 29 11 13					Loudspeakers					
23-37 15 29 11 15					Sound Amplifiers					
23-37 15 29 11 17					Audio Equalizers					
23-37 15 29 13				Headphones						
23-37 15 29 15				Audio Reproducing Units						
23-37 17 00		Audio Information Equipment							Equipment involving only the use of sound to aid in the collection or exchange of related data between one or more entities.	
23-37 17 11			Sound Devices							
23-37 17 13			Signal Devices							
23-37 17 13 11				Bells						
23-37 17 13 13				Carillons						
23-37 17 13 15				Sirens						
23-37 17 13 17				Aerials						
23-37 17 13 19				Speakers						
23-37 17 15			Public Address Equipment					Public Address System, PA		
23-37 19 00		Visual Information Systems							Equipment involving only the use of visuals to aid in the collection or exchange of related data between one or more entities.	
23-37 19 11				Cathode Ray Tube (CRT) Video Monitors						
23-37 19 13				Liquid Crystal Display (LCD) Video Monitors						
23-37 19 15				Plasma Video Monitors						
23-37 19 17				Video Walls						
23-37 21 00		Audio Visual Systems							Equipment involving the use of sound and visuals to create a system which aids in the collection or exchange of related data between one or more entities.	
23-37 21 11			Broadcasting Receiving Equipment							
23-37 21 13			Film Projectors							
23-37 21 15			Data Multi Media Projectors							
23-37 21 17			Video Reproduction							
23-37 23 00		Telecommunications Equipment							Equipment used to transmit information over significant distances for the purpose of communication	
23-37 23 11			Wireless Phone Equipment							
23-37 23 11 11				Wireless Phones				Cell Phone		
23-37 23 11 13				Wireless Phone Chargers				Cell Phone Chargers		
23-37 23 13			Telephones							
23-37 23 13 11				Single Line Telephones						
23-37 23 13 13				Multiple Line Telephones						
23-37 23 15			Telephone Equipment							
23-37 23 15 11				Private Branch Exchanges				PBX		

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23-37 23 15 13				Telephone Patch Panels						
23-37 23 17			Intercom Equipment							
23-37 23 17 11				Intercoms						
23-37 23 17 13				Door Entry Telephones						
23-37 23 19			Radio Broadcast Equipment							
23-37 23 19 11				Radio Booths						
23-37 23 19 11 11					Radio Broadcast Booths					
23-37 23 19 11 13					Radio Recording Booths					
23-37 23 19 13				Radio Broadcast Transmitters						
23-37 23 19 15				Radio Broadcast Receivers						
23-37 23 19 17				Radio Communication Base Stations						
23-37 23 19 19				Radio Communication Call Microphones						
23-37 23 19 21				Radio Broadcast Transmission Towers						
23-37 23 21			Radio Communication Equipment							
23-37 23 21 11				Infra Red Radio Communication Equipment						
23-37 23 21 11 11					Infra Red Radio Communication Receivers					
23-37 23 21 11 13					Infra Red Radio Communication Transmitters					
23-37 23 21 11 15					Infra Red Radio Communication Transmitter Receivers					
23-37 23 21 13				Satellite Radio Communication Equipment						
23-37 23 21 13 11					Satellite Radio Communication Transmitters					
23-37 23 21 13 13					Satellite Radio Communication Transmitter Receivers					
23-37 23 21 13 15					Satellite Radio Communications Receivers					
23-37 23 21 15				Wireless Radio Communication Equipment						
23-37 23 21 15 11					Wireless Radio Communication Receivers					
23-37 23 21 15 13					Wireless Radio Communication Transmitters					
23-37 23 21 15 15					Wireless Radio Communication Transmitter Receivers					
23-37 23 21 17				Radio Communication Antenna Towers						
23-37 23 21 19				Radio Communication Transmission Towers						
23-37 23 23			Satellite Communication Equipment							
23-37 23 23 11				Satellite Communication Dishes						
23-37 25 00		Broadcasting Communications Equipment						Television Broadcasting Equipment	Equipment used in the distribution of audio and/or video signals which transmit programs to an audience	
23-37 25 11			Broadcasting Communication Circuits							
23-37 25 13			Broadcasting Intercommunication Equipment							
23-37 25 15			Broadcasting Communication and Data Processing Equipment							
23-37 25 17			Broadcasting Cable Transmission and Reception Equipment							
23-37 25 17 11				Broadcasting Cable Transmission and Reception Amplifiers						
23-37 25 17 13				Broadcasting Cable Transmission and Reception Modulators						
23-37 25 17 15				Broadcasting Cable Transmission and Reception Control Equipment						
23-37 25 19			Broadcast Transmission and Reception Equipment							
23-37 25 19 11				Broadcast Transmitters						
23-37 25 19 13				Broadcast Antennas						
23-37 25 19 15				Broadcast Amplifiers						
23-37 25 19 17				Broadcast Control Equipment						
23-37 25 21			Broadcasting Microwave Transmission and Reception Equipment							
23-37 25 21 11				Broadcasting Microwave Transmitters						
23-37 25 21 13				Broadcasting Microwave Antennas						
23-37 25 21 15				Broadcasting Satellite Dishes						
23-37 25 21 17				Broadcasting Microwave Amplifiers						
23-37 25 21 19				Broadcasting Microwave Receivers						
23-37 25 23			Broadcasting Equipment							
23-37 25 23 11				Television Broadcasting Equipment						
23-37 25 23 13				Multimedia Broadcasting Equipment						
23-37 25 23 15				Broadcasting Light Signals						
23-37 27 00		Emergency Communications							Communication and Information Equipment or systems used in the event of an emergency to quickly notify occupants .	
23-37 27 11			Duress Notification Devices							
23-37 27 13			Mass Notification Systems							
23-37 27 13 11				Emergency Notification Devices						
23-37 27 13 13				Imminent Danger Notification Devices						
23-37 27 15			Intercoms							
23-37 27 15 11				Audio Intercoms						
23-37 27 15 13				Audio Visual Intercoms						
23-37 27 17			Emergency Call Equipment							
23-37 27 17 11				Call Systems for the Disabled						

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23-37 27 17 13				Nurse Call Equipment						
23-39 00 00	Utility and Transportation Products								Products used for providing utility services and products specific to transportation applications.	Includes water treatment equipment, water flow controls, floating docks, culverts, large pipes, and roadway monitor and control equipment. See "Site Products" for pavement.
23-39 11 00		Roadway Monitoring and Control							Transportation products used specifically for controlling and/or monitoring traffic.	
23-39 11 11			Traffic Safety Barriers and Protections							
23-39 11 11 11				Safety Barriers						
23-39 11 11 11 11					Crash Barriers (including Impact Attenuating Devices)					
23-39 11 11 11 13					Median Barriers					
23-39 11 11 11 15					Guardrails					
23-39 11 11 13				Noise Barriers						
23-39 11 11 15				Traffic Barriers						
23-39 11 11 15 11					Traffic Delineators					
23-39 11 11 17				Traffic Control						
23-39 11 11 17 11					Traffic Speed Bumps					
23-39 11 11 19				Roadway Curbs						
23-39 11 11 21				Roadway Gutters						
23-39 11 11 23				Roadway Cattle Guards						
23-39 11 13			Roadway Signage							
23-39 11 15			Roadway Markers							
23-39 11 15 11				Roadway Surface Markings						
23-39 11 15 13				Roadway Reflectors						
23-39 11 15 15				Traffic Cones						
23-39 11 15 17				Traffic Signals						
23-39 11 15 19				Traffic Monitoring Equipment						
23-39 11 15 21				Roadway Mirrors						
23-39 11 15 23				Traffic Cameras						
23-39 11 15 25				Traffic Detectors and Sensors						
23-39 11 17			Vehicle Control Barriers							
23-39 11 17 11				Anti Ram Planters						
23-39 11 17 13				Jersey Barriers						
23-39 11 17 15				Active Tire Shredders						
23-39 11 17 17				Passive Tire Shredders						
23-39 11 19			Bollards						See Facility and Occupant Protection Products	
23-39 11 19 11				Active Anti Ram Bollards					Pneumatic or Hydraulic	
23-39 11 19 13				Passive Anti Ram Bollards					Embedded in concrete	
23-39 11 19 15				Architectural Bollards						
23-39 13 00		Tunnels and Bridges							A passageway used to pass either over or under obstacles.	
23-39 13 11			Tunnels							
23-39 13 11 11				Tunnel Shafts						
23-39 13 11 13				Tunnel Segments						
23-39 13 11 15				Tunnel Linings						
23-39 13 11 17				Tunnel Grouting						
23-39 13 11 17 11					Earth Stabilization Chemical Grouting					
23-39 13 11 17 13					Rock Seam Pressure Grouting					
23-39 13 11 17 15					Tunnel Liner Grouting					
23-39 13 11 19				Microtunneling						
23-39 13 13			Bridges							
23-39 13 13 11				Prefabricated Bridges						
23-39 13 13 13				Bridge Beams						
23-39 13 13 15				Bridge Trusses						
23-39 13 13 17				Bridge Cable						
23-39 13 13 19				Bridge Bearings						
23-39 13 13 19 11					Fixed Bridge Bearings					
23-39 13 13 19 13					Expansion Bridge Bearings					
23-39 13 13 19 15					Multi Rotational Bridge Bearings					
23-39 13 13 21				Bridge Movable Mechanism						
23-39 13 13 23				Bridge Decking						
23-39 13 13 25				Bridge Drainage						
23-39 13 13 27				Bridge Safety Barriers						
23-39 13 13 27 11					Shock Absorbers					

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23-39 13 13 27 13					Bridge Parapets					
23-39 13 13 27 15					Bridge Railings					
23-39 13 13 29				Bridge Expansion Joints						
23-39 13 13 29 11					Bridge Expansion Joint Assemblies					
23-39 15 00		Railways							A conveyance of passengers and goods via wheeled vehicles running on rail tracks.	Includes: Cable Ways
23-39 15 11			Railway Track Equipment							
23-39 15 11 11				Railway Ties						
23-39 15 11 11 11					Railway Concrete Ties					
23-39 15 11 11 13					Railway Wood Ties					
23-39 15 11 13				Railway Rails						
23-39 15 11 15				Railway Turnouts						
23-39 15 11 17				Railway Bumpers					End-of-track stopper	
23-39 15 13			Railway Platform Components							
23-39 15 15			Railway Electrification Equipment							
23-39 15 15 11				Railway Surge Arresters						
23-39 15 15 13				Railway Traction Lines						
23-39 15 15 13 11					Railway Traction Line Pylons					
23-39 15 17			Railway Monitoring and Control							
23-39 15 17 11				Railway Signaling Devices						
23-39 15 17 13				Railway Control Instrumentation						
23-39 15 19			Railway Locomotives							
23-39 15 19 11				Railway Diesel Locomotives						
23-39 15 19 13				Railway Electric Locomotives						
23-39 15 21			Railway Cars							
23-39 15 21 11				Railway Passenger Cars						
23-39 15 21 13				Railway Sleeper Cars						
23-39 15 21 15				Railway Baggage Cars						
23-39 15 21 17				Railway Diner Cars						
23-39 15 21 19				Railway Freight Cars						
23-39 15 21 19 11					Railway Box Cars					
23-39 15 21 19 13					Railway Coal Cars					
23-39 15 21 19 15					Railway Vehicle Carrier Cars					
23-39 15 21 21				Railway Tanker Cars						
23-39 15 21 23				Railway Car Equipment						
23-39 15 21 23 11					Railway Car Bumpers					
23-39 15 21 23 13					Railway Car Electrical Connectors					
23-39 17 00		Funiculars						Cable Railway, Incline Railway	is a cable railway in which a cable attached to a pair of vehicles on rails moves them up and down a steep slope in which the ascending and descending of the vehicles counterbalanced each other.	
23-39 17 11			Cable Trams							
23-39 17 13			Cable Cars							
23-39 17 15			Funicular Cable Rails							
23-39 17 17			Funicular Cables							
23-39 17 19			Aerial Tramways							
23-39 17 21			Chair Lifts							
23-39 17 23			Ski Lifts							
23-39 17 23 11				Ski Pole Lifts						
23-39 17 23 13				Ski Chair Lifts						
23-39 19 00		Aviation Equipment							Equipment related to aviation; including monitoring and control equipment as well as aviation barriers.	
23-39 19 11			Aviation Monitoring and Control							
23-39 19 11 11				Approach Indication Equipment						
23-39 19 11 13				Aviation Monitoring Equipment						
23-39 19 11 13 11					Aviation Windsocks					
23-39 19 13			Aviation Barriers							
23-39 19 13 11				Jet Blast Barriers						
23-39 19 13 13				Aviation Sound Barriers						
23-39 21 00		Marine Construction Waterways and Seaways							Equipment used in marine construction.	
23-39 21 11			Navigation Facilities							
23-39 21 11 11				Components						
23-39 21 11 11 11					Mooring Posts					
23-39 21 11 11 13					Boat Fenders					
23-39 21 11 13				Canal Locks						
23-39 21 11 13 11					Canal Lock Gates					

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23-39 21 11 13 11 11						Canal Hydraulic Gates				
23-39 21 11 13 11 13						Canal High Pressure Gates				
23-39 21 11 13 11 15						Canal Hinged Leaf Gates				
23-39 21 11 13 11 17						Canal Radial Gates				
23-39 21 11 13 11 19						Canal Slide Gates				
23-39 21 11 13 11 21						Canal Sluice Gates				
23-39 21 11 13 11 23						Canal Spillway Crest Gates				
23-39 21 11 13 11 25						Canal Vertical Lift Gates				
23-39 21 11 13 13					Canal Hydraulic Valves					
23-39 21 11 13 13 11						Canal Butterfly Valves				
23-39 21 11 13 13 13						Canal Regulating Valves				
23-39 21 11 15				Piers and Docks						
23-39 21 11 15 11					Floating Docks					
23-39 21 11 15 13					Dock Loading Ramps					
23-39 21 11 17				Pontoons						
23-39 21 11 19				Jetties						
23-39 21 13			Waterflow Controls							
23-39 21 13 11				Reservoirs						
23-39 21 13 13				Dams, Dikes						
23-39 21 13 15				Weirs						
23-39 21 13 17				Barrages						
23-39 21 13 19				Bifurcation Panels						
23-39 21 13 21				Manifolds						
23-39 21 13 23				Penstocks and Sluice Gate						
23-39 21 13 25				Trash Rakes						
23-39 21 15			Breakwater Products							
23-39 21 15 11				Bulkheads						
23-39 21 15 13				Seawalls						
23-39 21 15 15				Moles and Breakwater						
23-39 21 15 17				Groins						
23-39 21 17			Marine Monitoring and Control							Includes: Navigation Signals
23-39 21 17 11				Navigation Signs						
23-39 21 17 13				Navigation Lights						
23-39 21 17 15				Navigation Monitoring Equipment						
23-39 23 00		Electrical Utility Equipment							Equipment involved with electrical utilities.	
23-39 23 11			Electrical Transmission Equipment							
23-39 23 11 11				Electrical Utility Poles						
23-39 23 11 13				Electrical Utility Towers						
23-39 25 00		Natural Gas Utility Equipment							Utility equipment involved with natural gas.	
23-39 25 11			Natural Gas Utility Pipeline Equipment							
23-39 27 00		Water Utility Equipment							Equipment used in water utilities.	
23-39 27 11			Water Utility Pipeline Equipment							
23-39 29 00		Waste Water Collection and Removal							Equipment used in liquid waste collection and removal.	
23-39 29 11			Waste Water Drains							
23-39 29 11 11				Waste Water French Drains			Soakaways			
23-39 29 11 13				Waste Water Storm Drain						
23-39 29 11 13 11					Manhole (Goes in Prefab Concrete)				Access Chamber, Utility Hole, Utility Vault	
23-39 29 11 13 13					Manhole Cover				Utility Lid	
23-39 29 11 13 15					Manhole Ladder					
23-39 29 11 13 17					Manhole Rung					
23-39 29 11 15				Waste Water Drainage Pipes, Couplings, Collectors						
23-39 29 11 17				Wastewater Pipework Access Fittings						Includes: Roding Fittings
23-39 29 13			Waste Water Subdrainage							
23-39 29 13 11				Geocomposite Drains						
23-39 29 13 13				Geotextile Subsurface Drainage Filtration						
23-39 29 13 15				Pipe Underdrain and Pavement Base Drain						
23-39 29 13 17				Subgrade Drains						
23-39 29 13 19				Surface Water Drainage Systems						
23-39 29 13 19 11					Surface Water Catch Basins, Grates, and Frames					
23-39 29 13 19 13					Combination Storm Drain and Underdrain Inlets					
23-39 29 13 19 15					Storm Drainage Manholes, Frames, and Covers					
23-39 29 13 19 17					Surface Water Retention Chambers					
23-39 29 13 21				Storm Water Ponds and Reservoirs						
23-39 29 13 21 19					Surface Water Retention Basins					
23-39 29 13 21 21					Storm Water Pond Covers					

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23-39 29 13 21 23					Storm Water Pond Liners					
23-39 29 15			Waste Water Channels, Gullies, Gratings, Covers							
23-39 31 00		Packaged Waste Water Treatment							Equipment used in packaged waste water.	
23-39 31 11			Packaged Stations							
23-39 31 11 11				Packaged Pumping Stations						
23-39 31 11 13				Packaged Lift Stations						
23-39 31 13			Packaged Sewage Treatment Plants							
23-39 33 00		Water and Waste Water Preliminary Treatment Equipment							Equipment used in water and wastewater preliminary treatment.	
23-39 33 11			Screening Equipment							
23-39 33 11 11				Clamber-type Bar Screens						
23-39 33 11 13				Chain-and-Rage Bar Screens						
23-39 33 11 15				Flexible Rake Bar Screens						
23-39 33 11 17				Catenary Bar Screens						
23-39 33 11 19				Continuous Belt Screens						
23-39 33 11 21				Cylindrical Bar Screens						
23-39 33 11 23				Step Screens						
23-39 33 11 25				Rotary Drum Screens						
23-39 33 11 27				Spiral Screens						
23-39 33 11 29				Band Screens						
23-39 33 11 31				Disc Screens						
23-39 33 11 33				Traveling Screens						
23-39 33 11 35				Perforated Plate Screens						
23-39 33 11 37				Wedge Wire Screens						
23-39 33 11 39				Element Screens						
23-39 33 11 41				Trash Raking Equipment						
23-39 33 11 43				Screenings Washing and Compacting Equipment						
23-39 33 11 45				Vacuum Screenings Conveying Equipment						
23-39 33 11 47				Screenings Storage Containers						
23-39 33 11 49				Septage Receiving Equipment						
23-39 33 13			Grit Removal and Handling Equipment							
23-39 33 13 11				Chain-and-Bucket Grit Removal Equipment						
23-39 33 13 13				Chain-and-Flight Grit Removal Equipment						
23-39 33 13 15				Vortex Grit Removal Equipment						
23-39 33 13 17				Cyclone Degritters						
23-39 33 13 19				Aerated Grit Removal Equipment						
23-39 33 13 21				Inline Baffled Grit Removal Equipment						
23-39 33 13 23				Traveling Bridge Grit Removal Equipment						
23-39 33 13 25				Grit Classifying and Washing Equipment						
23-39 33 13 27				Grit Storage Containers						
23-39 33 15			Grinding and Shredding Equipment							
23-39 33 15 11				Macerators						
23-39 33 15 13				Comminutors						
23-39 33 15 15				Inline Grinders						
23-39 33 15 17				Open-Channel Grinders						
23-39 33 15 19				Modular Grinding-Screening-Compacting Equipment						
23-39 33 17			Oil and Grease Separation and Removal Equipment							
23-39 33 17 11				Coalescing Oil-Water Separators						
23-39 33 17 13				API Oil-Water Separators						
23-39 33 17 15				Grease Traps						
23-39 33 17 17				Dissolved Air Flotation Grease and Oil Separation Equipment						
23-39 33 17 19				Helical Scum Skimming and Removal Equipment						
23-39 33 17 21				Tipping Trough Scum Skimming and Removal Equipment						
23-39 33 17 23				Chain and Flight Scum Collection and Removal Equipment						
23-39 33 17 25				Floating Scum Skimming and Removal Equipment						
23-39 35 00		Water and Wastewater Chemical Feed Equipment							Equipment used in water and wastewater chemical feed.	
23-39 35 11			Gas Chemical Feed Equipment							
23-39 35 11 11				Chlorine Gas Feed Equipment						
23-39 35 11 13				Sulfur Dioxide Gas Feed Equipment						
23-39 35 11 15				Ammonia Gas Feed Equipment						
23-39 35 11 17				Gas Storage, Weighing, and Leak Detection Equipment						
23-39 35 11 19				Chlorine Dioxide Reactors						
23-39 35 11 21				Carbon Dioxide Gas Feed Equipment						
23-39 35 11 23				Ozone Generating and Feed Equipment						
23-39 35 11 25				Liquid Oxygen Storage and Feed Equipment						
23-39 35 11 27				Cleaning Requirements for Oxygen Service						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-39 35 11 29				Gas Chemical Feed Accessories and Safety Equipment						
23-39 35 13			Liquid Chemical Feed Equipment							
23-39 35 13 11				Sodium Hypochlorite Generating Equipment						
23-39 35 13 13				Liquid Chemical Weighing Equipment						
23-39 35 13 15				Polymer Blending and Feed Equipment						
23-39 35 13 17				Diaphragm-type Metering Pumps						
23-39 35 13 19				Peristaltic Metering Pumps						
23-39 35 13 21				Progressing Cavity Metering Pumps						
23-39 35 13 23				Lobe Metering Pumps						
23-39 35 13 25				Drum Pumps						
23-39 35 13 27				Liquid Chemical Transfer Pumps						
23-39 35 13 29				Liquid Chemical Diffusers						
23-39 35 13 31				Liquid Chemical Feed Accessories and Safety Equipment						
23-39 35 15			Dry Chemical Feed Equipment							
23-39 35 15 11				Storage Silos						
23-39 35 15 13				Dry Chemical Weighing Equipment						
23-39 35 15 15				Volumetric Feed Equipment						
23-39 35 15 17				Gravimetric Feed Equipment						
23-39 35 15 19				Lime Slaking Equipment						
23-39 35 15 21				Chemical Tablet Feeding Equipment						
23-39 35 15 23				Dry Chemical Feed Accessories and Safety Equipment						
23-39 37 00		Water and Wastewater Clarification and Mixing Equipment							Equipment used in water and wastewater clarification and mixing.	
23-39 37 11			Mixing Equipment							
23-39 37 11 11				Rapid Mixers						
23-39 37 11 13				Inline Blender-type Rapid Mixers						
23-39 37 11 15				Induction-type Rapid Mixing Equipment						
23-39 37 11 17				Inline Static Mixers						
23-39 37 11 19				Mixing Equipment						
23-39 37 11 21				Submersible Mixers						
23-39 37 11 23				Floating Mechanical Mixers						
23-39 37 11 25				Paddle Mixers						
23-39 37 11 27				Pin Mixers						
23-39 37 11 29				Vertical Reel Flocculation Equipment						
23-39 37 11 31				Horizontal Reel Flocculation Equipment						
23-39 37 11 33				Vertical Turbine Flocculation Equipment						
23-39 37 11 35				Walking-beam Flocculation Equipment						
23-39 37 11 37				Horizontal Oscillating Flocculation Equipment						
23-39 37 11 39				Top-entering Tank Mixers						
23-39 37 11 41				Side-entry Tank Mixers						
23-39 37 11 43				Portable Tank Mixers						
23-39 37 13			Clarifier Equipment							
23-39 37 13 11				Chain-and-Flight Clarifier Equipment						
23-39 37 13 13				Traveling Bridge Clarifier Equipment						
23-39 37 13 15				Differential Head Clarifier Equipment						
23-39 37 13 17				Oscillating Scraper-type Clarifier Equipment						
23-39 37 13 19				Circular Clarifier Equipment						
23-39 37 13 21				Solids Contact Clarifier Equipment						
23-39 37 13 23				Flocculating Clarifier, Pulsating Sludge Blanket Type						
23-39 37 13 25				Dissolved Air Flotation Equipment for Water Treatment						
23-39 37 13 27				Ballasted High-rate Clarifier Equipment						
23-39 37 13 29				High rate Clarification/Thickening Equipment						
23-39 37 13 31				Tube Settlers						
23-39 37 13 33				Lined Plate Settlers						
23-39 37 15			Sediment Removal Equipment							
23-39 37 15 11				Tipping Sediment Flushing Tanks						
23-39 37 15 13				Flushing Gates						
23-39 37 15 15				Water Cannon						
23-39 39 00		Water and Wastewater Secondary Treatment Equipment							Equipment used in water and wastewater secondary treatment.	
23-39 39 11			Air and Gas Diffusion Equipment							
23-39 39 11 11				Fixed Mechanical Aerators						
23-39 39 11 13				Floating Mechanical Aerators						
23-39 39 11 15				Submersible Aspirating Aerator Equipment						
23-39 39 11 17				Jet Aeration Equipment						
23-39 39 11 19				Coarse Bubble Diffusers						
23-39 39 11 21				Swing-type Channel Aeration Equipment						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-39 39 11 23				Shear Box Diffusers						
23-39 39 11 25				Flexible Membrane Tube Diffusers						
23-39 39 11 27				Flexible Membrane Disc Diffusers						
23-39 39 11 29				Ceramic Disc Fine Bubble Diffusers						
23-39 39 11 31				Floating Membrane Diffusers						
23-39 39 11 33				Membrane Diffusers						
23-39 39 11 35				Cascading Aerators						
23-39 39 11 37				Pure-oxygen Generating Equipment						
23-39 39 13			Biological Treatment Systems							
23-39 39 13 11				Rotating Biological Contactors						
23-39 39 13 13				Trickling Filter Rotary Distributor Equipment						
23-39 39 13 15				Trickling Filter Media						
23-39 39 13 17				Bio-towers						
23-39 39 13 19				Moving-bed Biological Reactors						
23-39 39 13 21				Integrated Fixed-film Activated Sludge Equipment						
23-39 39 13 23				Intermittent Sand Filters for Wastewater Treatment						
23-39 39 13 25				Deep-bed Denitrification Filters						
23-39 39 13 27				Biologically Activated Filters						
23-39 39 13 29				Membrane Biological Reactors						
23-39 39 13 31				Sequencing Batch Reactors						
23-39 39 13 33				Oxidation Ditch Equipment						
23-39 39 13 35				Vertical Loop Reactors						
23-39 41 00		Water and Wastewater Advanced Treatment Equipment							Equipment used in water and wastewater advanced treatment.	
23-39 41 11			Filtration Equipment							
23-39 41 11 11				Filter Media						
23-39 41 11 13				Filter Surface Wash Agitators						
23-39 41 11 15				Filter Air Scour Equipment						
23-39 41 11 17				Wash Water Troughs						
23-39 41 11 19				Pressure Filters						
23-39 41 11 21				Gravity Filters						
23-39 41 11 23				High-rate Sand Filters						
23-39 41 11 25				Traveling Bridge Filters						
23-39 41 11 27				Microfiltration and Ultrafiltration Membrane Equipment						
23-39 41 11 29				Disc Cloth Filters						
23-39 41 11 31				Rotary Drum Cloth Filters						
23-39 41 11 33				Automatic Backwash Cloth Filter Equipment						
23-39 41 11 35				Cartridge Filters						
23-39 41 11 37				Bag Filters						
23-39 41 11 39				Automatic Straining Equipment						
23-39 41 13			Deminerlization Equipment							
23-39 41 13 11				Ion-exchange Vessel Media						
23-39 41 13 13				Electrodialysis Reversal Equipment						
23-39 41 13 15				Reverse Osmosis and Nanofiltration Membrane Equipment						
23-39 41 13 17				Multiple-effect Distillation Equipment						
23-39 41 13 19				Desalination Mechanical Vapor Compression Equipment						
23-39 41 13 21				Desalination Thermal Vapor Compression Equipment						
23-39 41 13 23				Desalination Multi-stage Flash Equipment						
23-39 41 13 25				Desalination Falling Film Evaporators						
23-39 41 13 27				Desalination Rising Film Evaporators						
23-39 41 13 29				Desalination Forced-circulation Crystallizing Equipment						
23-39 41 13 31				Desalination Spray Dry Evaporation Equipment						
23-39 41 13 33				Deminerlization Energy Recovery Equipment						
23-39 41 15			Ultraviolet Equipment							
23-39 41 15 11				Closed-vessel Low-pressure/Low-intensity Ultraviolet Treatment Equipment						
23-39 41 15 13				Closed-vessel Low-pressure/High-intensity Ultraviolet Treatment Equipment						
23-39 41 15 15				Closed-vessel Medium-pressure Ultraviolet Treatment Equipment						
23-39 41 15 17				Open-channel Low-pressure/Low-intensity Ultraviolet Treatment Equipment						
23-39 41 15 19				Open-channel Low-pressure/High-intensity Ultraviolet Treatment Equipment						
23-39 41 15 21				Open-channel Medium-pressure Ultraviolet Treatment Equipment						
23-39 43 00		Water and Wastewater Residuals Handling and Treatment							Equipment used in water and wastewater residuals handling and treatment.	
23-39 43 11			Residuals Thickening Equipment							
23-39 43 11 11				Circular Gravity Thickeners						
23-39 43 11 13				Gravity Belt Thickeners						
23-39 43 11 15				Dissolved Air Flotation Thickening Equipment						
23-39 43 11 17				Rotary Drum Thickening Equipment						

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-39 43 11 19				Centrifuge Thickening Equipment						
23-39 43 11 21				Disc Thickeners						
23-39 43 11 23				Thickening Screw Press						
23-39 43 11 25				Scum Concentrator Equipment						
23-39 43 13			Residuals Stabilization							
23-39 43 13 11				Digester Covers and Appurtenances						
23-39 43 13 11 11					Fixed Covers					
23-39 43 13 11 13					Floating Covers					
23-39 43 13 11 15					Gasholder Covers					
23-39 43 13 13				Radial Beam Fixed Digester Covers						
23-39 43 13 15				Dual Deck Truss-type Fixed Digester Covers						
23-39 43 13 17				Radial Beam Floating Digester Covers						
23-39 43 13 19				Dual Deck Truss-type Floating Digester Covers						
23-39 43 13 21				Radial Beam Floating Gas-holding Digester Covers						
23-39 43 13 23				Dual Deck Truss-type Floating Gas-holding Digester Covers						
23-39 43 13 25				Digester Appurtenances						
23-39 43 13 27				Aerobic Digester Aeration Equipment						
23-39 43 13 29				Autothermal Thermophilic Aerobic Digestion Equipment						
23-39 43 13 31				Egg-shaped Digesters						
23-39 43 13 33				Confined Gas Mixing System						
23-39 43 13 35				Digester Heating Equipment						
23-39 43 13 37				Residuals Pasteurization Equipment						
23-39 43 15			Residuals Dewatering Equipment							
23-39 43 15 11				Vacuum Filters						
23-39 43 15 13				Belt Filter Presses						
23-39 43 15 15				Plate-and-Frame Filter Presses						
23-39 43 15 17				Rotary Presses						
23-39 43 15 19				Screw Presses						
23-39 43 15 21				Dewatering Centrifuges						
23-39 43 15 23				Belt Dryers						
23-39 43 15 25				Direct-heat Residuals Drying Equipment						
23-39 43 15 27				Indirect-heat Residuals Drying Equipment						
23-39 43 17			Thermal Treatment of Residuals							
23-39 43 17 11				Multiple-hearth Sludge Incinerators						
23-39 43 17 13				Fluidized-bed Sludge Incinerators						
23-39 43 17 15				Ash Handling Equipment						
23-39 43 17 17				Recuperative Air Preheating Equipment						
23-39 43 17 19				Regenerative Thermal Oxidizers						
23-39 43 17 21				Waste Heat Recovery Boilers						
23-39 43 17 23				Waste Heat Recovery Heat Exchangers						
23-39 43 17 25				Thermal Oxidation Equipment						
23-39 45 00		Septic System Equipment							Equipment used in a septic system.	
23-39 45 11			Liquid Waste Treatment							
23-39 45 11 11				Liquid Waste Decanter						
23-39 45 11 13				Bacterial Filter Tanks						
23-39 45 11 15				Liquid Waste Decanters						
23-39 45 11 17				Liquid Waste Separators						
23-39 45 11 19				Liquid Waste Pond and Reservoir Products						
23-39 45 11 19 11					Liquid Waste Pond Covers					
23-39 45 11 19 13					Liquid Waste Pond Liners					
23-39 45 11 21				Additives for Treatment of Liquid Waste						
23-39 45 11 21 11					Additives for Waste Water and Sewage Treatment					
23-39 45 11 21 13					Additives for Residue Treatment					
23-39 45 13			Liquid Waste Monitoring and Control							
23-39 45 13 11				Detectors of Water Pollution						
23-39 45 15			Solid Waste Disposal Plant Products							Includes: Refuse Disposal
23-39 45 15 11				Chutes and Collectors						
23-39 45 15 13				Pneumatic Waste Equipment						
23-39 45 15 15				Incineration Plant						
23-39 45 15 15 11					Packaged Incinerators					
23-39 45 15 17				Crusher Plant						
23-39 45 15 17 11					Waste Compactors and Destructors					
23-39 45 15 19				Baling Plant						
23-39 45 15 21				Pulping Machines						
23-39 45 17			Solid Waste Handling Products							
23-39 45 19			Solid Waste Impelling Equipment							

OmniClass Number	Level 1 Title	Level 2 Title	Level 3 Title	Level 4 Title	Level 5 Title	Level 6 Title	Level 7 Title	Synonym	Definitions	Discussion/Examples
23-39 45 21			Solid Waste Treatment Equipment							
23-39 45 21 11				Solid Waste Compactors, Destructors, and Balers						
23-39 45 21 13				Solid Waste Crushers						
23-39 45 21 15				Solid Waste Pulping Machines						
23-39 45 21 17				Solid Waste Shredding Machines						
23-39 45 21 19				Incinerators						
23-39 45 21 19 11					Solid Waste Incinerators					
23-39 45 21 19 13					Packaged Incinerators					
23-39 45 23			Solid Waste Monitoring and Control Equipment							
23-39 45 23 11				Solid Waste Metal Detectors						
23-39 45 23 13				Solid Waste Detectors for Other Solids						
23-39 45 25			Solid Waste Collection and Removal Products							
23-39 45 25 11				Complete Solid Waste Removal Systems						
23-39 45 25 13				Solid Waste Bins						
23-39 45 25 15				Gravity Chute Solid Waste Systems						
23-39 45 25 17				Refuse Disposal Chutes						
23-39 45 25 17 11					Refuse Hoppers					
23-39 45 25 17 13					Refuse Chute Doors					
23-39 45 25 17 15					Refuse Chute Decontamination Units					
23-39 45 27			Solid Waste Handling Systems							
23-39 45 27 11				Refuse Compactors						
23-39 45 27 13				Refuse Containers						
23-39 45 27 15				Dust Collectors						
23-39 45 27 17				Utility Poles						
23-39 47 00		Offshore Structures							Structures used offshore.	



John Wayne Airport BIM Execution Plan For [Insert Project Title Here]

Version 2.0

April 17, 2015



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1. BIM Execution Plan Overview

Introduction

The John Wayne Airport (JWA) Building Information Model (BIM) Execution Plan document defines the scope of work, procedures, processes, and deliverables associated with use and submission of BIM on JWA projects.

The following objectives and references are in place to describe the purpose of this guide and help our consultants and team members in understanding what JWA requires for current and future BIM projects to come.

Objectives

As stated, the intended use of BIM and the application of the JWA BIM guidelines are to be coordinated with the general and specific project delivery guidelines laid out in the JWA BIM Execution Plan. Where applicable; and possible BIM's shall be created in support of all phases during the project.

The use of these guidelines should achieve four major benefits:

- 1) Unnecessary drafting is eliminated, thus saving production time
- 2) Ease in coordination and checking of documents
- 3) Avoid errors through inconsistencies in the documents and reduce change orders during construction
- 4) Clear understanding of the Consultant's scope of work is an important ingredient to the coordination of documents



2. Project Information

The following information is for all parties to understand the project scope, along with the name, address, description, and more. Please fill this out prior to the Project Kickoff Meeting and be as descriptive and clear as possible when referring to the project information details.

Item	Project Information
Project Owner	John Wayne Airport
Project Name	
Project Number	
Contract Number	
Task Order	
Project Address	
Project Description	
Delivery Method	
Addl. Project Information	

Items to note:

- When referring to the Project Name, only use the approved name given by JWA
- When listing the Project Address, include the Site Section and any civil points of reference
- When describing the project, make sure to include the number of facilities and general size
- For the Addl. Project Info, include any unique BIM Project Requirements

Before any work is to begin, please gather all of the below information and make it known to everyone for coordination purposes. This includes the project phase information listed below.

Phase	Estimated Start Date	Est. Completion Date	Project Stakeholders
Preliminary Planning			
Design Documents			
Const Documents			
Construction			



3. Key Project Contacts / Roles

Team coordination is vital to the overall BIM process and is highly involved, from roles and responsibilities, to coordination review meetings, to the file upload and download procedure required to keep everyone in sync and informed.

Use this opportunity to list every key contact within each organization involved with the project. Additional contacts can be included later in the document.

Role	Organization	Contract Name	Location	E-Mail	Phone
Project Manager					
BIM Manager					
Discipline Lead					
Discipline Lead					
Discipline Lead					
Discipline Lead					



4. Project Goals / BIM Uses

JWA is implementing BIM to efficiently and effectively deliver design and construction projects. These BIM Standards define the use of computer-aided design software using building information modeling methods for many beneficial reasons. The main items include; consistency of process and realism of design, providing an efficient workflow and effective collaboration, and finally to provide an overall uniform product and subsequent best possible outcome for our projects. JWA’s primary goals are:

- Avoid errors through inconsistencies in the documents and reduce change orders;
- To provide a comprehensive 3D view of projects, for more efficient and effective reviews;
- To coordinate and manage clash detections and simulations virtually during pre-construction;
- To incorporate schedules into the BIM for tracking work-in-place; and
- To populate the BIM with systems and component data to be utilized for facilities management.

Describe how the BIM and Facility Data are leveraged to maximize project value (e.g. design alternatives, life-cycle analysis, scheduling, estimating, material selection, pre-fabrication opportunities, site placement, etc.). State any/all major BIM Goals and Objectives below. This section is also an opportunity to include the owners BIM Requirements. It is important that the owner’s requirements for BIM be considered so that they can be incorporated into the projects BIM process

Priority (High/Medium/Low)	Goal Description	Potential BIM Uses

Highlight and place an “X” next to the additional BIM Uses to be developed by the use of the BIM.

X	Plan	X	Design	X	Construct	X	Operate
	Programming		Design Authoring		Site Planning		Maintenance Sched.
	Site Analysis		Design Review		Construction Sys.		Building System
			3D Coordination		3D Coordination		Asset Management
			Structural Analysis		Digital Fabrication		Space Management
			Lighting Analysis		3D Control/Plan		Disaster Planning
			Energy Analysis		Record Modeling		Record Modeling
			Mech. Analysis		Schedule Tracking		
			Other Eng. Analysis		W.I.P. Tracking		
			Sustainability Eval.				
			Code Validation				
	Phase Planning		Phase Planning		Phase Planning		Phase Planning
	Cost Estimation		Cost Estimation		Cost Estimation		Cost Estimation
	Exist. Conditions		Exist. Conditions		Exist. Conditions		Exist. Conditions



5. Team Collaboration

Describe how the entire project team will collaborate, including communication methods, document management and transfer, record storage, and more.

Electronic Communication

The following document management issues should be resolved and a procedure must be defined for each: Permissions/Access, File Locations, FTP Site Locations, File Transfer Protocol, and File/Folder Maintenance.

Location	Structure/Name	File Type	Password Protection	File Maintainer	Update Frequency

Meeting Procedures

The following include examples of meetings that should be considered, and specifics of those types must be addressed. These are not required, but suggested as a starter list. Cross out any that do not apply, and add to the blank ones for custom meetings for this project alone. The second is for

Meeting Type	Project Stage	Frequency	Participants	Location
BIM Kick-Off				
Routine Design Coordination				
Major Milestone Completion				
Construction Progress Review				

Interactive Workspace

The project team must consider the physical environment it will need throughout the lifecycle of the project to accommodate the necessary collaboration, communication, and reviews that will improve the BIM plan decision making process. Often this includes a BIM Trailer. If so, make sure to include where it will be located and what will be in the space such as computers, projectors, tables, and even table configuration.



6. Model Coordination

With the team collaboration in place, the next item on the agenda needs to be model coordination. This includes the model delivery agreement, content transfer process, and process overview map.

Model Delivery Schedule of Information Exchange for Submission and Approval

Document the information exchanges and file transfers that will occur on the project.

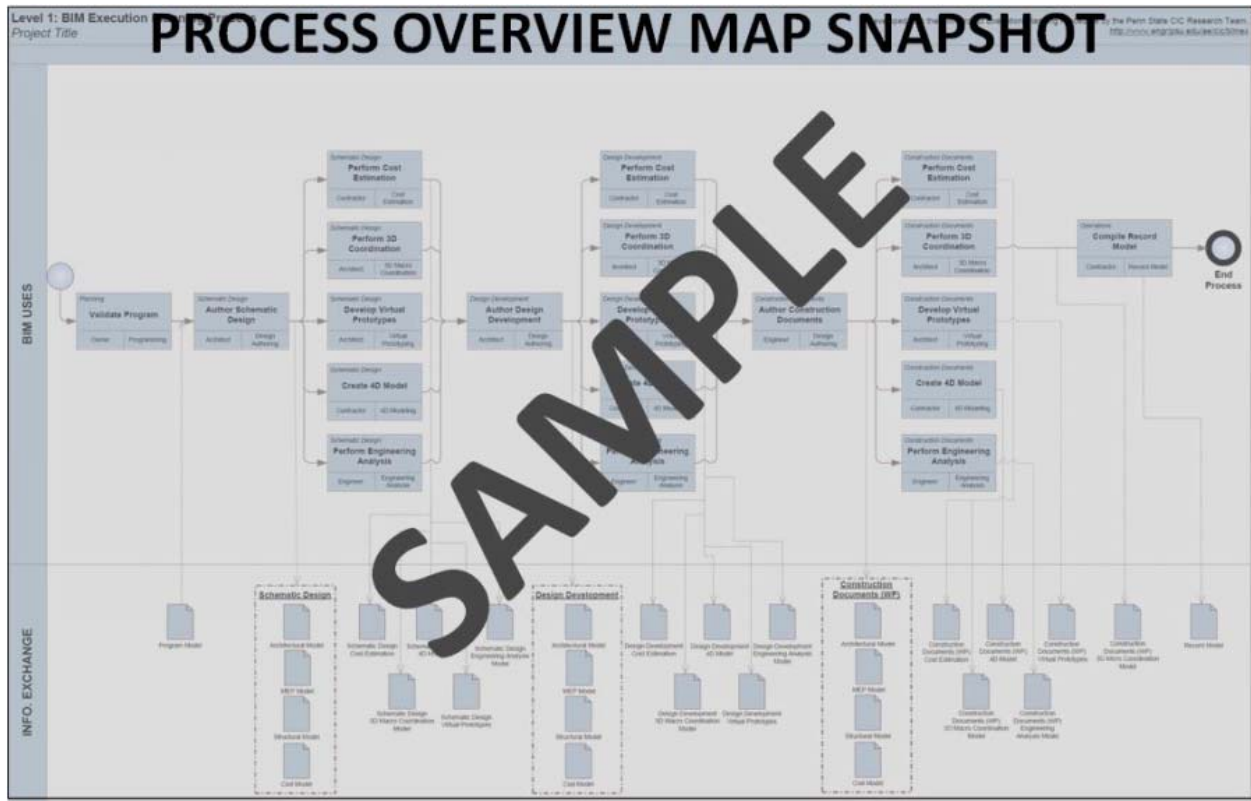
Info. Exchange	File Sender	File Receiver	Frequency	Due/ Start Date	Disc.	Software	File Type (Native)	File Type (Exchange)
Architect BIM File	Architect	Owner/ Contractor	Monthly	Proj. Sched.	Arch	Revit	.RVT	.RVT
Structural BIM File	Structural	Owner/ Architect	Monthly	Proj. Sched.	Arch	Revit	.RVT	.RVT

Process Overview Map

Provide a process map that includes each file listed above. This process map provides a detailed plan for execution of each file. They also define the specific Information Exchanges for each activity, building the foundation for the entire execution plan. This map is to be created before the kick-off meeting and agreed upon by the entire team. This is displayed on the following page.



Process Overview Map



Detailed BIM Use Process Map (List)

The following are examples. Modify per project as some may need to be removed, while others added:

Existing Conditions	Cost Estimation	Phase Planning	Programming
Site Analysis	Design Reviews	Energy Analysis	Structural Analysis
Lighting Analysis	3D Coordination	Site Utilization Planning	3D Control/Planning
Record Modeling	Maintenance Schedule	Building Sys. Analysis	Add. Process Maps...



7. Model Requirements

File Naming Structure

File names for models must be formatted as: <Discipline-Project Number-Building Number>

Model Type	Source Discipline	File Name
Architectural	Architect	ARCH-0000-00
Civil	Civil Engineer	CIVIL-0000-00
Mechanical	MEP Consultant	MECH-0000-00
Plumbing	MEP Consultant	PLUMB-0000-00
Electrical	MEP Consultant	ELEC-0000-00
Structural	Structural Engineer	STRUCT-0000-00
Energy	Architect	ENERGY-0000-00
Construction	Construction Manager	CONST-0000-00
Coordination	Construction Manager	COORD-0000-00

Model elements by discipline, level of detail, and any specific attributes important to the project are documented using the below Information Exchange worksheet

INFORMATION EXCHANGE (IE)

Information	Responsible Party
A Accurate Size & Location, include materials and object parameters	ARCH: Architect CON: Contractor
B General Size & Location, include parameter data	CE: Civil Engineer FM: Facility Manager MEP: MEP Engineer
C Schematic Size & Location	SE: Structural Engineer TC: Trade Contractors

BIM Use Title	Programming			Design Authoring			Existing Conditions Modeling			Cost Estimation			3D Coordination			Design Reviews		
	Info	Resp Part	Additional Info	Info	Resp Part	Additional Info	Info	Resp Part	Additional Info	Info	Resp Part	Notes	Info	Resp Part	Notes	Info	Resp Part	Notes
Project Phase	Planning			Design			Design			Design			Design Reviews					
Time of Exchange (SD, DD, CD, Construction)																		
Responsible Party (Information Receiver)																		
Receiver File Format																		
Application & Version																		
Model Element Breakdown	Info	Resp Part	Additional Info	Info	Resp Part	Additional Info	Info	Resp Part	Additional Info	Info	Resp Part	Notes	Info	Resp Part	Notes	Info	Resp Part	Notes
A SUBSTRUCTURE																		
Foundations																		
Standard Foundations																		
Special Foundations																		
Slab on Grade																		
Basement Construction																		
Basement Excavation																		
Basement Walls																		
B SHELL																		
Superstructure																		
Floor Construction																		
Floor Construction																		
Exterior Enclosure																		
Exterior Walls																		
Exterior Windows																		
Exterior Doors																		
Roofing																		
Floor Coverings																		
Floor Openings																		
C INTERIORS																		
Interior Construction																		
Partitions																		
Interior Doors																		
Fittings																		
Stairs																		
Stair Construction																		
Stair Finishes																		
Interior Finishes																		
Wall Finishes																		
Floor Finishes																		
Ceiling Finishes																		
D SERVICES																		
Conveying Systems																		
Elevators & Lifts																		
Escalators & Moving Walks																		
Other Conveying Systems																		

SAMPLE



Model Structure

Describe and diagram how the model is separated, e.g., by building, floor, zone, area, and/or discipline

Measurement and Coordinate System

Describe the measurement system (Imperial or Metric) and coordinate system (geo-referenced) used.

BIM and CAD Standards

Identify items such as the BIM and CAD Standards, content reference information, and the version of IFC, etc.

Standard	Version	BIM Uses Applicable	Organizations Applicable
CAD Standards	1.0	Design Authoring	Architect
IFC		Record Modeling	Construction Manager



8. Infrastructure Requirements

Technology Infrastructure includes many aspects of BIM including software, hardware, content transfer, and communication setup. All of these items are addressed here and defined per JWA standards.

Software

List the software used to deliver BIM for this project.

BIM Use	Discipline	Software	Version
Design Authoring	Architecture	Autodesk Revit	2014

Hardware

Understand that hardware specifications become valuable once information begins to be shared between several disciplines or organizations. It also becomes valuable to ensure that the downstream hardware is not less powerful than the hardware used to create the information. In order to ensure that this does not happen, choose the hardware that is in the highest demand and most appropriate for the majority of BIM Uses.

BIM Use	Hardware	Hardware Owner	Specification
Design Authoring	Presentation Computer	Architect	Processor/OS/Memory

Model Content and Reference Information

Identify items such as families, workspaces, and databases

BIM Use	Discipline	Content/Reference Info	Version
Design Authoring	Architecture	Autodesk Revit Families	2014



9. Quality Control

This section requires a detailed strategy to control the quality of the model, from quality control checks to model accuracy and tolerances.

Quality Control Checks

The following checks must be performed to assure accuracy:

Checks	Definition	Party Responsible	Software	Frequency
Visual	Ensure there are no unintended components, and the design intent has been followed			
Interference	Detect problems in the model where two items are clashing (may include hard/soft clashes)			
Standards	Ensure that the BIM and AEC CAD Standards have been followed (fonts, line types, etc.)			
Integrity	Describe the QC Validation process used to ensure the BIM has no non-compliant information			

Model Accuracy and Tolerances

Models should include all appropriate dimensioning as needed for design intent, analysis, and construction. Level of detail and included model elements are provided in the Information Exchange Worksheet.

Phase	Discipline	Tolerance
Design Documents	Architecture	Accurate to +/- (#) of Actual Size and Location
Shop Drawings	Mechanical Contractor	Accurate to +/- (#) of Actual Size and Location



10. Project Deliverables

List the BIM Deliverables for the project. Include the format which the information will be delivered.

BIM Submittal Item	Stage	Due Date	Format	Notes
	Design Development			
	Construction Documents			
	Construction			
	Close Out			



Delivery and Contracting Strategy

What additional measures need to be taken to successfully use BIM with the selected delivery method and contract type?

Team Selection Procedure

How will you select future team members in regards to the above delivery strategy and contract type?

BIM Contracting Procedure

How should BIM be written into the future contracts?