****

**[project name]**

**BIM EXECUTION PLAN**

**CLIENT**: [Client Name]

**PROJECT LOCATION**: [Project Location]

**LAST UPDATED**: [Updated Date]

**ARCHITECT:** [Architect / Company Name]

Note: When using this BIM Execution Plan Template, replace sections written in [grey] with the corresponding project information and requirements. Remove the brackets and turn these sections black once editing is complete. Remove all instructional sections written in Red, such as this one, before distributing this to your project team. Refer to RevitGods BXP Development Guide\_2024 for more details.

**Disclaimer:**  
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# BIM EXECUTION PLAN OVERVIEW

## OVERVIEW

This BIM Execution Plan is a structured document that outlines the strategy for implementing Building Information Modeling (BIM) throughout a project. The Plan specifies the intended uses of BIM, defines the roles and responsibilities of all involved parties, and provides detailed documentation of the processes required for BIM integration across the project lifecycle.

## GOALS AND GUIDELINES

[Refer to the RevitGods BxP Development Guide on what must be included in this section. Below are some examples you could include, remove, or edit to fit your project’s goals for using BIM]

* + - Enhance collaboration between disciplines by identifying and resolving clashes and conflicts early in the design phase.
    - Facilitate an integrated design approach that considers all project elements—architecture, structure, MEP, and sustainability—within a cohesive BIM model.
    - Provide detailed and precise project documentation that reduces errors and omissions.
    - Optimize scheduling and sequencing through 4D BIM, allowing for better time management and resource allocation.
    - Drawings must be derived from the BIM model to achieve alignment between them.
    - Utilize 5D BIM to enhance cost estimation, budgeting, and control by linking costs to design elements.
    - Facilitate better design visualization and communication with stakeholders through 3D models.
    - Perform energy modeling and sustainability assessments to optimize building performance and reduce environmental impact.
    - Support the lifecycle management of the building by linking BIM data to facility management systems for ongoing maintenance and operations.
    - Reduce project risks by identifying potential issues early and enabling proactive decision-making.
    - Foster interdisciplinary collaboration by providing a shared, centralized model accessible to all stakeholders.
    - Ensure the project meets all relevant building codes and standards through automated checks and validation processes.
    - Integrate BIM data with facility management systems for efficient operations and maintenance throughout the building's lifecycle.
    - Improve cost estimation and budgeting accuracy by linking financial data directly to design components and generating schedules for quantity takeoffs.

# PROJECT INFORMATION

|  |  |
| --- | --- |
| **KEY PROJECT DATA** | |
| Project Name |  |
| Project Address | [City, State] |
| Revit Year + Build | [2018.2] |
| Project Identification Code | [XXXX] |
| Project Area Code | [XX] [Applicable to large buildings that may require a file for each building area. Add a row to assign a code for each building area] |
| **PROJECT STRUCTURE** | |
| Project Type | [Recreation] |
| Project Scope | [define the specific construction goals, deliverables, tasks, materials, timelines, and boundaries, detailing exactly what will be built and what is excluded.] |
| Number of Buildings | [X] |
| Proposed GSF | [XX, XXX] |
| **SCOPE** | |
| Clash Detection (Y/N) |  |
| Model Used for Cost Estimation (Y/N) |  |
| Model Used for Energy Analysis (Y/N) |  |
| Model Used for Facilities Management (Y/N) |  |
| Level of Detail (LOD) |  |
| **TIMELINE + COORDINATION** | |
| BIM Kick-Off Meeting Date | [mm/dd/yyyy] |
| File Sharing Platform | [Autodesk Construction Cloud] |
| Conceptual & Schematic Design Timeline | [x months] |
| Design Development Timeline | [x months] |
| Construction Documentation Timeline | [x months] |
|  |  |

# STAFF ROLES & RESPONSIBILITIES

This section describes the processes designed for collaboration across disciplines. These BIM protocols provide clear criteria for participating in the BIM process. Each team is required to take part and deliver according to the outline below.



## ARCHITECTS & ENGINEERS

The traditional design team will lead the authoring of the Design Models. The content of these models will be defined by several factors, including the scope of work defined under each of the team member's agreements, the Model Element Table, and the technical requirements outlined in this document.

# COORDINATION

* Oversees and manages the overall BIM process for the architectural team, ensuring that the model aligns with design intent, standards, and project requirements.
* Manages design review and model coordination sessions.

# MODEL INTEGRATION

* Responsible for integrating inputs from various disciplines into the architectural BIM model, ensuring consistency and resolving clashes.

# STANDARDS COMPLIANCE

* Validating the level of detail and controls as defined for each project phase
* Enforces BIM standards, protocols, and workflows within the architectural team and the entire design project team
* Keeping file naming accurate for all BIM files following the agreed file naming convention.

# COMMUNICATION

* Acts as the main point of contact for BIM-related issues between the architect, the project design team, the client, and other stakeholders.
* Communicating issues back to the internal and cross-company teams
* Managing version control

## ARCHITECTURAL BIM MANAGER

As defined in this document, the architect’s BIM manager will manage all BIM and 3D information produced by the consultants’ team members. The BIM Manager is responsible for analyzing all relevant content as it is being produced and communicating continuously with BIM managers from other disciplines in the team.

## CONSULTANT BIM MANAGERS

# MODEL DEVELOPMENT

* Ensures their discipline's BIM model is accurate, detailed, and aligned with project requirements and standards.
* Validating the level of detail and controls as defined for each project phase within their discipline
* Validating modeling content during each phase within their discipline
* Combining or linking multiple models within their discipline
* Participating in design review and model coordination sessions
* Coordination
  + - * Works closely with the architect’s BIM manager to integrate their model with the overall design, addressing any clashes or inconsistencies.

# COMMUNICATION

* + - * Communicate issues related to their and other consultants' discipline to the architect.

# DATA EXCHANGE

* + - * Facilitates the smooth exchange of information and models between their team and the architect, following agreed-upon protocols.
      * Properly saving and publishing their discipline models in the collaborative platform as indicated by the Architect’s BIM Manager
      * Keeping file naming accurate following the agreed file naming convention.
      * Managing version control for their discipline models.

## TEAM CONTACT LIST

Refer to the *RG-2024\_BIMExecutionPlan-Team Contact list* of all contacts for each discipline and organization involved in the Project.

# PROJECT NAMING & CONVENTIONS

The traditional design team will lead the authoring of the Design Models. The content of these models will be defined by several factors, including the scope of work defined under each of the team member's agreements, the Model Element Table, and the technical requirements outlined in this document.

## MODEL FILES

All Model Files (e.g., Revit, Sketchup, Rhino, etc.) must be named beginning with the Project Identification Code (XXX) followed by a dash, a Discipline Code, and the Revit year if applicable.

[Project Identification Code]- [Area Code if applicable] Refer to section 2.0 Project Information.

[DISCIPLINE CODE]-[Software Version Year if Applicable]

Example: CC-100-A**-R23**

CC-A**-R23**

## PLOT SHEET FILES

Plot sheet files must be generated from the Models in PDF format.

* + 1. **For a compiled set:** 
       - The set file must be named beginning with the Project Identification Code, a dash, a Discipline Code, a dash, the Discipline Designation Code (if applicable), followed by a dash, and the deliverable issue title.
       - The filename must take the form of: [PIC–D- Design Development.pdf]
    2. **For individual sheets:** 
       - The files must be named beginning with the [Project Identification Number, a dash, a Discipline Code, a dash, the Discipline Designation Code (if applicable) followed by the Sheet Number range, a dash, and a two-digit Revision Decimal Number.]
       - The filename must take the form of: [PIC–D-A001\_###-Design Development.pdf]
    3. **Abbreviations**

|  |  |
| --- | --- |
| **Item** | **Description** |
| PIC | Project Identification Code |
| D | Discipline Code |
| DC | Discipline Designation Code (if applicable) |
| 001\_ ### | First Sheet Number to Last Sheet Number (Three-digit Number) |
| RN | Revision Number (Two-digit Number) |

* + 1. **Discipline Codes**

|  |  |
| --- | --- |
| **Discipline** | **Designator Code** |
| Architectural | A |
| General | G |
| Landscape | L |
| Civil | C |
| Mechanical | M |
| Electrical | E |
| Plumbing | P |
| Borings/Geotechnical | B |
| Fire Protection | FP |
| Fire Alarms | FA |
| Structural | S |
| Vertical Transportation | VT |
| Telecomm/AV/Security | TAVS |

## REVISIONS

* + 1. When creating a Plot sheet in PDF format containing revisions, only consecutive sheets can be grouped within the electronic files.
    - As an example, the Structural discipline is creating revision 7 of sheets 001 through 007 and sheets 011 and 013. Like Plot sheets, Revised sheets must be named beginning with the [Project Identification Code, a dash, a Discipline Code, and a two-digit Revision Decimal Number].
    - Three files must be named as follows:
      * PIC-S-001\_007-07
      * PIC -S-011-07
      * PIC -S-013-07

## INTER-DISCIPLINARY COORDINATION FILES (NWD)

* + 1. Interdisciplinary Coordination Files must be generated from the Models and saved as Navisworks files (NWD). Like model files, coordination files must be named beginning with the [Project Identification Code, a dash, a Discipline Code, and a two-digit Revision Decimal Number].
       - The filename must take the form of FMSID-D-RN.nwd

|  |  |
| --- | --- |
| **Item** | **Description** |
| PIC | Project Identification Code |
| D | Discipline Code |
| RN | Revision Number (Two-digit Number) |

# As an example, an Inter-Disciplinary Coordination File is being created for a Plumbing project with a Project Identification Code of PHQ for its revision 7. The file must be named as follows: PHQ-P-07.nwd

## WORKSETS

[Refer to the RevitGods BxP Development Guide on what must be included in this section. Below are some standard workset rules you could consist of, remove, or edit to fit your project requirements.]

* All Levels and Grids must be on the "Shared Levels and Grids" Workset.
* When project teams have more than one discipline included in the BIM model, they must be broken into separate Worksets.
* Elements modeled within a design option must be broken into separate Worksets as specified below and **NOT** placed within their own Workset. All project design options must be deleted before the start of the Construction Documentation phase.
* Linked Revit models must be on their own Worksets; this allows the opening of links to be controlled through Worksets when opening the model. See the naming convention below:

LINK-[DISCIPLINE CODE]

Below is the naming convention for Worksets:

**[DISCIPLINE CODE]-[Elements]**

See Section 4.1 for **Discipline Codes**

The chart below lists all Worksets with their corresponding names that must be created in their respective Revit files and specifies what elements must be included within each workset.

[Fill out the chart below and add more rows as necessary after the team collaboratively discusses and decides how Worksets will be set up in each project file]

|  |  |  |
| --- | --- | --- |
| **Workset Name** | **Model Origination** | **Elements** |
| A-Shared Levels and Grids | [Architecture Revit Project File Name] | Levels and grids |
| A-Exterior | [Architecture Revit Project File Name] |  |
| A-Furniture | [Architecture Revit Project File Name] |  |
| A-Casework | [Architecture Revit Project File Name] |  |
| A-Site | [Architecture Revit Project File Name] |  |
| CAD-Civil |  |  |
| M-Supply |  |  |
| M-Exhaust |  |  |
| P-Drainage |  |  |
| P-Sanitary |  |  |
| TAVS-Telecom |  |  |

## SHEETS

* + 1. The architectural team will distribute the standard title block.
    2. Before each submission, the architectural team will send instructions on the information that must be included in the revision block. This will be controlled through the Revit revision manager.
    3. A unified drawing list will be maintained through linked models and managed with Revit and Excel. The drawing list will be due before each submission and must adhere to the architect's guidelines. The parameter "include in Sheet List" in the sheet properties must only be checked for those sheets included in the submission.

## PHASING

* + 1. Revit models will utilize Phases which include "Existing," "Demo," and "New Construction" for anticipated phased Construction under the following:
       - [1 – Existing]
       - [2 - New Construction]

## SHARED LEVELS AND GRIDS

* + 1. The Architectural models will serve as the master models for levels and grids. All other discipline models will use the Copy/Monitor feature to reference these grids and levels from the architectural models.
    2. Each discipline model will contain copies of only the grids and levels relevant to that model.

* + 1. To prevent the appearance of duplicate grids and level lines, the workset containing the architectural model's levels and grids will typically be hidden within discipline models.
    2. The exception to this is in exceptional coordination views, where both sets may be visible.

* + 1. You can use the "Manage Links" dialog box to manage this setup. After the levels and grids have been Copy/Monitored, use the "Reload From" option to specify not to load the "Shared Levels and Grids" workset. This approach ensures consistency across discipline models while avoiding visual clutter from duplicate grid and level lines.
    2. Levels represent the **Top of the Finish**

## GRAPHICS

* + 1. **ORIENTATION**
       - Consultant floor plans must match the orientation of the architect's plans (same North direction).
       - Any orientation changes require approval from the BIM Manager.
    2. **SCALE**
       - Consultant floor plans must match the scale of the architect's plans.
       - Enlarged plans must also use the same scale as the architect's enlarged plans.
       - Any scale differences need prior approval and documentation.
    3. **MATCHLINES**
       - Consultants must align Matchlines with those in the architect's plans when splitting large buildings.
       - Matchline placement and labels must be consistent across all disciplines.
    4. **BACKGROUND MODELS**
       - Backgrounds will be acquired from the posted architectural models.
       - The background model will be linked in by the various disciplines.
    5. **PHASING GRAPHIC FILTERS**
       - Phasing graphic filters used by consultants must match those shown in the architectural model.

# 5.0 PROJECT POSITIONING IN REVIT



## OBJECTIVE

This section defines the procedures for setting up project positioning. This ensures that all models are correctly aligned and that shared coordinates are consistent across the project team.



## ROLES AND RESPONSIBILITIES

* + 1. Architectural BIM Manager: has established the primary project coordinates and position as follows:

|  |  |
| --- | --- |
| Project Base Point | (X,X,X) |
| Survey | (X,X,X) |
| Rotation Angle | (X° true north) |

* + 1. Consultant BIM Manager: responsible for acquiring and applying the coordinates from the architectural model to their discipline-specific models.

## MODEL SETUP PROCESS

* + 1. **Architectural Model Setup**
       - Define the project (PBP) and Survey Point (SP):
         * The Architectural BIM Manager will set up the PBP and SP based on the site’s real-world coordinates and project requirements, as defined in the chart shown in 3.2.1.
         * Ensure both points are accurately positioned and locked to avoid changes during the project lifecycle.
       - Shared Coordinates Specification:
         * The Architectural BIM Manager will specify shared coordinates within the architectural model using Manage > Coordinates > Specify Coordinates at Point.
         * True North will be rotated and aligned accurately according to site data.
    2. **Consultant Model Setup**
       - Linking the Architectural Model
         * The Consultant BIM Manager will link the architectural model into their Revit model using **Insert** > **Link Revit**.
         * Use the **Auto-By Shared Coordinates** positioning method to ensure the consultant model aligns with the architectural model.
       - Acquiring Coordinates:
         * Navigate to **Manage** > **Coordinates** > **Acquire Coordinates**.
         * Select the linked architectural model to acquire the shared coordinates from the architectural model.
         * This will adjust the consultant model’s Project Base Point, Survey Point, and True North to match the architectural model.
         * After acquiring the coordinates, the Consultant BIM Manager must synchronize their model, especially in a work-sharing environment, to ensure all team members work with the correct positioning.

|  |  |
| --- | --- |
| Project Base Point | (X,X,X) |
| Survey | (X,X,X) |

# COLLABORATION PLATFORM

The project team will use [Platform name] for the project's web-based collaboration solution.



## COORDINATION SOFTWARE

The project team will use [Software name] for the project's coordination software.

## MEETING PROCEDURES

Meetings will be held [weekly] to discuss BIM-related topics in conjunction with other team coordination topics. The architectural team will conduct [weekly] Revit meetings, internal coordination, and project standards and procedures review.

## MODEL EXCHANGE SCHEDULE

Models will be exchanged on [Fridays by the end of the day] before the weekly coordination meeting on [Tuesdays once a week.] The model exchange includes Revit models as well as associated Navisworks exports. The Architectural BIM Manager will provide guidelines and settings for the Navisworks exports (NWC files).

## SHARING / LINKING OF MODELS

Individual Models will reside on [Platform name] and shall be published on the project's collaboration site at the prescribed intervals. Team members' access will be controlled by the collaboration site's permissions implemented in other areas of the Project.

All models not hosted on [Platform name] must be "detached,” before distribution.

## MODEL DELIVERABLES, SOFTWARE, AND CONVENTIONS

To conduct coordination meetings, all Native Models shall be federated as [Navisworks Cache files (NWC)], [or DWG] to the Federated Model (NWF). The BIM software used to create the Federated Model will be [Autodesk Navisworks Manage 2022.] All collision reports viewpoints, problem areas, and notations will be published as [Navisworks NWD] files. All Coordination Team members must have (at a minimum) the current version of [Navisworks Freedom]. All BIM Model Managers must have the current version of [Navisworks Manage] to view and work within the file(s) provided.

## DWG EXPORTS

DWG exports are to use the following Revit settings, which can be set in the 'Modify DWG/DXF Export Setup':

In the Units & Coordinates Tab:

One DWG unit is: **Inch**

Coordinate base: **Shared Coordinates**

In the General Tab:

Options: Hide all scope boxes, reference planes, and unreferenced view tags

Default Export options: **AutoCAD YYYY Format**

## NWC EXPORTS

When exporting model information to NWC format, all links, scope boxes, and modeled content outside the building scope must be hidden within the view before export. NWC exports are to use the following Revit settings, which can be set in the “Export/NWC/Navisworks settings…”:

# QUALITY CONTROL



## OVERALL STRATEGY FOR QUALITY CONTROL

The BIM leadership within each discipline is responsible for maintaining the BIM standards outlined in this document to ensure that all BIM models are appropriate, accurate, and consistent. To achieve this, we will use various techniques, from visual inspections within Revit to possible clash detection in Navisworks.

## QUALITY CONTROL CHECKS

|  |  |  |  |
| --- | --- | --- | --- |
| CHECK | SOFTWARE  USED | RESPONSIBILITY | PERFORMED |
| VISUAL INSPECTION OF MODELS | REVIT | EVERYONE WORKING IN THE BIM MODEL | DAILY |
| CLASH /CLEARANCE DETECTION | NAVISWORKS | DISCIPLINE BIM MANAGER | TWICE A MONTH BEFORE COORDINATION MTG |
| MODEL INTEGRITY | REVIT | DISCIPLINE BIM MANAGER | BEFORE EACH MILESTONE |

## MODEL ACCURACY AND TOLERANCES

All models will be developed with accuracy or tolerance of [1/16" [1 mm]]. All dimensions will be to the [nearest 1/8" inch.] The Design Team must strive to create model elements that are accurate and complete for general coordination.

## CLASH / CLEARANCE DETECTION

Industry-standard modeling practices for design models will result in several clashes; some are critical to coordination, while other tertiary clashes must be filtered out. It is the role of each BIM Manager to filter these clashes to the critical items properly. The team will use [Navisworks] to aid in clash and clearance detection and general coordination. The team will develop sets of appropriate clash/ clearance analyses in parallel with the Level of Development of the model (see section 9.0). For example, at LOD 200, clash analysis must be performed for primary MEP systems, while at LOD 300, primary and secondary systems are to be included.

## MODEL INTEGRITY CHECK

Each discipline BIM manager is responsible for the integrity of their model. The items to check for include, but are not limited to:

* + 1. Data integrity
    2. Naming conventions per the BIM Execution Plan
    3. General modeling best practices
       - Appropriate element categorization
       - Correct hosting of elements
       - File size / family size
       - Purging of unused elements from the model
       - Phasing
    4. File linking
    5. Copy Monitoring of grids and levels
    6. Positioning

# TECHNICAL REQUIREMENTS



## SOFTWARE

The following releases are the current standard for the Project. All teams must use the same release; no team shall upgrade software without first consulting with the other groups.

**[Revit:** YYYY]

**[AutoCAD:** YYYY] **[Navisworks:** YYYY]

## HARDWARE

It is highly recommended that the minimum system requirements for Revit be as recommended by [Autodesk](https://www.autodesk.com/support/technical/article/caas/sfdcarticles/sfdcarticles/System-requirements-for-Autodesk-Revit-products.html).

System requirements for other [BIM-related products or platforms by Autodesk](https://www.autodesk.com/support/system-requirements/overview) can also be found on their website.

# BIM LEVEL OF DEVELOPMENT DEFINITION

## LOD 100

Level 100 Models include elements such as Masses and are used for preliminary studies, such as Conceptual Design and Overall Project Phasing. They can be analyzed based on their Location and Orientation. Quantities based on Overall Area and Volume can be obtained.

A screenshot of a computer generated image

Description automatically generatedA screenshot of a computer

Description automatically generated

*Figure 9.1: 3D view of Mass model and properties window displaying the Mass data parameters*

The images above show the Building Elements as Masses and their associated Area and Volume.

## LOD 200

Level 200 Models include elements in which Masses have been replaced with Generic Components. Analysis based on Overall Systems can be performed. Quantities based on specific Elements can be obtained.

A screenshot of a computer

Description automatically generatedA computer screen shot of a building

Description automatically generated

*Figure 9.2.1: 3D View of LOD 200 Model Figure 9.2.2: Generic Wall Quantities by Square Foot Area*

A screenshot of a computer

Description automatically generated

*Figure 9.2.3: Building Section and Properties bar displaying selected Roof element instance parameters.*

The images above show the different Building Elements as Generic Components. The major characteristics of components are their thickness and width, which allow quick takeoffs.

## LOD 300

Level 300 Models include elements in which Generic Components have been replaced with fully defined Assemblies. Analysis based on Specific Systems can be performed, and quantities based on Materials can be obtained.

The images above show the different Building Elements as fully defined Assemblies, where the different components have well-defined characteristics; therefore, a more specific takeoff can be performed.

At LOD 300, the model can be leveraged to generate traditional Construction Documents and coordinate between disciplines.

A building with a diagram

Description automatically generated with medium confidenceA screenshot of a computer

Description automatically generated*Figure 9.3.1: 3D View of LOD 300 Model Figure 9.3.2: Wall Material Quantities by Cubic Feet*

A screenshot of a computer

Description automatically generated

*Figure 9.3.3: Building Section and Properties bar displaying selected Wall instance parameters.*

A screenshot of a computer

Description automatically generated

*Figure 9.3.4: Brick Wall Assembly window displaying all its layers.*

## LOD 350

LOD 350 builds on LOD 300 by adding information about interfaces with other building systems. This level is crucial for detailed coordination between disciplines and advanced Construction documents.

A building with a glass roof

Description automatically generated with medium confidenceA screenshot of a computer

Description automatically generated

*Figure 9.4: 3D View of LOD 350 Model and Properties bar displaying selected Duct instance parameters*

## LOD 350+

LOD 350+ is an intermediate Level of Development in BIM that goes beyond LOD 350 but falls short of LOD 400. At this level, the model includes detailed non-geometric information, such as manufacturer data, serial numbers, warranty details, and performance characteristics (e.g., power usage and thermal capabilities). The geometric aspects of the model do not change from LOD 350; however, LOD 375 also starts to incorporate analytical data for purposes such as energy, solar, and structural analysis.

A screenshot of a computer

Description automatically generatedA computer generated image of a building

Description automatically generated

*Figure 9.5: 3D View of LOD 350+ Model and Properties bar displaying a Light Fixture's typical Data Type parameters.*

## LOD 400

Level 400 Models include elements that are accurate in terms of size, shape, location, quantity, and orientation with complete fabrication, assembly, and detailed information. At this level, the Model may also have non-geometric (3D) information such as text, dimensions, notes, 2D details, etc.

The image above shows a detail where 2D information has been placed on top of the 3D Model on a Section View.

The model represents the proposed elements at LOD 400. It can analyze energy performance, clash detection, sequencing, and cost.

A computer screen shot of a building

Description automatically generated

*Figure 9.6: 3D View of a LOD 400 Model and Properties bar displaying a framing stud's typical Data Type parameters.*

## LOD 500

LOD 500 represents the as-built condition, reflecting any changes made during construction. This level includes detailed information about all elements suitable for facility management and future renovations.

A computer screen shot of a building

Description automatically generatedA screenshot of a computer

Description automatically generated

*Figure 9.7: 3D View of a LOD 500 Model and Properties bar displaying selected metal panel's Data Type parameters.*

# UPDATES TO THE BIM EXECUTION PLAN

This BIM Execution Plan may be updated with additional information as the Project progresses. When updates occur, [Architect] will update the document along with the *[RG-2024 BIM Execution Plan Revision Log*] and distribute the updated BIM Execution Plan in PDF form to all organizations through the design phase.

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# MODEL INFORMATION

Refer to the following table for LOD levels of specific building elements at different design stages.

**Model Element Table**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **MODEL ELEMENTS** | | **SD** | | | **DD** | | | **CD** | | |
| **200** | **300** | **400** | **200** | **300** | **400** | **200** | **300** | **400** |
| **ARCHITECTURE + INTERIORS** | |  |  |  |  |  |  |  |  |  |
| WALLS | | • |  |  |  | • |  |  |  | • |
|  | FOUNDATIONS | • |  |  |  | • |  |  |  | • |
|  | FOUNDATION WALLS | • |  |  |  | • |  |  |  | • |
|  | EXTERIOR WALLS | • |  |  |  | • |  |  |  | • |
|  | INTERIOR PARTITIONS | • |  |  |  | • |  |  |  | • |
|  | STOREFRONT | • |  |  |  | • |  |  |  | • |
|  | CURTAIN WALL | • |  |  |  | • |  |  |  | • |
|  | CURTAIN WALL MULLIONS | • |  |  |  | • |  |  |  | • |
|  | CURTAIN WALL PANELS | • |  |  |  | • |  |  |  | • |
|  | REINFORCEMENT BARS |  |  |  |  | • |  |  |  | • |
|  | WALL INSULATION |  |  |  |  | • |  |  |  | • |
|  | WALL CAVITY |  |  |  |  | • |  |  |  | • |
|  | WALL TIES |  |  |  |  | • |  |  |  | • |
|  | WALL MEMBRANE |  |  |  |  | • |  |  |  | • |
| ROOF | | • |  |  |  | • |  |  |  | • |
|  | ROOF INSULATION |  |  |  |  | • |  |  |  | • |
|  | ROOF MEMBRANE | • |  |  |  | • |  |  |  | • |
|  | ROOF SOFFIT | • |  |  |  | • |  |  |  | • |
|  | ROOF SUBSTRATE |  |  |  |  | • |  |  |  | • |
|  | ROOF STRUCTURE (INCLUDING JOIST INFORMATION) | • |  |  |  | • |  |  |  | • |
| FLOOR | | • |  |  |  | • |  |  |  | • |
|  | FLOOR INSULATION |  |  |  |  | • |  |  |  | • |
|  | FLOOR MEMBRANE |  |  |  |  | • |  |  |  | • |
|  | FLOOR EXPANSION JOINTS |  |  |  |  | • |  |  |  | • |
|  | FLOOR SUBSTRATE |  |  |  |  | • |  |  |  | • |
|  | FLOOR STRUCTURE (INCLUDING JOIST INFORMATION) | • |  |  |  | • |  |  |  | • |
| OPENINGS | | • |  |  |  | • |  |  |  | • |
|  | CEILING OPENING | • |  |  |  | • |  |  |  | • |
|  | FLOOR OPENING | • |  |  |  | • |  |  |  | • |
|  | SHAFT OPENING | • |  |  |  | • |  |  |  | • |
|  | ROOF OPENING | • |  |  |  | • |  |  |  | • |
| ARCHITECTURAL WOODWORK | | • |  |  |  | • |  |  |  | • |
| DOORS | | • |  |  |  | • |  |  |  | • |
|  | DOOR GLASS | • |  |  |  | • |  |  |  | • |
|  | DOOR OPENING CUT | • |  |  |  | • |  |  |  | • |
|  | DOOR FRAME | • |  |  |  | • |  |  |  | • |
|  | DOOR HARDWARE |  |  |  |  | • |  |  |  | • |
| PLUMBING FIXTURES | | • |  |  |  | • |  |  |  | • |
| WINDOWS | | • |  |  |  | • |  |  |  | • |
|  | WINDOW GLASS | • |  |  |  | • |  |  |  | • |
|  | WINDOW MULLION | • |  |  |  | • |  |  |  | • |
|  | WINDOW OPENING CUT |  |  |  |  | • |  |  |  | • |
|  | WINDOW SILL |  |  |  |  | • |  |  |  | • |
|  | WINDOW FRAME |  |  |  |  | • |  |  |  | • |
| SPECIALTY EQUIPMENT | | • |  |  |  | • |  |  |  | • |
| CASEWORK | | • |  |  |  | • |  |  |  | • |
|  | CASEWORK/MILLWORK | • |  |  |  | • |  |  |  | • |
|  | HARDWARE |  |  |  |  | • |  |  |  | • |
|  | CASEWORK PANEL |  |  |  |  | • |  |  |  | • |
| CEILINGS | | • |  |  |  | • |  |  |  | • |
|  | CEILING INSULATION |  |  |  |  | • |  |  |  | • |
|  | CEILING STRUCTURE |  |  |  |  | • |  |  |  | • |
|  | CEILING MEMBRANE |  |  |  |  | • |  |  |  | • |
| FURNISHINGS + EQUIPMENT | | • |  |  |  | • |  |  |  | • |
|  | FURNITURE | • |  |  |  | • |  |  |  | • |
|  | SYSTEMS FURNITURE | • |  |  |  | • |  |  |  | • |
| GENERIC MODEL | | • |  |  |  | • |  |  |  | • |
| RAILING | | • |  |  |  | • |  |  |  | • |
| MATERIALS | | • |  |  |  | • |  |  |  | • |
| STAIRS | | • |  |  |  | • |  |  |  | • |
| TOPOSURFACE | | • |  |  |  | • |  |  |  | • |
| PLANTING | | • |  |  |  | • |  |  |  | • |
| RAMP | | • |  |  |  | • |  |  |  | • |
| ROAD | | • |  |  |  | • |  |  |  | • |
| FINISHES | | • |  |  |  | • |  |  |  | • |
| **STRUCTURAL** | |  |  |  |  |  |  |  |  |  |
| STRUCTURAL BEAM SYSTEMS | | • |  |  |  | • |  |  |  | • |
| STRUCTURAL COLUMNS | | • |  |  |  | • |  |  |  | • |
| STRUCTURAL FOUNDATIONS | | • |  |  |  | • |  |  |  | • |
| STRUCTURAL FRAMING | | • |  |  |  | • |  |  |  | • |
| STRUCTURAL TRUSSES | | • |  |  |  | • |  |  |  | • |
| **MECHANICAL (HVAC)** | |  |  |  |  |  |  |  |  |  |
| DUCT | | • |  |  |  | • |  |  |  | • |
|  | DUCT LININGS | • |  |  |  | • |  |  |  | • |
|  | DUCT ACCESSORIES | • |  |  |  | • |  |  |  | • |
|  | DUCT CURVES | • |  |  |  | • |  |  |  | • |
|  | DUCT FITTINGS | • |  |  |  | • |  |  |  | • |
|  | DUCT INSULATION | • |  |  |  | • |  |  |  | • |
|  | DUCT FITTING INSULATION | • |  |  |  | • |  |  |  | • |
|  | DUCT FITTING LINING | • |  |  |  | • |  |  |  | • |
|  | DUCT SYSTEM | • |  |  |  | • |  |  |  | • |
|  | DUCT TERMINAL | • |  |  |  | • |  |  |  | • |
|  | FLEX DUCTS | • |  |  |  | • |  |  |  | • |
| MECHANICAL EQUIPMENT | | • |  |  |  | • |  |  |  | • |
| SPACES | | • |  |  |  | • |  |  |  | • |
| **ELECTRICAL** | |  |  |  |  |  |  |  |  |  |
| CABLE TRAY | | • |  |  |  | • |  |  |  | • |
| CABLE TRAY FITTINGS | | • |  |  |  | • |  |  |  | • |
| CONDUITS | | • |  |  |  | • |  |  |  | • |
| ELECTRICAL EQUIPMENT | | • |  |  |  | • |  |  |  | • |
| ELECTRICAL FIXTURES | | • |  |  |  | • |  |  |  | • |
| LIGHTING DEVICES | | • |  |  |  | • |  |  |  | • |
| LIGHTING FIXTURES | | • |  |  |  | • |  |  |  | • |
| ELECTRICAL DEVICES | | • |  |  |  | • |  |  |  | • |
| **COMMUNICATIONS (TELECOM)** | |  |  |  |  |  |  |  |  |  |
| INFRASTRUCTURE | | • |  |  |  | • |  |  |  | • |
| DATA DEVICES | | • |  |  |  | • |  |  |  | • |
| SECURITY DEVICES | | • |  |  |  | • |  |  |  | • |
| TELEPHONE DEVICES | | • |  |  |  | • |  |  |  | • |
| OCCUPANCY SENSORS | | • |  |  |  | • |  |  |  | • |
| **PLUMBING** | |  |  |  |  |  |  |  |  |  |
| PIPES | | • |  |  |  | • |  |  |  | • |
|  | PIPE PLACEHOLDERS | • |  |  |  | • |  |  |  | • |
|  | PIPE INSULATIONS | • |  |  |  | • |  |  |  | • |
|  | PIPE CONNECTIONS | • |  |  |  | • |  |  |  | • |
|  | FLEX PIPES | • |  |  |  | • |  |  |  | • |
|  | PIPE ACCESSORIES | • |  |  |  | • |  |  |  | • |
|  | PIPE FITTING INSULATION | • |  |  |  | • |  |  |  | • |
|  | PIPE SEGMENTS | • |  |  |  | • |  |  |  | • |
|  | PIPE CURVES | • |  |  |  | • |  |  |  | • |
|  | PIPE FITTINGS | • |  |  |  | • |  |  |  | • |
| **FIRE PROTECTION** | |  |  |  |  |  |  |  |  |  |
| PIPES | | • |  |  |  | • |  |  |  | • |
| SPRINKLERS | | • |  |  |  | • |  |  |  | • |
| FIRE ALARM DEVICES | | • |  |  |  | • |  |  |  | • |