

Project BIM Execution Plan

[Project Name]

|  |  |
| --- | --- |
| Revision [Revision Number]  Submitted Date: [Submission Date]  Author Name: [Name]  Author Company: [Name]  Author E-mail: [Name] |  |

# BIM Execution Plan Overview

The intent of this project BIM Execution Plan is to provide a framework that will let the owner, architect, engineers, and construction manager to deploy building information modeling (BIM) technology and best practices on this project faster and more cost-effectively. This plan delineates roles and responsibilities of each party, the detail and scope of information to be shared, relevant business processes and supporting software. The BEP will be revisited and updated at each design phase and at the onset of construction. All text that is RED is for illustrative and guidance purposes by UCSD only and should not be construed as a formalized response to this execution plan. Items in red are for reference only and should be deleted or replaced with relevant project information.

# Section 1: Project Information

### Section 1.1 General Project Information

|  |  |
| --- | --- |
| Project Name | [Project Name] |
| UCSD Project Number | Click or tap here to enter text. |
| Project Location/Address | Click or tap here to enter text. |
| Contract Type/Delivery Method | Choose an item. |
| Project Size (GSF) | Click or tap here to enter text. GSF |
| Number of Floors | Click or tap here to enter text. |
| General Project Description | Click or tap here to enter text. |

### Section 1.3 Project Schedule

The table below identifies all stakeholders involved in completing the project phase milestones. Start and end dates correspond with the approved project schedule. The intent is to list broad time ranges for when the project team will be developing the design authoring models, construction models, and as-built and/or record models throughout the project. Stakeholders involved should be the contributing parties assigned to those tasks within the phases for the project. For discipline and system-specific model element LOD definitions and authors, the project team should complete a project BIM LOD Matrix (Appendix C of the University BIM Guide). Minimum University requirements for element LODs are denoted in the template BIM LOD Matrix.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Project Stage / Milestone** | | **Estimated Start Date** | **Estimated Completion Date** | **Project Stakeholders Involved** |
| Design Phase | | | | |
| Design Model | Programming/Concept Design  LOD 0-100 | Click or tap to enter a date. | Click or tap to enter a date. | Click or tap to enter stakeholder names. |
| Schematic Design  LOD 100-200 | Click or tap to enter a date. | Click or tap to enter a date. | Click or tap to enter stakeholder names. |
| Design Development  LOD 200-300 | Click or tap to enter a date. | Click or tap to enter a date. | Click or tap to enter stakeholder names. |
| Construction Documents  LOD 200-300 Complete | Click or tap to enter a date. | Click or tap to enter a date. | Click or tap to enter stakeholder names. |
| Construction Phase | | | | |
| Construction  Model | Construction Modeling/Coordination  LOD 350-400 Complete | Click or tap to enter a date. | Click or tap to enter a date. | Click or tap to enter stakeholder names. |
| Project close-out phase  As-Built/Record Model LOD Complete | Click or tap to enter a date. | Click or tap to enter a date. | Click or tap to enter stakeholder names. |

### Section 1.4 UCSD Standards

The project team acknowledges receipt of and has developed this BIM Execution plan and all other project deliverables referencing the following UCSD Standards:

|  |  |
| --- | --- |
| Considered | Standard Name |
|  | University BIM Guide |
|  | File Naming Convention |
|  | Space Naming Convention |
|  | University Facility Data Specification (FDS) |
|  | Asset Inventory Form (AIF) Requirements |
|  | University CAD Standards |
|  | Sheet and View Naming Convention |

# Section 2: Project Goals

### Section 2.1 Project goals leveraging BIM

The projects goals are described in the table below as well as the metric being used to measure their success. The team members have considered the BIM maturity of every stakeholder required to accomplish each goal and confirm that all goals listed are achievable.

The team members acknowledge the success of each goal can only be attained through a combined team effort by all required project participants as listed in the tables in this section.

|  |  |  |  |
| --- | --- | --- | --- |
| Priority / Measurement | Goal / Achieved if | Primary Responsibility | |
| Priority  High | Goal:  Turn over BIMs for each design discipline that represents the final design intent for use by UCSD to manage facility operations. | Owner / Operator | Request and approve disciplines and systems requiring record models with architect and GC. Ensure these requirements are included as part of the project LOD matrix. |
| Architect | Develop and execute process to reincorporate any design-intent changes into record model at end of project. Partake in all meetings necessary to define facility data requirements, BIM element needs at turnover, define and assign model responsibility for record and/or as-built models to ensure responsibility for each BIM scope is assigned to correct team member. |
| Builder / Contractor | Buy-out project from design-build subs with record model requirements, ensure each sub has a process to reincorporate design intent changes and update record models at the end of the project. |
| Subcontractors | For design-build subs, re-incorporate any design-intent changes into record model at the end of the project. Ensure facility data relates back to record model. Ensure process in place to validate final design intent is reflected in model. |
| Measurement | Achieved if:  Record models obtained from project team with:  100% as-managed components verified in model (components specified in FDS) with accurate locations verified in field +/- 6 inches. | Builder / Contractor | Field verify during walkthrough using field BIM tools reviewing record model with each subcontractor having record model requirements 100% of as-managed assets. |
| Architect | Field verify record models for 100% as-managed arch components in field, +/-6” with GC present. |
| Subcontractors | Updated record models provided with 100% of as-managed components located +/- 6 inches from field locations. Sign-off sheets with list of components verified, observed in field with representative of CM present. |

# Section 3: BIM Uses Summary

The preferred authoring platform for UCSD is Autodesk Revit. For convenience, the BIM Uses matrix below denotes the UCSD priority for each BIM use as it relates to design and construction**. Priority level 1 BIM uses are required for every design-construction project team using BIM** on University projects. See the University BIM Guide for more information.

### Section 3.1: BIM Uses Matrix

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Project Phase* | *BIM Uses* | *UCSD Priority* | *Applied to Project?* | *Software Applications Used* | *Team Member(s)* |
| Planning | Programming | 3 |  | Enter other application including version/year | Organization Name |
| Site Analysis | 3 |  | Enter other application including version/year | Organization Name |
| Existing Conditions Modeling | 2 |  | Revit 20XX Other Enter other application including version/year | Organization Name |
| Cost Estimation | 3 |  | Enter other application including version/year | Organization Name |
| Design | Design Authoring - Architecture | 1 |  | Revit 20XX Other Enter other application including version/year | Organization Name |
| Design Authoring - MEP | 1 |  | Revit 20XX Other Enter other application including version/year | Organization Name |
| Design Authoring - Structure | 1 |  | Revit 20XX Other Enter other application including version/year | Organization Name |
| Design Authoring - Civil | 1 |  | Civil 3D 20XX Other Enter other application including version/year | Organization Name |
| Design Authoring - Landscape | 1 |  | Revit 20XX Other Enter other application including version/year | Organization Name |
| Design Review/Visualization/Rendering | 1 |  | Enter other application including version/year | Organization Name |
| 3D Coordination | 1 |  | Navisworks Manage 20XX Other Enter other application including version/year | Organization Name |
| Structural Analysis | 3 |  | Enter other application including version/year | Organization Name |
| Mechanical/  Energy Analysis | 3 |  | Enter other application including version/year | Organization Name |
| Other Engineering Analysis | 3 |  | Enter other application including version/year | Organization Name |
| Lighting Analysis | 3 |  | Enter other application including version/year | Organization Name |
| Sustainability (LEED) Evaluation | 3 |  | Enter other application including version/year | Organization Name |
| Phase Planning (4D Modeling) | 3 |  | Enter other application including version/year | Organization Name |
| Cost Estimation | 3 |  | Enter other application including version/year | Organization Name |
| Code Validation | 3 |  | Enter other application including version/year | Organization Name |
| Existing Conditions Modeling | 2 |  | Revit 20XX Other Enter other application including version/year | Organization Name |
| Construction | Construction Modeling | 1 |  | Revit 20XX Other Enter other application including version/year | Organization Name |
| Digital Fabrication | 3 |  | Revit 20XX Other Enter other application including version/year | Organization Name |
| 3D Coordination | 1 |  | Navisworks Manage 20XX Other Enter other application including version/year | Organization Name |
| Site Utilization Planning (Logistics) | 3 |  | Enter other application including version/year | Organization Name |
| Construction System Design | 3 |  | Enter other application including version/year | Organization Name |
| 3D Control and Planning | 2 |  | Enter other application including version/year | Organization Name |
| Record Modeling | 1 |  | Revit 20XX Other Enter other application including version/year | Organization Name |
| 4D Modeling | 3 |  | Enter other application including version/year | Organization Name |
| Cost Estimation | 3 |  | Enter other application including version/year | Organization Name |
| Safety | 3 |  | Enter other application including version/year | Organization Name |
| Commissioning Data | 2 |  | Enter other application including version/year | Organization Name |
| As-Built Modeling | 1 |  | Revit 20XX Other Enter other application including version/year | Organization Name |
| Other BIM Use |  |  | Enter other application including version/year | Organization Name |
| Other BIM Use |  |  | Enter other application including version/year | Organization Name |
| Other BIM Use |  |  | Enter other application including version/year | Organization Name |

### Section 3.2 Other Tools

List other supporting tools (computational design, model checking/validation, field data collection, etc.) that will be used on the project, what they will be used to accomplish, and who will be the primary users:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Other Tools | **Software Applications Used** | **Mobile App?** | **Purpose/Use** | **Team Member(s)** |
| Application name and version. |  | Purpose or use of application. | Organization Name |
| Application name and version. |  | Purpose or use of application. | Organization Name |
| Application name and version. |  | Purpose or use of application. | Organization Name |
| Application name and version. |  | Purpose or use of application. | Organization Name |
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| Application name and version. |  | Purpose or use of application. | Organization Name |
| Application name and version. |  | Purpose or use of application. | Organization Name |

### Section 3.3 BIM Application Version Transition Plan

Describe the project teams plan for revisiting and managing software version upgrades throughout the project. This is especially important for multi-year projects:

Click or tap here to enter text.

### Section 3.4 Training Plan

Certain uses of BIM require multiple team members to access and use applications and tools administered by one lead team member who may have the most experience with the BIM tool in question. This section should describe any tools training offered by lead team members to align other contributing team members on best practices for these tools. List the tool or platform, team member who is offering the training, the team members who are recommended to receive the training.

Enter description of training program here.

# Section 4: Collaboration

### Section 4.1 Collaboration Strategy

Describe strategies for collaboration amongst the project team or between the project team and University stakeholders. These include approaches to alternative methods for setting up the project team offices, new structures for how meetings are conducted, and supporting tools and technologies for exchanging information and communicating.

**Document Management System:** E.g. BIM 360 Docs, Sharepoint, Box, etc.

**Model Collaboration/Exchange Platform or Common Data Environment (CDE) (if different from DMS):** E.g. BIM 360 Glue, Trimble Connect, Projectwise, Sharepoint, etc. Note if this changes from design into construction.

**Collaboration methods:** Will a Big Room approach be used? Will Lean methodologies be used and in between which project team members? Will video conferencing or other remote meeting tools be used? How does the team expect these methods to improve project outcomes?