

BUILDING INFORMATION MODEL (BIM) STANDARD

PART 1 – PURPOSE

1. The intent is to encourage design teams to work in a collaborative BIM environment and improve design efficiency and accuracy by utilizing 3D coordination.

PART 2 – PROJECT REQUIREMENTS

1. This BIM Standard will be required for any new construction/ renovation/ addition in which the total project cost exceeds \$2 million OR the project has been delivered to the design team in a BIM Model format.
2. Other projects are encouraged to follow the BIM Standard.
3. Provide Energy Model Report.

PART 3 – BIM EXECUTION PLAN

1. Included in the Schematic Design submittal, a BIM Execution Plan shall be submitted. This plan will include, at minimum, the following:
 - A. List all teams involved in BIM
 - B. BIM Goals
 - C. Identify Model Element Authors for each portion of the work
 - D. Model Progressions spec / Level of Development Schedule (LOD)
 - E. Authorized uses of the BIM
 - F. Exceptions
4. The intent of the BIM Execution Plan will be to create a framework for the implementation of the BIM model. The goal of this will be to identify issues early and develop a tool to measure success and performance throughout the project.

PART 4 – BIM FILE FORMATS

1. The Design Team is required to deliver the BIM Project Model in the following format:
 - A. Autodesk Revit, RVT (most current agreed-upon version)

PART 5 – CRITERIA OF MODEL

1. All design items will be included in the model and to scale.
2. All model elements will be accurately dimensioned and depicted.
3. Model Sheets will be included to match the Record Documents set.
4. The design team shall develop a model with a minimum LOD of 200 (below as an example).
 - A. All walls, windows, fenestrations, doors, etc. properly modeled.
 - B. All floors, slabs, and roofs modeled.
 - C. All rooms must be bounded, scheduled, and the element properties meet the Room Criteria.
 - D. Structural systems modeled.
 - E. Mechanical equipment, duct, and piping over 1” modeled.
 - F. Plumbing piping over 1”, fixtures, and equipment modeled.
 - G. Other major building elements modeled.
 - H. Electrical devices, lighting, conduit over 1”, and equipment modeled.
 - I. Technology devices and equipment modeled.
5. Room Documentation Criteria
 - A. The Room Naming and Numbering must be reviewed with Ivy Tech.
 - B. Each BIM room shall have properties which identify each space per FICM codes and are color-coded appropriately as below allowing for room identification per the Space Standards.
 - C. The Room Coding shall match the Space Standards and as follows:
 1. 100 – Classrooms (RGB: 202-210-191)
 2. 200 – Labs (RGB: 215-233-240)
 3. 300 – Offices (RGB: 163-188-218)
 4. 400 – Study Facilities (RGB: 191-099-064)
 5. 500 – Special use Facilities (RGB: 216-203-169)
 6. 600 – General Use Facilities (RGB: 216-155-128)
 7. 700 – Support Facilities (RGB: 178-161-151)
 8. WWW – Circulation (RGB: 235-235-235)
 9. XXX – Building Services (RGB: 188-190-192)

10. YYY – Mechanical Spaces (RGB: 255-231-154)

- D. Colored Floor Plans coded to Space Standards shall be presented with the Ivy Tech Color Scheme.
- E. All BIM rooms shall be accurately modeled and bounded to report the actual Assignable Square Feet (ASF).
- F. All spaces in a building must meet these requirements.

PART 6 – CRITERIA OF DELIVERABLE TO COLLEGE

- 1. Use elements and components to the standard practices of the firm.
- 2. Use firm or industry standard for naming of sheets, model elements, and component objects.
- 3. All discipline's model(s) shall be delivered to Ivy Tech. *This language allows for only the modeled geometry.*
- 4. All supporting files/references included and linked.
- 5. All links shall be relative.
- 6. All associated objects and supporting files.

PART 7 – RECORD DOCUMENTS

- 1. The Architect/Engineer is to deliver to Ivy Tech Community College record documents and the backbone BIM Model which is used to create the Contract Document Drawings. This model shall include all revisions associated with Addendum responses creating changes to the Contract Documents, ASI responses creating changes to the Contract Documents, RFI responses creating changes to the Contract Documents, Change Order responses creating changes to the Contract Documents, and any other field changes to the Contract Documents as part of the Record Documents.
 - A. Provide sheets in PDF format.
- 2. A Space Spreadsheet (.XLS Format) which includes the following:
 - A. Space Name
 - B. Space Code (Per Space Standards)
 - C. Total Summary by General Space Code (i.e. all assignable labs are 210, etc.).
 - D. Space by Space Assignable Square Feet
 - E. Building Gross SF
 - F. Building Assignable SF