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| **Georgia Tech BIM Execution Plan Template** | January 15,  2016 | |
|  | | Version 1.5 |

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# Agreement

By signature below, this BIM Execution Plan is herewith adopted and incorporated into the Agreement, dated \_\_\_\_\_\_\_\_\_, for Professional Design Services between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and Georgia Tech.

Owner Date

Architect Date

Construction Manager Date

Structural Engineer Date

Mechanical Engineer Date

Electrical Engineer Date

Plumbing Engineer Date

Additional Party as Needed Date

Additional Party as Needed Date

# Overview

The intent of this BIM Execution Plan is to provide a framework that will let the owner, architect, engineers, and construction manager 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 updated at each design phase and at the onset of construction.* ***All text that is RED is for illustrative purposes only, and should not be construed as a formalized response to this execution plan. Items in red are for reference only; items in RED should be deleted and/ or replaced with relevant project information.***

# Project Initiation

This section defines the Core Collaboration Team, the project objectives, project phases, and overall communication plan throughout the project’s phases.

## Project Information

|  |  |
| --- | --- |
| Project Name: |  |
| Project Number: |  |
| Project Address: |  |
| Project Description: |  |

## Core Collaboration Team

***List all stakeholders that form the project management team below. These individuals share in the responsibility of providing oversight pursuant to validation of the project program, cost and value.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Contact Name | Role/Title | Company | Email | Phone |
|  |  |  |  |  |
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## Project Goals and Objectives

***List all project goals and objectives below.***

|  |  |  |  |
| --- | --- | --- | --- |
| Project Goal | Objective | Achieved if | Project Timeframe |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
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## Collaborative Process Mapping (Coordination Plan)

***All stakeholders on the project are to briefly describe and identify their roles and responsibilities below. The purpose of the process map is to plan events, coordination, and the deliverables for each milestone. Role owners, described as a column will reflect their responsibilities per project phase.***

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Owner |  | Architect |  | Consulting Engineers |  | Construction Manager |  | Commissioning Agent |
| Programming/ Pre-Design Phase |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Schematic Design Phase |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Preliminary Design Phase |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Construction Documents Phase |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Agency Review & Bidding Phase |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Construction Phase (Contractor) |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Close-out (Design Team) |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Close-out (Contractor) |  |  |  |  |  |  |  |  |  |

## Project Phases / Milestones

***This section identifies all stakeholders involved in completing project phase milestones. Start and completion dates will correspond with the approved project schedule. Stakeholders involved shall be the contributing parties assigned to those tasks within the phases for the project.***

|  |  |  |  |
| --- | --- | --- | --- |
| Project Phase / Milestone | Estimated Start Date | Estimated Completion Date | Project Stakeholders Involved |
| Programming/ Pre-Design Phase |  |  |  |
| Schematic Design Phase |  |  |  |
| Preliminary Design Phase |  |  |  |
| Construction Documents Phase |  |  |  |
| Agency Review & Bidding Phase (Contractor) |  |  |  |
| *COBie Data transmitted from GC to Design Team* |  |  |  |
| *COBie Data transmitted from Design Team to Georgia Tech Facilities* |  |  |  |
| Close-out (Design Team) |  |  |  |
| Close-out (Contractor) |  |  |  |

# Modeling Plan

Advance planning around which models will need to be created during the different phases of the project, which will be responsible for updating models and distributing them, and predetermining the content and format of models as much as possible, will help your project run more efficiently and cost-effectively during every phase.

## Model Managers

Each party—such as the owner, architect, contractor, or sub-consultants—that is responsible for contributing modeling content should assign a model manager to the project. The model manager from each party has a number of responsibilities. They include, but are not limited to:

* Transferring modeling content from one party to another
  + - * Validating the level of detail and controls as defined for each project phase
* Validating modeling content during each phase
* Combining or linking multiple models
* Participating in design review and model coordination sessions
* Communicating issues back to the internal and cross-company teams
* Keeping file naming accurate
* Managing version control
* Properly storing the models in the collaborative project management system

|  |  |  |  |
| --- | --- | --- | --- |
| Stakeholder Company Name | Model Manager Name | Email | Phone |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
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# Design Team Software Requirements

## Authoring Software

The Design Team is required to use parametric BIM Authoring software for this project. All architects, engineers, and specialty consultants are required to use the following design authoring software in it’s current year version:

* Autodesk Revit Architecture
* Autodesk Revit MEP
* Autodesk Revit Structure
* Autodesk Civil 3D

The current year version of Revit verticals will be used throughout the life of the project

## Coordination Software

All final internal and external model coordination and conflict detection are required to use the following software in its native file format in it's current year version:

* Autodesk Navisworks

All AE teams should be able to use the following software in its native file format in its current version for communication with Georgia Institute of Technology:

* Bluebeam Revu PDF

## Construction Team Software Requirements

1. GC will use Autodesk Revit Architecture to author logistics models and to manage model deliverables from the Design Team.
2. Autodesk Navisworks Manage will be used to compile the system models and execute a comprehensive clash detection studies.
3. Sub-contractors will author their three-dimensional shop drawings and as-built models in a platform compatible with Autodesk Navisworks Manage.
4. The current year version of Autodesk Revit verticals will be used throughout the life of the project.

## Hardware Requirements

Design and Construction Team members shall utilize computer hardware that is sufficient to effectively handle single model files up to 750 MB and aggregate models of up to 2 GB. Design team should refer to the following website page under the heading of “Performance: Large, complex models” for hardware requirements.

http://knowledge.autodesk.com/support/revit-products/troubleshooting/caas/sfdcarticles/sfdcarticles/System-requirements-for-Autodesk-Revit-2016-products.html#performance

# Existing Conditions (if applicable)

1. Modeling of the existing conditions is to be performed by the Design Team based on Georgia Institute of Technology provided as-built information.
2. Design Teams will perform field surveys of the buildings to validate and document the accuracy of the as-built information.
3. MEP Design Team to verify the extent of the demolition work and to update Architects with necessary changes.

# Planned Models

In the table below, outline the models that will be created for the project. List the model name, model content, project phase when the model will be delivered, the model’s authoring company, and the model-authoring tool that will be used. For models that will not be used or created in your project, just leave the row blank, and add rows for model types you anticipate needing that are not already listed. ***Items in RED are listed as an example.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Model Name | Model Content | Project Phase | Authoring Company | Authoring Tool |
| Architectural Model | Architectural objects, code information |  |  | Autodesk Revit Architecture |
| Civil Model | Topography, site utilities to within 5 feet of perimeter, hard and soft surfaces, other site objects |  |  | Autodesk Civil 3D |
| Structural Model | Structural steel members, bearing and shear walls, analytical structural model, lintels |  |  | Autodesk Revit Structure |
| Mechanical Model | Mechanical systems, equipment, load information, utilities within 5 feet of building perimeter |  |  | Autodesk Revit MEP |
| Electrical Model | Electrical systems, equipment, load information, utilities within 5 feet of building perimeter |  |  | Autodesk Revit MEP |
| Plumbing Model | Plumbing systems, equipment, load information, utilities within 5 feet of building perimeter |  |  | Autodesk Revit MEP |
| Energy Model | Energy data, run iterations, life cycle costing, peak loads |  |  | Autodesk Ecotect/ EQuest |
| Construction Model | Scheduling information, sequencing information |  |  | Autodesk NavisWorks |
| Estimate Model | Costing data, quantity takeoffs |  |  | Autodesk Quantity Takeoff |
| Coordination Model | Design Intent Models and Fabrication information |  |  | Autodesk NavisWorks |

## Project Base Point

Each team shall maintain the following coordinates for the Project Base Start Point and Survey Point:

Project Base Point: TBD

Survey Point: TBD

The Architectural Design Model will be issued with these points already located, along with a Model group of crosshairs corresponding to each point.

Do not move or alter these points or any reason.

## File Naming Structure

As an aid to usability during later phases of your project, specify what the content, level of detail, and file naming structure of your models. Determine and list the structure for model file names and data format.

|  |  |
| --- | --- |
| File Names for Models Should Be Formatted as: | |
| *DISCIPLINE-Project Number-Building Number.rvt (example: ARCH-20090001-BL001.rvt). Confirm with GT.* | |
| Architectural Model | ARCH- |
| Civil Model | CIVL- |
| Mechanical Model | MECH- |
| Electrical Model | ELEC- |
| Plumbing Model | PLMB- |
| Food Service Model | KTCH- |
| Structural Model | STRC- |
| Telecommunications | TCOM- |
| Audio Visual | AVIS- |
| Energy Model | ENRG- |
| Construction Model | CNST- |
| Estimate Model | COST- |
| Coordination Model | COOR- |

### 

# Design Model Structure

## Model Element Rules, General Completeness of design

All physical building elements within the project are to be modeled (except those clearly defined and excluded in the MEA Table) and are to represent the full and complete design of each level and element of the building. For example, if a single level of a building is identical to another level, each level is to be distinctly and completely represented in the Design and Construction models. The same applies to identical partial floor layouts.

## Precision and Dimensioning

Models should include all appropriate dimensioning as needed for design intent, analysis, and construction. With the exception of the exclusions listed below, the model will be considered accurate and complete. In the table below, enter which items’ placement will not be considered entirely accurate and should not be relied on for placement or assembly.

|  |
| --- |
| Items that Will Not Be Considered Accurate for Dimensioning or Placement |
| Architectural – |
| MEP – |
| Civil – |
| Construction – |
| Food Service – |
| Structural – |

## Modeling Object Properties

The level of property information in the modeling objects and assemblies depends on the types of analysis that will be performed on the model. See Analysis Models Tablefor the types of analysis that will be performed.



### Model Attribute Data

The level of property information in the modeling objects and assemblies depends on the types of analysis that will be performed on the model.

Diagramming expected and anticipated events, solving workflow dynamics for the collaborative team will address the intent of the BIM project.

### Modeling Level of Detail

Model elements by discipline, Level of Development (LoD) and any specific attributes important to the project are documented below.

LOD by phase and discipline



The Project Team shall use the following Level of Development requirements to execute the project for each given phase.

**Exclusions: List the objects excluded from the model in the table below.**

|  |
| --- |
| Items that Will Be Excluded from the Model |
| Architectural – |
| MEP – |
| Civil – |
| Construction – |
| Food Service – |
| Structural – |

Size: Any object smaller than 1”will not be included in the model.

## Project Phases

1. The Architectural and Structural models will utilize phasing as follows:
   1. Existing
   2. Demolition
   3. New Construction
2. It should not be necessary for other disciplines to utilize phasing in their models.

## Design Model Ownership of Elements

|  |  |  |
| --- | --- | --- |
| Model Element | Discipline Owner | Discipline Usage |
| Grids | Architectural | A, M, P & E – Copy Monitor |
| Columns | Structural | A, M, P & E - Linked |
| Exterior | Architectural | S, M, P & E – Linked |
| Ramp slabs/stair steps & stair landing slabs | Architectural | S, M, P & E - Linked |
| Floor slabs | Structural | A, M, P & E – Linked |
| Foundation walls- retaining, stair/ramp walls, entry foundations | Structural | A, M, P & E – Linked |
| Roof deck (floor) | Structural | A, M, P & E – Linked |
| Roof finish (floor) | Architectural | M, P & E - Linked |
| RTU curbs | Mechanical | M, P & E - Linked |
| Mechanical curbs | Mechanical | A, P & E - Linked |
| Plumbing Fixtures | Architectural | A, S, M, & E - Linked |
| Mechanical Fixtures | Mechanical | A, P & E - Linked |
| Light Fixtures | Electrical | A - Linked |
| AV/IT Equipment | AV/IT | A, M, P, E - Linked |

# Detailed Modeling Plan

### Programming/ Pre-Design Phase

#### Objectives: Provide initial design based on conceptual parameters established by the owner, ensure that code and zoning requirements meet project objectives, and establish a 3D reference point of model coordination. Provide Program of Requirements and all space considerations for reference in the model.

#### Model Roles: A model may or may not take shape during the Conceptualization / Program of Requirements phase. If a model is created, its role will be to depict the visual concept and general layout of the project along with space requirements.

#### Responsibilities: The architect’s designated model manager will establish a baseline model to be used as the basis for other models. During the Conceptualization / Program of Requirement phase, the model managers from all parties will establish modeling standards and guidelines.

### Schematic Design Phase

#### Objectives: Provide spatial design based on input from the Conceptualization / Program of Requirement phase; provide initial design for building system and attributes including architectural, structural, and MEP; identify initial coordination issues between building systems; receive input from suppliers and fabricators regarding system cost, placement, fabrication and scheduling.

#### Model Roles: The Architectural model will show the general design and layout of the building structure and act as the baseline for all other subsystem designs, such as MEP and Structural models. The subsystem designs will be used to show the initial selection and layout of building components. The Architectural model and Consulting Engineers’ model will be used to inform the Energy Models. Refer to Georgia Tech’s Yellow Book for Energy modeling requirements.

#### Responsibilities: Once the baseline conceptual structure has been created, the architect’s model manager will send the model to the sub-consultants so they can develop their designs. The consulting engineers’ designated model managers will audit and deliver the completed models to the architect’s model manager. The architect’s model manager will review the models to ensure compliance with the phase requirements. Once the models meet the requirements, the architect’s model manager will link or combine cross-disciplinary models. The architect’s model manager should coordinate with the consulting engineers’ model managers to eliminate duplicate or redundant objects.

### Preliminary Design Phase

#### Objectives: Provide final design of building and building systems; resolve coordination issues between building systems; provide a Construction model capable of analyzing schedule, cost, and constructability.

#### Model Roles: The Architectural model will continue to act as the baseline for all other subsystem designs. The subsystem designs will be modified accordingly to represent the enhanced design.

#### Responsibilities: The consulting engineers’ model managers will use the Architectural model to revise and complete their designs. Once the models are complete, the consulting engineers’ model managers will deliver their models to the architect’s model manager. The architect’s model manager will review the models to ensure compliance with the phase requirements. The architect’s model manager will provide the construction manager’s model manager with the Architectural model and the Consulting Engineers’ models.

### Construction Documents Phase

#### Objectives: Finalize design of the building and all building systems, prepare documentation for agency review, and provide construction modeling that highlight constructability, trade coordination, and fabrication.

#### Model Roles: All design models will be used to reflect the design. The models will then be used to generate the contract documents. The Construction model will be used primarily for estimating, scheduling, and constructability analysis.

#### Responsibilities: The architect and engineer's model managers will prepare contract documents for agency review based on the Design Intent models.

### Agency Review & Bidding Phase

#### Objective: Revise Design Intent models based on agency feedback on all models.

#### Model Roles: The design models will be adjusted to reflect agency feedback. The Construction model will be enhanced and further used for estimating, scheduling, construction sequencing, trade coordination, and constructability analysis.

#### Responsibilities: The architect’s model manager will communicate agency comments back to the design team. The consulting engineers’ model managers will revise their design models accordingly and submit them back to the architect. The architect’s model manager will provide the construction manager’s model manager with the Architectural model and the Consulting Engineers’ models.

### Construction Phase

#### Objectives: Update Architectural and Consulting Engineers’ models based on submittals, RFIs, or owner-directed changes; maintain the Construction model based on construction activities. The construction team will submit RFIs and submittals through the collaborative project management system.

#### Model Roles: The Architectural and Consulting Engineers’ models will be revised throughout construction, based on owner directives and As Built comments. The models will always reflect the revised contract documents. The Construction model will be used for scheduling analysis, construction sequencing, and trade coordination.

#### Responsibilities: The architect’s model manager will work with their consulting engineers to answer the RFIs and submittals and adjust the models accordingly. The construction manager’s model manager will update the Construction model and will work with the architect to develop the Architectural and Consulting Engineers’ models.

## Facility Management- FM

Objective: Use the Architectural and Consulting Engineers’ models for facility management, with the possibility of use in ongoing operations. Georgia Tech Operations and Maintenance staff will use data from the Architectural Model and the General Contractor’s field data collection tools to populate FM databases. A set of objects or Revit Families in the model shall have COBie attributes for tracking data.The Revit Families/Objects to be tracked shall be determined on a “per project basis” with the Design Team and the O&M Area manager determining the objects to be tracked.

Model Roles: The Architectural and Consulting Engineers’ models will be used to represent the actual assembly of the building from construction.

Responsibilities: The Design Team shall update the Design Team’s BIM Model on a continual basis during the Construction Phase. The BEP shall be coordinated with the Design Team/Construction Team to allow for bi-weekly updates to track equipment specifications and as-built changes. The updates may be delivered from the construction team to the Design Team through shop drawings, product data, or by electronic data collection methods. (360 Field and 360 Glue). **The schedule shall have a milestone date established 4 months before the Material Completion date at which the updated Design Team’s model COBie data (in spreadsheet form) shall be delivered to the Georgia Tech.**

#### 

## Analysis Plan

By listing and specifying what types of analysis your project will likely require at the beginning of your project, you can ensure that your key models will include the relevant information, making the analysis easier and more efficient.

### Analysis Models

Your project’s scope of work may require performing certain kinds of analysis, such as the ones listed below, based on existing or specially created model(s). In most cases, the quality of the analysis depends on the quality of the original model that the analysis is derived from. Therefore, the project team member performing the analysis should clearly communicate the analysis requirements to the original model authoring team member.

#### Quantity Takeoff Analysis

The objective of quantity takeoff analysis is to use modeling property data to automate or simplify the quantity takeoff process. This information from the quantity takeoff tool can then be imported or tied to cost-estimating software. In order for the quantity takeoff process to work seamlessly, the original modeling author will need to include the relevant property information in the design and an agreement of modeled content communities to estimate.

#### Scheduling Analysis

Scheduling analysis lets the project team use the project model to analyze the timeline and sequencing for construction. This information can then be used to modify or adjust the construction schedule. Tools currently exist that allow project team members to visualize the construction over time, but no systems exist yet that interact automatically with scheduling tools.

#### Visualization Analysis

Visualization tools let the project team view the design or construction of the project in 3D, giving them a more accurate perspective of the product.

#### Energy Analysis

Energy Analysis tools help the project team evaluate the impact of design decisions on sustainability and energy consumption. This analysis model is usually based on the main Architectural model, after which material and building system inputs can be used to evaluate the project’s sustainability and energy consumption. Refer to Georgia Tech’s Yellow Book for Energy modeling requirements.

#### Structural Analysis

Structural analysis tools use the model to analyze the building’s structural properties. Structural analysis programs typically use the finite element method (FEM) to measure the stresses on all structural elements of the design. For structural analysis to work seamlessly, the original structural modeling tool needs to be compatible with the structural analysis tool, and the original structural model property data must include information about the structural elements.

## Detailed Analysis Plan

For each type of analysis that may be performed for your project, list the models used for the analysis, which company will perform the analysis, the file format required for the analysis, the estimated project phase, and the analysis tool that will be used. If there are, other special instructions associated with the analysis, mark the Special Instructions column and list the details in the Special Instructions table in the next section.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Analysis | Analysis Tool | Model | Analyzing Company | Project Phase | File Format Required |
| Visualization |  | Architectural & Structural Model |  |  | .rvt/.nwf |
| Structural |  | Structural Model |  |  | .rvt |
| Quantity Takeoff |  | All Models |  |  | .rvt |
| Scheduling /4D |  | All Models |  |  | .rvt/.nwf |
| Cost Analysis /5D |  | All Models |  |  | .rvt/.nwf |
| Energy/LEED |  | Architectural Model |  |  | .IFC/ .rvt/.gbXML |
| Daylight/Lighting |  | Architectural Model |  |  | .IFC/ .rvt/.FBX |

## Interference Checking/Clash Detection Process

Interference checking is done to check for interferences between the designs of one or many models. To reduce change orders during construction, interference checking should be performed early and continue throughout the design process. For interference checking to work properly, your project’s models need to have a common reference point and they must be compatible with the interference checking tool. The design team will link individual models via shared coordinates as the common reference point to run interference reports. For clash detection the contractor will need to link all models via shared coordinates. Interference reports will be generated at PD, 50% CD and 95% CD. After the completion of the construction document model phase, the design team will analyze final interference reports and coordinate necessary changes based on construction document phase models. This process may take several weeks and is listed as a model role and responsibility in section 4.2 “Agency Review & Bidding Phase”.

# Concurrent As-Built Modeling Plan

As-built modeling will be a collaborative effort between the Architect and consultants and the construction team. During the construction process, the design team will incorporate changes triggered by requests for information (RFIs), architect’s supplemental instructions (ASIs) and change orders in into the Architectural and Consultant models. At specified dates during the construction process, the construction team will provide the design team with necessary changes due to shop drawings, coordination drawings and change orders. As required, the completed form of the construction will also be verified at these specified dates using laser scanning. The design team will then incorporate the changes reported by the construction team into the Architectural and Consultant models. At the end of construction, it will be the updated Architectural and Consultant models that are used for facility management.

# Design Model Update Plan

Design model updates will be a collaborative effort between the Architect and consultants and the construction team. During the construction process, the design team will incorporate changes triggered by requests for information (RFIs), architect’s supplemental instructions (ASIs) and change orders into the Architectural and Consultant design models. At specified dates during the construction process, the construction team will provide the design team with necessary changes due to requests for information (RFIs), architect’s supplemental instructions (ASIs) and change orders. Scheduled data transfers will begin with the posting of models every other Friday for the first several months. Scheduled postings will decrease to a monthly cycle at an agreed upon date in the future. As required, the completed form of the construction will also be verified at these specified dates via contractor as-built redlines. The design team will then incorporate the changes reported by the construction team into the Architectural and Consultant models (these changes will not include MEP systems that have been reengineered by subcontractors). At the end of construction, the updated Architectural and Consultant models will be used for facility management. The contractor will update all fabrication models and construction models based on as-built conditions. Any deviations from approved shop drawings should be recorded via RFIs and/or as-built models.

# Construction Capture Schedule

|  |  |  |
| --- | --- | --- |
| Event | Date | Parties involved |
| Construction Capture 1 |  | Construction team, Design Team, [Laser Scanning] |
| Construction Capture 2 |  | Construction Team, Design Team, [Laser Scanning] |
| Construction Capture 3 |  | Construction Team, Design Team, [Laser Scanning] |
| Construction Capture 4 |  | Construction Team, Design Team, [Laser Scanning] |

# Collaboration Plan

Creating a collaboration plan early on—including defining permissions and file structures—will help team members efficiently communicate, share, and retrieve information throughout the project. It lets you get the most out of your collaborative project management system, saving time and increasing your ROI.

# Document Management

A collaborative document management system will have to be researched and agreed upon prior to start of project. The requirements of the Collaborative Project Management system are:

* Be web-based or web-enabled—so all relevant, authorized project team members can remotely access it.
* Accommodate different permissions profiles for different project team members.
* Allow communication through either internal messaging or system-generated email.
* Include document management capability that lets the project team create a customized and permission-based folder structure, which offers upload, download, and version control capabilities.
* Include a viewer that allows the project team to view .dwg, .dgn, .plt, .dwf, .pdf, .tif, .jpg, .doc, and .xls files.
* Include 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.
* Able to automatically accept raw data from the clash detection tool.
* Include bid management capability, and this bid management solution should allow the project team to post the contract drawings and specifications for viewing in the form of a Plan Room.
* Allow for cost management controls, and this cost management capability should include budgeting, contracting, change orders processing, and payments applications tracking.
* Allow the project team to run reports based on the information in the system.
* Allow for the workflow and routing throughout the document, construction and cost management components of the solution.

# Document Management Solution

A document management solution will be provided by the architect. The document management solution that will be used is called [TBD]. The architect will setup the site and set up all permissions for the site. The architect will lead a training session for the entire project team on how to use the site. The site will be maintained from the signing of this BEP document until the occupation of the building. These files will not necessarily remain on the site for any extended period of time. The architect will notify key team members of pertinent posting on the site.

1. Beginning in the CD Phase, Architectural, Structural, Mechanical, Plumbing, and Electrical models will be uploaded by EOD every Friday. Electric Lighting and AV/IT models will be uploaded two weeks prior to each deliverable.
2. Links to the model uploads shall be sent to BIM Point of Contact from each design discipline.
3. Before sending your file for exchange, do the following:
   1. Open Revit
   2. Select the file using the dialog box and check both ***Detach from Central*** and ***Audit*** checkboxes.
   3. Save the project to the proper subfolder in the Outgoing folder.
   4. Remove all links (Revit and CAD)
   5. Purge all unused families
   6. **Synchronize with central to remove your ownership from the worksets**.
      1. Be sure to select  ***Synchronize and Modify Settings.***
      2. Check all boxes that are not shaded including **Compact File**.
      3. Make sure they are named as set forth in Section 6.6.

# Supplementary Documents

* MEA Table (sample document)
* GT COBie Objects for O&M Tracking Spreadsheet (sample document)