

**Engineering Department**



# Engineering Operations BIM Guidelines

*Last Updated: 07/01/2020  
Reviewed/Released 2020 v1.0*

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**DOCUMENT CONTROL**

Document History				
Version	Issue Date	Author	Details of Changes	Approved by
2020 v1.0	2020-07-01	Saravia, Maria Laura	First published version	Turner, Ashley

## 1.0 INTRODUCTION

### 1.1 PURPOSE

The BIM Guidelines has been established to assist professionals using the BIM Standards. This is an official document with instruction for all BIM Models developed for The Port Authority of NY & NJ. Within this document, you will find how-to documents, tutorials and good practices written to accomplish the Agency BIM Standards.

The goal of this BIM Guidelines is to establish highly effective process that will ensure consistent BIM data for all the BIM models during all project life cycles.

These instructions are intended to improve the process of building design and construction. If you feel that any of the standards are causing design or construction issues, you should bring them immediately to the attention of the VDC support team.

This document should be read in conjunction with the following:

**Table 1-1 - Associated Materials**

Document	Type	Owner
VDC Requirements	Standard	The Port Authority of NY & NJ
BIM Standard	Standard	The Port Authority of NY & NJ
CAD Standard	Standard	The Port Authority of NY & NJ
Model Development Specification	Specification	The Port Authority of NY & NJ
Support files (*)	Templates	The Port Authority of NY & NJ

**(\*)Support files:** To promote consistency in the contract set as well as the Revit models created, the PANYNJ Revit templates contain several predefined settings.

All Revit projects must be created using one of the templates provided with the BIM Standard, which are:

- PA-TEMPLATE SM.rte
- PA-TEMPLATE ARCHITECTURAL.rte
- PA-TEMPLATE ELECTRICAL.rte
- PA-TEMPLATE MECHANICAL.rte
- PA-TEMPLATE STRUCTURAL.rte
- PA-TEMPLATE VERTICAL TRANSPORTATION.rte

Do not alter the settings within the template files. If needed, changes will be discussed and approved by the VCD Group. All specific requirements should be defined in the project BEP.

## 1.2 TEAM ROLES AND RESPONSIBILITIES

It is important for the team to adhere the process as stated on the BIM standards. Both the VDC group and EAD team need to have project integrators and quality controls throughout the life of the project.

The specific roles should be defined as part of the organization structure:

**LEA:** Leader of the project that usually stand up from the project main discipline. Their responsibilities are: Notify VDC support group if changes are required in the project, coordinate clash detection meetings, request the VDC Support Group to review the models for compliance.

**BIM Coordinator / Task Leader:** Person designated as responsible in charge for each discipline. Responsibilities: Create specific BIM content, run discipline specific clash detection and responsible for saving files in the correct folders.

**Designers:** Designers are specialists using Revit and other BIM software. Their responsibility is modeling and develop the project specifications in the Design Stage.

**Consultants/ Contractors:** External project development. They submit the models to be reviewed by VDC support group.

**VDC Support Group:** The VDC Support Group provides templates that must be use and content for modeling. Also giving orientation in the process. The PA BIM STANDARDS are updated every year to make the process more efficient and help in the different parts involved.

## 2.0 HOW TO PASS A BIM STANDARD COMPLIANCE REPORT

The VDC group is responsible for reviewing all Port Authority models. This review usually takes 3 working days after the request is submitted. If you are the LEA and you need help in the process of request a review, you can read the section [“How to request a BIM review”](#). Remember to include all necessary files and relevant information.

The compliance report has different sections described below, and all of them have a list of items. In order to pass a regular BIM review, the models should have no more than 3 “NO” in the Overall performance summary. We understand that all BIM files are “living elements” as part of a process.

If you are having a PA Wide Review all items should be “YES” without exception.

Report Structure: 3 Main Sections

**Area 1** (Image below): “BIM STANDARDS REVIEW REPORT”

In this section you can find the project Revit file information and the results of the review.

Main and descriptive data related to the Project: Facility Name; PID Number; Project Title; Contract Number; Stage; Date Submitted; File Reviewed; Date Reviewed; Confidential; Confidential Privileged; Discipline; Task Leader (if applicable); LEA; Lead Discipline; Consultant/Contractor (If applicable); Submittal Percentage; Initial Review Date; Reviewed by; Due Date (N/A in Stage IV).



PORT  
AUTHORITY  
NY NJ  
AIR LAND RAIL SEA

Engineering Operations Project Controls - VDC Group

**BIM - COMPLIANCE REPORT**

**ACCEPTED**

Reviewed By: Panozzo, Maria

**PROJECT INFORMATION**

Facility Name:	PATH	Review Type:	Submittal
Contract Number:	PAT-774.216	Submittal Percentage:	100 %
PID Number:	02110000		
Project Title:	Replacement of Substation #8	Date Submitted:	6/18/2020
Stage:	4	Date Reviewed:	6/26/2020
Lead Discipline:	Architecture	Due Date:	
LEA:	Plaskovsky, Izyaslav	Task Leader:	N/A
Resident Engineer:		Discipline:	Architecture
Consultant/Contractor:	Yonkers	File Reviewed:	A02110000-3D_CENTRAL.rvt
Confidential:	No	Confidential Privileged:	No

**Area 2** (Image below): “OVERALL PERFORMANCE SUMMARY”

In this area you will find 7 sections with different reviewed items:

- GENERAL
- PROJECT SETTINGS (some project settings already in the template)
- NAMING CONVENTION (PA naming convention according with the PA standards)
- MODEL INTEGRITY (reviewed in the working space)
- STYLES (settings from the original PA Revit templates)
- PLAN SET PREPARATION (completed data in the sheets, if applicable)
- PDF SUBMITTALS (PDF file if applicable)

All items are mandatory, in each one of them there is a status:

- YES (that shows its compliant with the PA Standard);
- NO (if the Standard is not achieved).

For a detailed description read the following section “BIM Review Item by Item”



PERFORMANCE SUMMARY			
<b>GENERAL</b>	YES	<b>NAMING CONVENTION</b>	YES
File Availability	Yes	Revit File:	Yes
Folder Structure:	Yes	AutoCAD Files:	N/A
Model Size:	Yes	PDF Filename:	N/A
<b>PROJECT SETTINGS</b>	YES	WorkSets:	Yes
Project Coordinates:	Yes	Annotation Families:	Yes
AutoCAD Links:	N/A	Model Families:	Yes
Revit Links:	Yes	Levels:	Yes
Project Units:	Yes	Views:	Yes
Project Browser:	Yes		
<b>MODEL INTEGRITY</b>	YES	<b>STYLES</b>	YES
Phases:	Yes	Objects:	Yes
Worksets:	Yes	Symbols:	Yes
Overlapping Objects:	Yes	Tags:	Yes
Object Hosting:	Yes	Texts:	Yes
Object Category:	Yes	Dimensions:	Yes
Parameter Assignment:	N/A	Lines:	Yes
Model Cleanup:	Yes	Regions:	Yes
LOD:	N/A		
DRAWINGS PERFORMANCE SUMMARY			
<b>PLAN SET PREPARATION</b>	YES	<b>PDF SUBMITTALS</b>	YES
Project Information:	N/A	Full Size:	N/A
Drawing Information:	N/A	Grouped by Drawing Type:	N/A
Title Sheet (Lead):	N/A	Black & White:	N/A
Contract Border:	N/A		
Professional Stamps:	N/A		
No Linework in Sheets:	N/A		

2

NOTES	
<b>MODEL INTEGRITY</b>	
1. All elements must be assigned to the correct Workset. Check Worksets to ensure all elements are correctly assigned. 2. Overlapped or duplicated objects have been found. Check the area of the stairs. 3. Some Generic models should be renamed and recategorized (PA EAD-BIM Standard – REVIT MODEL FAMILY FILES). 4. Parameters must be properly assigned to elements according to their current Construction Status. All items must contain a Parameter that Reflects the Current Construction Milestone achieved for that item BOD, AS, AC.	
<b>NAMING CONVENTION</b>	
1. Naming convention must follow: "<Category>-<Manufacturer>-< Description and/or Model Number>"	

3

**Area 3 (Image above): "NOTES"**

Here we include a brief record of comments, or thoughts, written down for further explanation per every failed item or if we need to comment about something that needs a small adjustment.

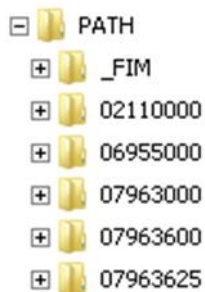
## 3.0 BIM COMPLIANCE REVIEW ITEM BY ITEM

### 3.1 GENERAL

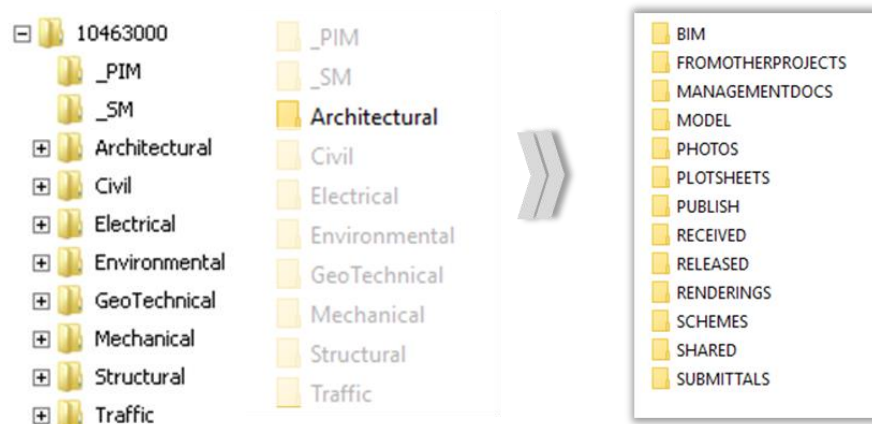
#### 3.1.1 PA FOLDER STRUCTURE

Files should be saved in their proper folder.

**Facility Folder:** All Port Authority of NY & NJ E/A Design Division BIM projects are stored on a central server, which has internally been mapped using the drive letter "R." The Engineering BIM Server (R:\ drive) is divided into facility folders.



The PID Number is a unique identifier assigned for all Port Authority of NY & NJ BIM projects. Every facility folder within the Engineering BIM server has been divided into project folders using an eight-digit PID Number.




Inside the project folder you will find the specific discipline folder and all the internal folders for saving all files needed in a project.

All parties involved shall adhere to the folder structure requirement. You can check the BIM Standard [Section 7.2](#) Folder Structure for more information. If you are a consultant, please replicate the folder structure in your process.

#### 3.1.2 MODEL SIZE

Model size should not exceed the limit suggested (500MB). Heavy files could affect the model performance.

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 A17017000-3D_CENTRAL	12/24/2018 10:56 ...	Revit Project	435,624 KB
 A17017000-3D_CENTRAL_ENC	12/24/2018 10:59 ...	Revit Project	550,928 KB
 A17017000-3D_CENTRAL_FFE	12/24/2018 10:55 ...	Revit Project	410,140 KB
 A17017000-3D_CENTRAL_GEN	12/18/2018 6:50 PM	Revit Project	69,860 KB
 A17017000-3D_CENTRAL_INT	12/18/2018 8:33 PM	Revit Project	132,608 KB
 A17017000-3D_CENTRAL_PBB	12/24/2018 3:23 PM	Revit Project	28,620 KB
 A17017000-SC_CENTRAL	12/18/2018 6:50 PM	Revit Project	95,908 KB

The process of developing a Revit model sometimes leads to heavy files, which the regular computers aren't capable of processing. When a file reaches this state, it is recommended to split such a heavy file into lighter ones, that allow us to work with minor parts of the project at a smaller computational cost. Model splitting can be done by area, level or subsections if needed.

If you are working on a very large model, please contact the VDC group and we can plan how to split that model into smaller sections.

## 3.2 PROJECT SETTINGS

### 3.2.1 COORDINATE COOLING SYSTEM

The project coordinate system will be established in the BIM Site Model file provided by the Authority and shall not be modified. Project disciplines must acquire coordinates from the site model. This information should be described in the BEP (BIM Execution Plan). You can check the BIM Standard [Section 6.3](#) Coordinate System for more information.

### 3.2.2 AUTOCAD LINKS

All DWG files must be linked, pinned and stored in the discipline's background folder. The Import CAD Tool should never be used instead of the Link CAD Tool since the Revit-based applications handles AutoCAD entities individually, decreasing overall model performance. Avoid if possible, working with dwg files. We recommend having all elements and standard details done inside Revit, and not using a CAD file imported in a drafting view. You can check the BIM Standard [Section 7.4.1.2](#) Linking AutoCAD Files for more information.

### 3.2.3 REVIT LINKS

When working with other disciplines, you are required to link the Revit model files into each other. All project Revit files should be linked, including the site model. All external Revit models must be linked and pinned. You can check the BIM Standard [Section 7.4.1.1](#) Linking Revit Files for more information.

### 3.2.4 PROJECT UNITS

Units are set up on each Revit template and shall not be modified unless needed for a major purpose.

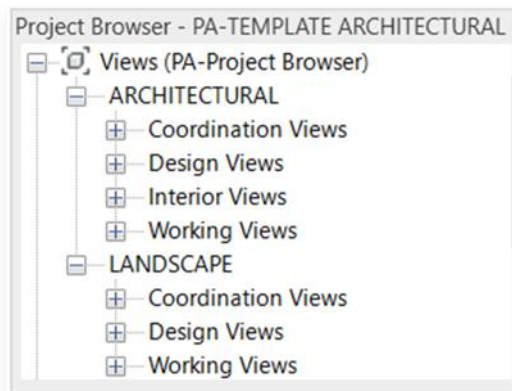
Discipline:	Common
Units	Format
Length	1' - 5 3/8"
Area	1234.57 SF
Volume	1234.57 CF
Angle	12.35°
Slope	12.3 [%]
Currency	\$1,234.57
Mass Density	1234.57 lb/ft <sup>3</sup>

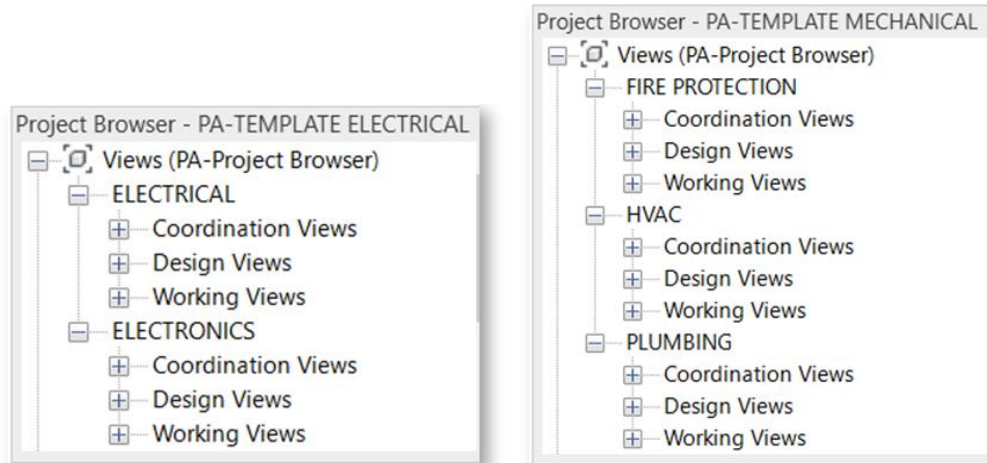
### 3.2.5 PROJECT BROWSER

Customized Revit project browser has been included within the different discipline Revit templates, in which views and sheets within the project browser will be grouped based on the PA-View Classification as follows:

PROJECT BROWSER	
PA - VIEW CLASSIFICATION	DESCRIPTION
Coordination Views	Views are intended to be the views that maintain the coordination across the different discipline Revit models as well as for coordination purposes only. These types of views include Floor Plans, Ceiling Plans, 3D Views and Elevations.
Design Views	Views intended to be included in the sheets for a presentation or a contract set.
Interior Views	Views are intended to be the views for Interior Design. These types of views include Floor Plans, Interior Elevation, Sections, Reflected Ceiling Plans and 3D Views.
Working Views	These types of views are for working purposes only and not intended to be included in the contract set.

Project browsers are broken down into specific categories of views. As you expand and collapse each branch, lower-level items display. See examples below for each discipline Revit template (See Figure 3 1, Figure 3 2, Figure 3 3 and Figure 3 4)



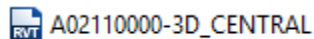


All views within the project browser must be assigned to the proper sub-discipline and view classification. New sub-discipline categories can be created but must contain PA predefined view classification structure. You can check the BIM Standard [Section 7.4.4 Project Browser](#) for more information.

### 3.3 NAMING CONVENTION

#### 3.3.1 REVIT FILES

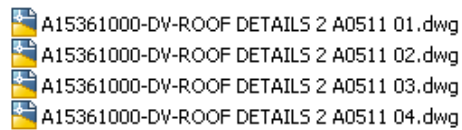
The file should follow the naming convention established in the BIM standard. For this item the naming convention is the following: DPID-MT\_CENTRAL.rvt



You can check the BIM Standard [Section 5.1.2 Naming Convention](#) for more information.

#### 3.3.2 AUTOCAD FILES

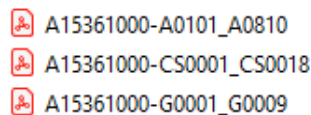
The file should follow the naming convention established in the BIM standard. For this item the naming convention is the following: DPID-SN/DT-Description.dwg



You can check the BIM Standard [Section 5.1.4 Naming convention](#) for more information.

#### 3.3.3 PDF FILENAME

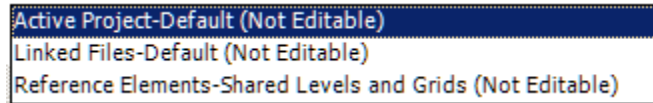
The file should follow the naming convention established in the BIM standard. For this item the naming convention is the following: DPID-DT-001\_###.pdf



You can check the BIM Standard [Section 5.1.3 Naming Convention](#) for more information.

### 3.3.4 WORKSETS

The file should follow the naming convention established in the BIM standard. For this item the naming convention is the following: Location-Description / Function/system-Description



You can check the **BIM Standard** [Section 5.2.4 Naming Convention](#) for more information.

### 3.3.5 ANNOTATION FAMILIES

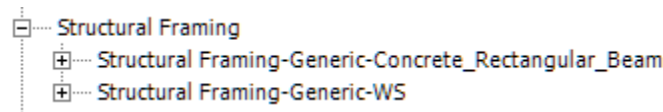
The file should follow the naming convention established in the BIM standard. For this item the naming convention is the following: PA-Description

... PA - GRID HEAD NEW  
 ... PA - LEVEL HEAD  
 ... PA - REPORT BORDER (STAGE 1) 22X34  
 ... PA - SECTION HEAD SECTION  
 ... PA - SECTION TAIL VERTICAL  
 ... PA - SPAN DIRECTION  
 ... PA - SPOT ELEVATION  
 ... PA - STRUCTURAL FRAMING TAG (STAGE 1)

You can check the **BIM Standard** [Section 5.2.3 Naming Convention](#) for more information.

### 3.3.6 MODEL FAMILIES

The file should follow the naming convention established in the BIM standard. For this item the naming convention is the following: Category-Manufacturer-Description or Model Number



You can check the **BIM Standard** [Section 5.2.1 Naming Convention](#) for more information.

### 3.3.7 LEVELS

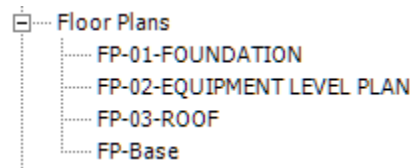
The file should follow the naming convention established in the BIM standard. For this item the naming convention is the following: D – LEVEL (D: Description)



You can check the **BIM Standard** [Section 5.2.6 Naming Convention](#) for more information.

### 3.3.8 VIEWS

The file should follow the naming convention established in the BIM standard. For this item the naming convention is the following: View-Level/Sequence-Description



You can check the **BIM Standard** [Section 5.2.5 Naming Convention](#) for more information.

**NOTE:** The Revit-based applications creates a relationship between the level and the floor plans, so when the level name is changed, the associated name for the floor plan and the reflected ceiling plan can update automatically. Users will be given the option to rename the corresponding level views (Floor Plan and Reflected Ceiling Plan) if the level name is changed. If so, the relationship between both will be broken. It is crucial to break this name link when using views, relationship between the level and the floor plans shouldn't have the same structure. Naming convention for levels is different than naming convention for views.

The view name displays in the project browser and in the title bar of the view. It also displays as the name of the viewport on a sheet, unless you define a value for the Title on Sheet parameter.

Title on Sheet: The name of the view as it appears on the sheet; it supersedes any value in the View Name property. Use capital letters for view titles.

## 3.4 MODEL INTEGRITY

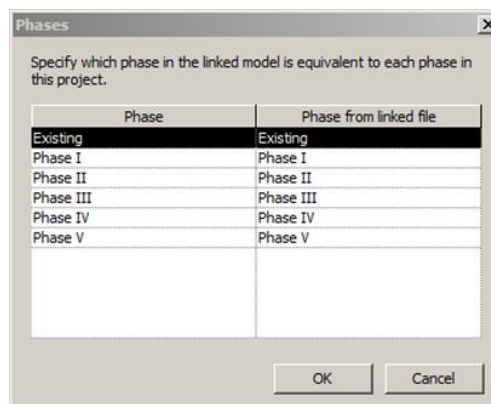
### 3.4.1 PHASES

Phasing allows representation of different elements of the model in different time periods in the life of the project for design, scheduling and construction purposes. All objects added to a project have a phase created and a phase demolished parameter.

Phases can be created to match the project phases as necessary.

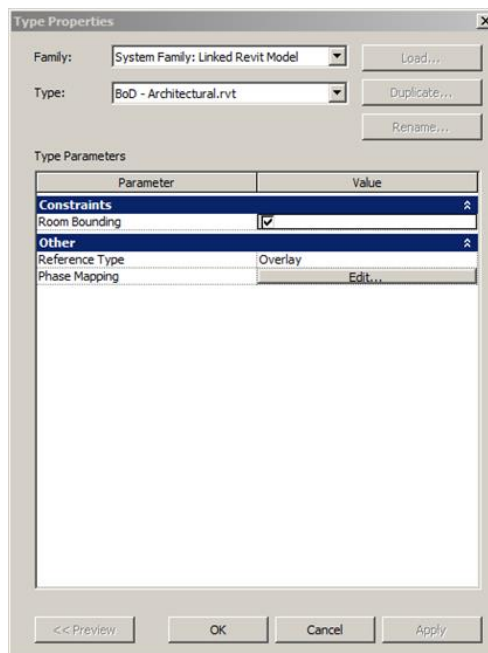
The phase should follow the naming convention established in the BIM standard. For this item the naming convention is the following:

"<Phase RN>" (RN: Roman Number)



**NOTE:** When working with phases on a multi-disciplinary project, it is critical to match phases across the different discipline models. Select each of the linked models and go to their type properties and select the Edit button right next to the Phase Mapping parameter as shown in the image to the right.



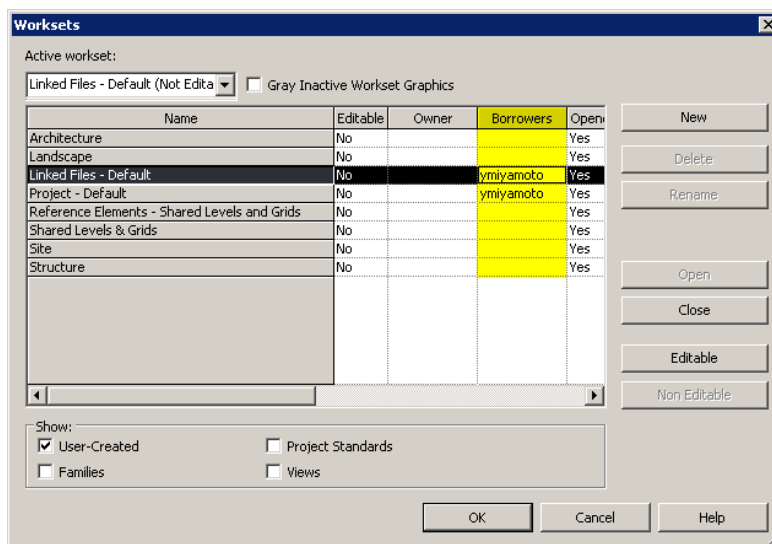


This will open the Phases dialog box as shown in the image above. Match the phase of the Host Model (Left Column) with the ones of the Linked Model (Right Column)

You can check the **BIM Standard [Section 5.2.7 Phases](#)** for more information.

### 3.4.2 WORKSETS

A workset is a collection of elements, such as walls, doors, windows, stairs, etc. that can be accessed by multiple users at a given time but ensures that individual elements are only ever edited by a single user at a time. No member of the team should ever be listed as an owner of a workset but should instead be listed as a borrower. This ensures that they have not locked out other team members from editing all content on that workset. All elements must be assigned to the correct workset.



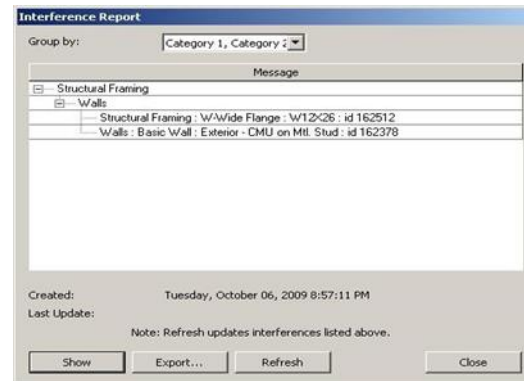
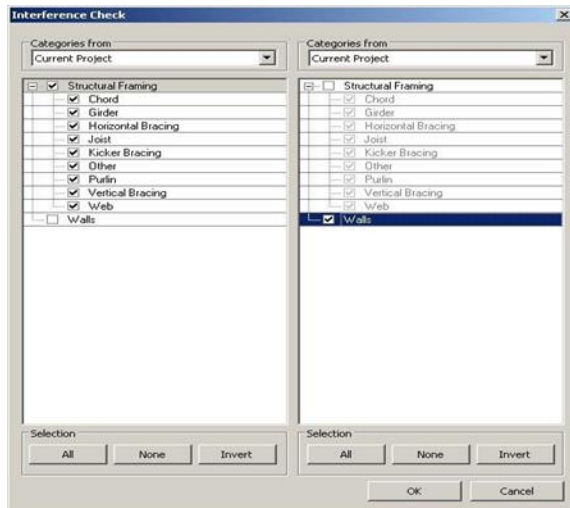


### 3.4.3 OVERLAPPING OBJECTS

Eliminate clashes within each model and duplicated element.

NOTE: In the Revit interface there is an Interference Check Tool.

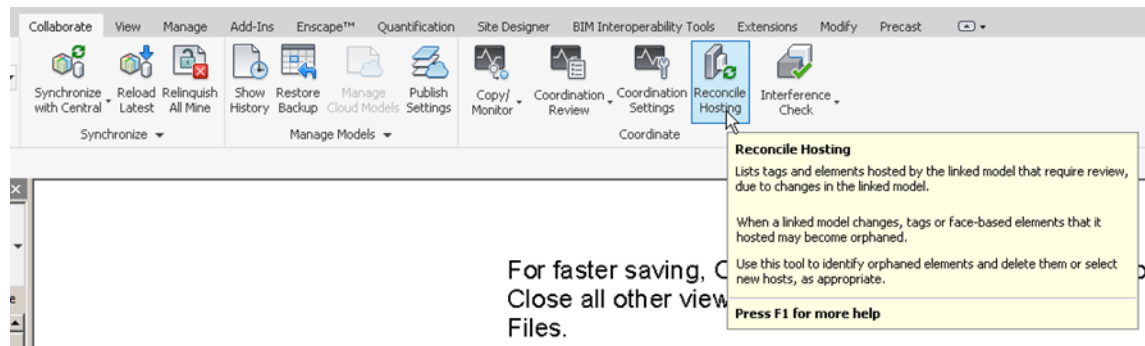
- 1) To start the Interference Check Tool, go to the COLLABORATE Contextual Tab and click on the Interference Check located under the COORDINATE Panel and then select the Run Interference Check option. This will open the INTERFERENCE CHECK Dialog Box as shown in the image to the right, in which Structural Framing is being checked against Walls. For single-discipline Interference Check, the Categories From option in the upper portion of both panes should be set to "Current Project."
- 2) The INTERFERENCE CHECK Dialog Box is divided into two panes. On the left pane select the Primary Element category or system you want to check, followed by the Secondary Element category or system you want to check the primary selection against. Then click the OK button.
- 3) If there are no interferences to report, a Dialog Box displays informing you of this. If there are interferences to report, the INTERFERENCE REPORT Dialog Box, as shown in the image below, displays a list of all elements that conflict with one another.



Disciplines are encouraged to run cross-discipline Interference checks before the inter-disciplinary interference check sessions using the Interference Check Tool within Revit. This can be accomplished by selecting the other discipline's linked files from the pull-down menu under the Category From option.

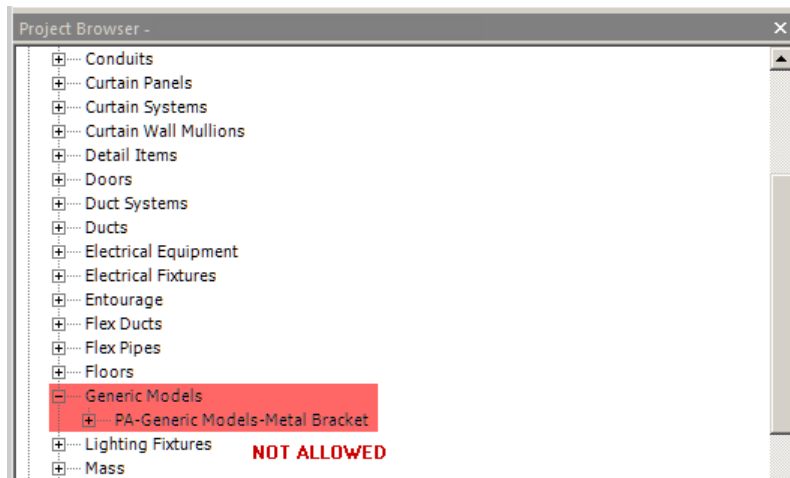
### 3.4.4 OBJECT HOSTING

Un-hosted elements are not allowed. All elements must be hosted. Check the tool in Revit interface to make sure all elements are hosted:



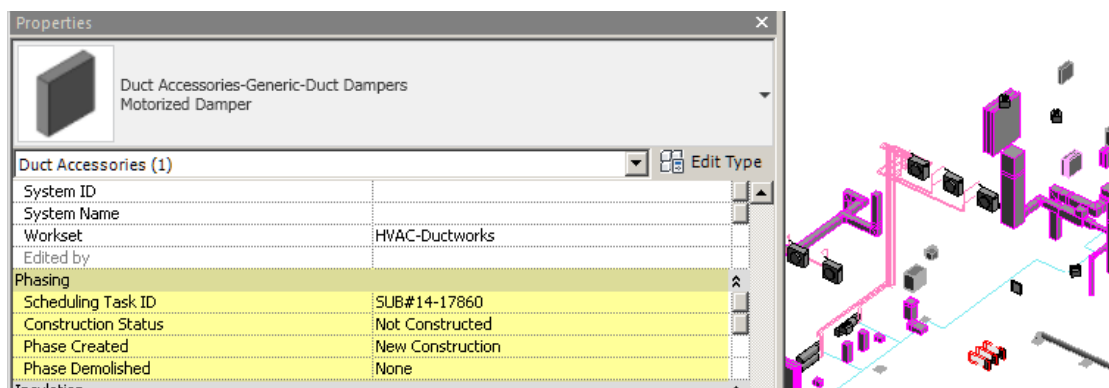
### 3.4.5 OBJECT CATEGORY

By default, generic models should not be used, but if needed those should be renamed and recategorized accordingly.



### 3.4.6 PARAMETER ASSIGNMENT

Parameters should be properly assigned to elements following the BEP.



Depending on the project specification, families inside the model should have all the information completed in the Parameters settings. Correct Omniclass Number and Unifomat Code is required.

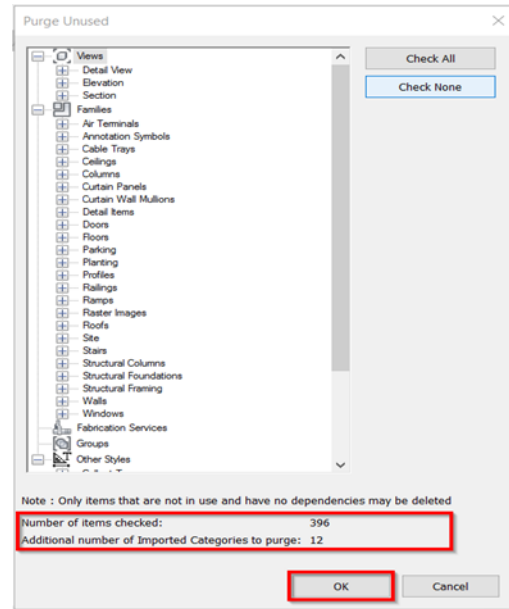
### 3.4.7 MODEL CLEANUP

Revit Models must be cleaned before every submission by purging, deleting temporarily views, etc. Unused elements/information must be purged from the model before every submission.

**Purge Unused:** The Purge Unused tool unloads any unused families and family types along with groups and styles, reducing the file size of the Revit Model file.

- 1) To purge the Model, go to the MANAGE Contextual Tab and click on the Purge Unused Tool located under the PROJECT SETTINGS Panel. This will open the PURGE UNUSED Dialog Box as shown in the image at right.
- 2) Expand the desired category and click on the "OK" button.

**NOTE:** Every discipline's Task Leader is responsible for purging their discipline's Revit model before each submittal milestone.



## 3.5 STYLES

### 3.5.1 OBJECT STYLES

Objects styles are set up on each Revit template. Please keep the settings provided. If any change is needed contact the VDC support group and update the BEP.

Why you could get a “NO” in this region?

If any Object Style is not in accordance with the PA BIM Standard.

### 3.5.2 SYMBOLS

Different symbols have been pre-loaded within the templates based on the discipline.

If you need to add a new type, consider the following:

Naming convention must follow: "<CI-Description>". (CI = Company Initials)

Existing approved families contain "PA" as "CI", if additional families (not existing within the template) are needed, those should be named following the existing styles naming convention, but instead of using “PA” use your company initials.

All text styles should use the Font Arial.

Why you could get a “NO” in this region?

If the Symbols added are not in accordance with the PA BIM Standard.

### 3.5.3 TAGS

Different tags have been pre-loaded within the templates based on the discipline.

If you need to add a new type, consider the following:

Naming convention must follow: "<CI-Description>". (CI = Company Initials)

Existing approved families contain "PA" as "CI", if additional families (not existing within the template) are needed, those should be named following the existing styles naming convention, but instead of using "PA" use your company initials.

All text styles should use the Font Arial.

Why you could get a "NO" in this region?

If the Tags added are not in accordance with the PA BIM Standard.

### **3.5.4 TEXT**

Eight Text Styles have been defined within the Templates as follows:

- PA-NOTE 1.0/10" (Used for general notes)
- PA-TEXT 0.5/10" (Used for location plan notes)
- PA-TEXT 1.0/10" (Used for texts)
- PA-TEXT 1.5/10" (Used for sub-titles)
- PA-TEXT 2.0/10" (Used for regular titles)
- PA-TEXT 2.5/10" (Used for big titles)
- PA-SCHEDULE TEXT 1 (Used for Schedules, already set up in templates)
- PA-SCHEDULE TEXT 2 (Used for Schedules, already set up in templates)

If you need to add a new type, consider the following:

Naming convention must follow: "<CI-Description>". (CI = Company Initials)

Existing approved families contain "PA" as "CI", if additional families (not existing within the template) are needed, those should be named following the existing styles naming convention, but instead of using "PA" use your company initials.

All text styles should use the font Arial.

Why you could get a "NO" in this region?

If the text styles added are not in accordance with the PA BIM Standard.

### **3.5.5 DIMENSIONS**

Three-dimension styles have been defined within the templates as follows:

- PA-DIM ARC
- PA-DIM DIAGONAL
- PA-DIM LINEAR

If you need to add a new type, consider the following:

Naming convention must follow: "<CI-Description>". (CI = Company Initials)

\*Existing approved families contain "PA" as "CI", if additional families (not existing within the template) are needed, those should be named following the existing styles naming convention, but instead of using "PA" use your company initials.

Why you could get a "NO" in this region?

If the dimensions added are not in accordance with the PA BIM Standard.

### 3.5.6 LINES

Sixteen line styles that match the sixteen line weights have been provided as follows:

LINE STYLES		
NAME	PEN # (WIDTH)	LINE PATTERN
PA - Pen#1	1 (0.0040")	Solid
PA - Pen#2	2 (0.0080")	Solid
PA - Pen#3	3 (0.0100")	Solid
PA - Pen#4	4 (0.0120")	Solid
PA - Pen#5	5 (0.0140")	Solid
PA - Pen#6	6 (0.0160")	Solid
PA - Pen#7	7 (0.0180")	Solid
PA - Pen#8	8 (0.0200")	Solid
PA - Pen#9	9 (0.0240")	Solid
PA - Pen#10	10 (0.0280")	Solid
PA - Pen#11	11 (0.0340")	Solid
PA - Pen#12	12 (0.0360")	Solid
PA - Pen#13	13 (0.0400")	Solid
PA - Pen#14	14 (0.0440")	Solid
PA - Pen#15	15 (0.0480")	Solid
PA - Pen#16	16 (0.0720")	Solid
PA - Contract Limit	11 (0.0302")	Center

If you need to add a new type, consider the following:

Naming convention must follow: "<CI-Description>". (CI = Company Initials)

\*Existing approved families contain "PA" as "CI", if additional families (not existing within the template) are needed, those should be named following the existing styles naming convention, but instead of using "PA" use your company initials.

Why you could get a "NO" in this region?

If the lines added are not in accordance with the PA BIM Standard.

You can check the **BIM Standard** [Section 7.4.7 Line Styles](#) for more information.

### 3.5.7 REGIONS

Different regions have been pre-loaded within the templates based on the discipline.

If you need to add a new type, consider the following:

Naming convention must follow: "<CI-Description>". (CI = Company Initials)

\*Existing approved families contain "PA" as "CI", if additional families (not existing within the template) are needed, those should be named following the existing styles naming convention, but instead of using "PA" use your company initials.

Why you could get a "NO" in this region?

If the Regions added are not in accordance with the PA BIM Standard.

You can check the **BIM Standard** [Section 7.4.14 Filled Regions](#) for more information.

### 3.6 PLAN SET PREPARATION

Creating a contract set in Revit is accomplished through sheets, in which views have been added.

Sheets within The Port Authority of NY & NJ BIM Standard have been pre-configured to work in conjunction with the discipline templates file and with the shared parameters file.

#### 3.6.1 PROJECT INFORMATION

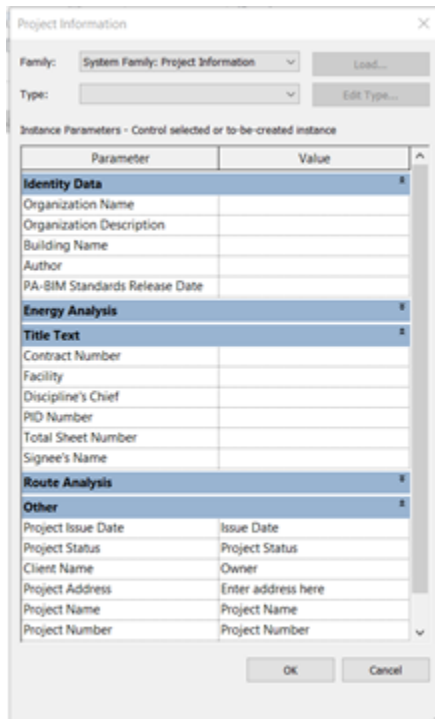
Project information is general data that must be completed at the beginning of a project by going to tab: MANAGE > SETTINGS > PROJECT INFORMATION.

The data is divided into 3 main blocks;

**IDENTITY DATA:** Organization Name, Organization Description, Building Name, Author and BIM Standards Release Date.

**TITLE TEXT:** Contract Number, Facility Name, Discipline's Chief, PID Number, Total Sheet Number and Signee's Name.

**OTHER:** Project Issue Date, Project Status, Client Name, Project Address, Project Name and Project Number.



Parameter	Value
<b>Identity Data</b>	
Organization Name	
Organization Description	
Building Name	
Author	
PA-BIM Standards Release Date	
<b>Energy Analysis</b>	
<b>Title Text</b>	
Contract Number	
Facility	
Discipline's Chief	
PID Number	
Total Sheet Number	
Signee's Name	
<b>Route Analysis</b>	
<b>Other</b>	
Project Issue Date	Issue Date
Project Status	Project Status
Client Name	Owner
Project Address	Enter address here
Project Name	Project Name
Project Number	Project Number

**NOTE:** The Revit-based applications will update all sheets in the contract set based on the information provided here.

This fields are mandatory:

- Facility
- Project Name
- Discipline Group
- PID Number
- Contract Number

You can check the **BIM Standard** [Section 7.4.3 Project Information](#) for more details.

### **3.6.2 DRAWING INFORMATION**

Drawing information is data related to an individual sheet of the contract border in a project. All the available title sheet information fields are listed under the Identity Data and Title Text Parameter columns.

To update the Drawing Information of a sheet, use one of the following methods:

- 1) Enter the information directly on a sheet by clicking on the text placeholder within the sheet and update the text as desired.
- 2) Select a sheet and right-click it to display the OPTIONS menu and select "Properties". This will open the Sheet PROPERTIES Dialog Box where users can change the values as desired.

This fields are mandatory:

- Drawing Name
- Drawing Type
- Drawing Number

### **3.6.3 TITLE SHEET**

A series of title sheet families have been provided by the Port Authority of NY & NJ and can be found under:

K:\Application\EAD\BIM\_Standards\2018\Borders and Stamps

External Link: <https://www.panynj.gov/port-authority/en/business-opportunities/engineering-available-documents.html>

Use the official Title Sheet provided within the Revit template. Three signature lines are provided within the Title Sheets:

- ASSISTANT CHIEF ENGINEER / DESIGN
- PROGRAM DIRECTOR XX or SR. PROGRAM MANAGER/PROGRAM MANAGER
- CHIEF ENGINEER

YES: Lead project discipline contain the title sheet within the set of drawings. Not all disciplines need to include the title sheet, in the case the set of drawing isn't the main discipline this requirement doesn't apply.

### **3.6.4 CONTRACT BORDER**

A series of contract border families have been provided by the Port Authority of NY & NJ and can be found under:

K:\Application\EAD\BIM\_Standards\2018\Borders and Stamps

External Link: <https://www.panynj.gov/port-authority/en/business-opportunities/engineering-available-documents.html>

**Identity Data Parameters:** Values within the contract border are confidential status of each Border, Sheet Name and Number, Issue Date, Drawn by, Checked by, Designed by and Approved by.

## Engineering Operations BIM Guidelines

PA-Contract Border 22x34 ENG	
Title Blocks (1) Edit Type	
Graphics	
Identity Data	
Confidential Sheet	<input checked="" type="checkbox"/>
Confidential & Privileged Sheet	<input checked="" type="checkbox"/>
Sheet Name	Unnamed
Sheet Number	A111
Date/Time Stamp	03/19/20
Sheet Issue Date	03/19/20
Drawn By	Author
Checked By	Checker
Designed By	Designer
Approved By	Approver
Sheet Width	2' 10"
Sheet Height	1' 10"
Other	

To promote consistency and easy identification of the people involved in the project, the “Designed by”, “Drawn by” and “Checked by” fields should have the first name's initial, followed by a period and the last name. Note that spaces before and after the period are not allowed. The “Date” field should be filled out as a two-digit month, a two-digit day, and a four-digit year format separated by the slash “/” character as shown in image below.

**NOTE:** The “Designed by”, “Drawn by” and “Checked by” fields must be filled out using uppercase characters only for the first character of the First name and Last name. Only one person's name is allowed by field.

The “Discipline” and “Sub-Discipline” fields will need to be filled by the user.

The image below shows an example where the “Discipline Group” field has been set to ARCHITECTURAL and the “Discipline Sub-Group” field has been set to LANDSCAPE. If a discipline does not have a “Sub-Group”, this field should be left empty.

**NOTE:** Both “Discipline Group” and “Discipline Sub-Group” fields should be filled out using uppercase characters.

Mandatory contract border family parameter:

- Project Name
- Designed by, Drawn by, Checked by
- Discipline & Subdiscipline

YES: If all the parameters are filled following the PA Standards.

No.	Date	Revision	Approval
ENGINEERING DEPARTMENT			
PATH			
ARCHITECTURAL LANDSCAPE			
Title HARRISON STATION - SOUTHWEST STATION HOUSE, PLATFORM, AND PLAZA REPLACEMENT			

subcontractors and suppliers who may receive all or part of the Contract documents or copies thereof, shall make every effort to ensure the secure and appropriate disposal of the Contract documents to prevent further disclosure of the information contained in the documents. Secure and appropriate disposal includes methods of document destruction such as shredding, or arrangements with secure facilities that ensure that third persons will not have access to the documents' contents either before, during, or after disposal. Documents may only be returned for disposal purposes to the Contract Desk: 2 Montgomery Street - 1st Floor, Jersey City, NJ 07302 or the office of the Chief Information Officer, 4 World Trade Center, 25th Floor, New York, NY 10007. It is a violation of law for any person to alter a document in any way, unless acting under the direction of a licensed professional engineer or registered architect. If the document bearing the seal of an engineering or architectural profession is altered, the altering engineer or architect shall affix to the document their seal and the notation "altered by" followed by their signature and the date of such alteration, and a specific description of the alteration.

Designed by	C.Okwulehie
Drawn by	K. Klein
Checked by	D. Sit
Date	06/16/2020
Contract Number	PAT-784.217
Drawing Number	A1103
	PID# 19370000



### 3.6.5 PROFESSIONAL STAMPS

A series of Stamps have been provided by the Port Authority of NY & NJ and can be found under:

K:\Application\EAD\BIM\_Standards\2018\Borders and Stamps

External Link: <https://www.panynj.gov/port-authority/en/business-opportunities/engineering-available-documents.html>

- Professional
- Submissions
- Confidential & Confidential Privileged

These stamps have been defined within the Revit-based applications as symbols and must be inserted from the sheet origin.

Professional stamps shall be inserted at the bottom left sheet corner, just outside of the bottom left border corner, as shown circled in red in the image below.



**Professional Stamps** have been created for both New York and New Jersey Professional Engineer and Registered Architect and can accommodate these 3 options:

- Single Professional Stamp - Two Consultants
- Combined Professional Stamps of NY & NJ - One Consultant
- Combined Professional Stamps of NY & NJ - Two Consultants

By default, the DISCIPLINE'S CHIEF and the ORIGINAL SIGNED BY fields are provided with their default values set ON as shown in the image below.

In order to accommodate the professional stamps, these fields should be turned OFF. This is accomplished by controlling the visibility of the Contract Border.

**NOTE:** The professional stamps are to be used in place of custom consultant logos to identify the consulting firm(s).

CONFIDENTIAL - RELEASED - DOCUMENT CONTROL NUMBER

Page 1 of 1

**SECRET**

REVISION NUMBER 01

DATE

CONFIDENTIAL - RELEASED - DOCUMENT CONTROL NUMBER

Page 1 of 1

**SECRET**

REVISION NUMBER 01

DATE

Page 21

### 3.7.1 FULL SIZE

Predefined Sizes are:

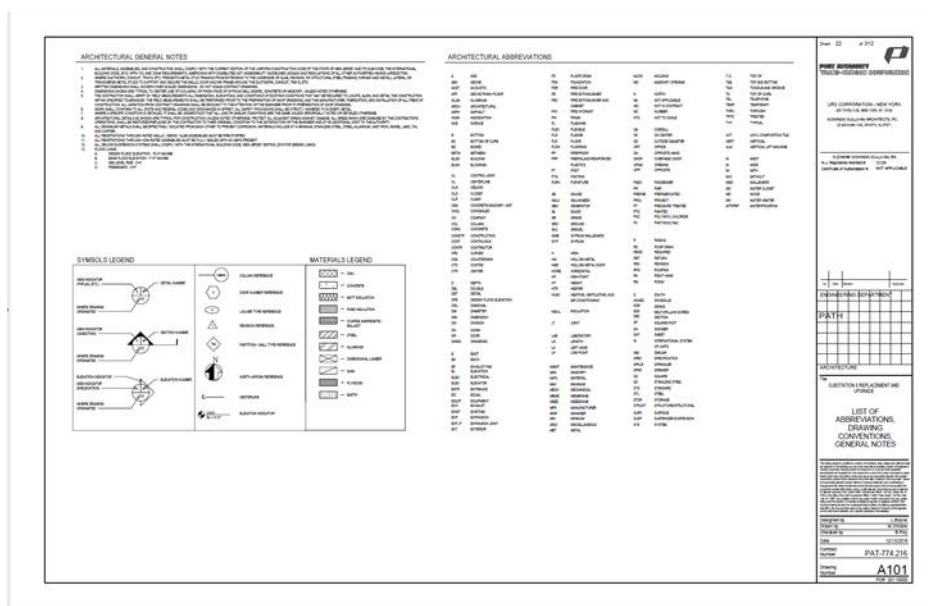
- 22X34
- 34X56

### 3.7.2 GROUPED BY DRAWING TYPE

PDF files must be created as multi-sheets and grouped by drawing type.

### 3.7.3 BLACK AND WHITE

PDF files printed in colors are not allowed.



## 4.0 HOW TO PASS A FEDERATED MODEL REVIEW

The VDC group is responsible for reviewing all Port Authority federated models. This review usually takes 3 working days after the request is submitted. If you are the LEA and you need help in the process of request a review, you can read the section [“How to request a BIM review”](#). Remember to include all necessary files and relevant information.

The Federated Model Report has different sections described below, with a list of items. In order to pass a regular BIM review the models should have no more than 3 “NO” in the Overall Performance Summary. We understand that all BIM files are “living elements” as part of a process.

If you are having a PA Wide Review all items should be “YES” without exception.

Report Structure: 3 Main Sections

**Area 1** (Image below): “FEDERATED MODEL REVIEW REPORT”

In this section you can find the project Revit files information and the results of the review.

## Engineering Operations BIM Guidelines

Main and descriptive data related to the project: Facility Name; PID Number; Project Title; Contract Number; Stage; Date Submitted; File Reviewed; Date Reviewed; LEA; Resident Engineer; Consultant/Contractor; Submittal Percentage; Reviewed by.

**THE PORT AUTHORITY OF NY & NJ**  
 Engineering CAD/BIM Support Group

### Federated Model Review Report

**FAILED**

Facility Name:	PATH	LEA:	Walsh, David
PID Number:	15361000	Resident Engineer:	Maureen, Lynch
Project Title:	Replacement of Substation No.14	Consultant / Contractor:	Yonkers
Contract Number:	PAT-774.217	Submittal Percentage:	100 %
Stage:	4	File Reviewed:	15361000-3D.nwd
Date Submitted:	5/20/2020	Reviewed By:	Saravia, Maria
		Date Reviewed:	5/27/2020

1

**Area 2** (Image below): OVERALL PERFORMANCE SUMMARY

Mandatory items that shows whether or not, compliance with the Standard has been achieved

In this area you will find 8 sections with different reviewed items:

- GENERAL
- MODEL ASSEMBLY (all models are included)
- VISUAL ASPECTS (standardized visualization)
- COORDINATION STATUS (clash reports)
- SCHEDULE INFORMATION (4D data in the model)
- TASKS LINK (link between 4D and 3D)
- CONSTRUCTION STATUS (updated parameters)
- VIEWPOINTS (visual coordination)

All items are mandatory, in each one of them there is a status:

- YES (that shows its compliant with the PA Standard);
- NO (if the Standard is not achieved).
- N/A (if the item doesn't apply specifically in that project or file).

For a detailed description read the following section "Federated Review Item by Item"

<b>OVERALL PERFORMANCE SUMMARY</b>			
<b><u>GENERAL</u></b>	<b>YES</b>	<b><u>SCHEDULE INFORMATION</u></b>	<b>YES</b>
File Name:	Yes	Tasks Name	N/A
Project Coordinates:	Yes	Activity IDs:	N/A
<b><u>MODEL ASSEMBLY</u></b>	<b>YES</b>	Planned Dates:	N/A
Site Context:	Yes	Actual Dates:	N/A
All Models:	Yes	Data Sources:	N/A
Appended Files Format:	Yes	<b><u>TASKS LINK</u></b>	<b>YES</b>
<b><u>VISUAL ASPECT</u></b>	<b>NO</b>	BIM Activity Search Sets:	N/A
Color Coding:	No	Attached by Explicit Selection:	N/A
Rooms:	Yes	Unattached Items:	N/A
2D Elements:	Yes	Items in Multiple Tasks:	N/A
4D Animation:	N/A	Items in Overlapping Tasks:	N/A
<b><u>COORDINATION STATUS</u></b>	<b>NO</b>	<b><u>CONSTRUCTION STATUS</u></b>	<b>NO</b>
Clash Tests:	Yes	Project Milestones Search Sets:	No
Clash Grouping:	No	Basis of Design Parameter:	Yes
Clash Status:	No	As per Shop Drawing Parameter:	Yes
		As Constructed Parameter:	Yes
		<b><u>VIEWPOINTS</u></b>	<b>NO</b>
		Areas of Interest Viewpoints:	No
		Coordination Issues Viewpoints:	No
		Viewpoints Folder Structure:	No

<b><u>NOTES</u></b>
<b>VISUAL ASPECTS</b> 1. Color coding used for trades are not following PA Standard.

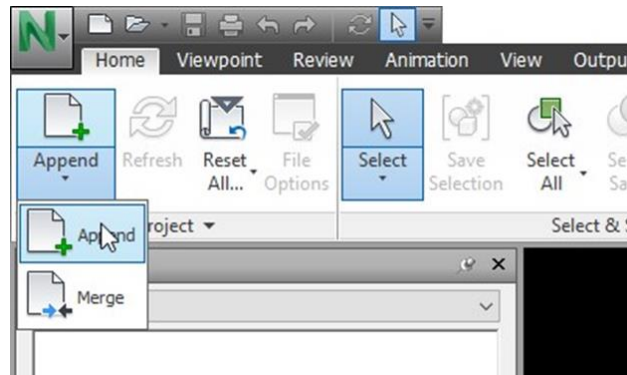
**Area 3** (Image above): NOTES

Here we include a brief record of comments, or thoughts, written down for further explanation per every incomplete item.

**5.0 FEDERATED COMPLIANCE REVIEW ITEM BY ITEM**

The LE/A is responsible for compiling all the discipline specific Navisworks Cache files (NWC) into a single Master Navisworks file (NWF) for coordination purposes.

- 1) After launching Navisworks Manage, should open the Navisworks template file located in:  
K:\Application\EAD\BIM\_Standards\2018\Templates
- 2) Append the discipline NWC file and link other disciplines' NWC files.



- 3) Once one or more discipline files have been appended to the template file, delete the file Checklist.nwc. This can be performed by opening the Selection Tree from the Home tab of the ribbon, placing the mouse pointer over it and using the right mouse button to select it and have the shortcut menu display, and using the Delete option from the shortcut menu.
- 4) Next, verify Navisworks settings by using the Application button drop-down menu to access the OPTIONS EDITOR Dialog Box. Expand the Interference/Display Units and make sure of the following: Under Linear Units select Feet and inches; Fractions; Under Angular Units select Degrees
- 5) Expand the Quick Properties/Definitions and make sure of the following: Under the first category field select Item, under the Property field select Name. Under the second Category field select Element ID
- 6) After loading all disciplines NWC files, the LE/A will save this file in his own COORDINATION folder as an NWF file (Navisworks Master File). The Navisworks Master File Set (NWF) contains links to the original NWC files generated by each discipline. No model geometry is saved with this file format, so the next time the disciplines update their NWC files the Master files will automatically be updated. If links are not found, you will be prompted with the RESOLVE Dialog Box to re-path the location of the NWC files.

## 5.1 GENERAL

### 5.1.1 FILE NAME

NWF file shall be named with the following convention: PID-"3D" (sample: 17012000-3D.nwf) or PID-"4D" (sample: 17012000-4D.nwf)

YES: If the Federated Model File name does comply with PANYNJ BIM Standard.

### 5.1.2 PROJECT COORDINATES

Federated Model coordinates must be setup-up following its correspondent NAD-83 State plane zone.

YES: If the Federated Model is coordinated with the correct coordinates.

## 5.2 MODEL ASSEMBLY

### 5.2.1 SITE CONTEXT

Federated Model must contain site context information such as: site topography, project limits, adjacent building, roads, sidewalks, among others.

YES: If the Federated model file name does comply with PANYNJ BIM Standard.

### 5.2.2 ALL MODELS

All trade models and site model should be appended to the Federated model.

YES: If the Federated Model File contain all the models inside.

### 5.2.3 APPENDED FILES FORMAT

All native models must be exported as NWC format prior to be appended, setting up the NWC export to comply with all BIM Standard Requirements.

YES: If the Federated model file contain all the NWC models inside.

## 5.3 VISUAL ASPECT

### 5.3.1 COLOR CODING

All PA Federated Models must follow the PA Standard color coding.

The following color scheme is used to promote consistency and easy identification across all users when coordinating the project and generating Clash Reports.

DISCIPLINE	COLOR
Architectural	Cyan
Electrical	Yellow
Electronics	White
Corrosion Protection	Orange
HVAC	Green
Plumbing	Magenta
Fire Protection	Red
Vertical Circulation	Pink
Structural	Blue

## Engineering Operations BIM Guidelines

**NOTE:** Depending on the project needs further breakdown can be set either by level or by system. Contact the VDC Support Group if you need to create new color schemes.

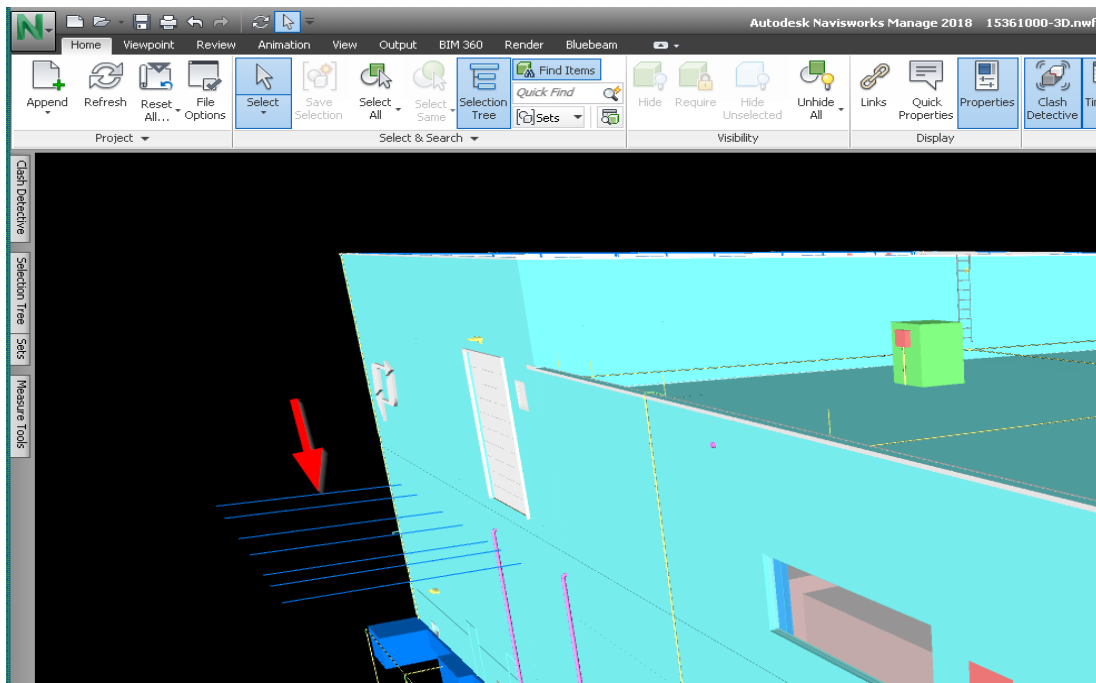
### 5.3.2 ROOMS

Room geometries should not be exported in the NWC files in order to avoid interferences while running clash detection tools.

YES: If the Federated Model File doesn't contain any room element.

### 5.3.3 2D ELEMENTS

2D Elements should not be exported in the NWC files in order to avoid interferences while running clash detection tools.



YES: If the Federated model file doesn't contain 2D elements.

### 5.3.4 4D ANIMATION

Time liner appearance must be properly set up in order to allow users to visualize the construction simulation properly and perform the visual comparison between the baseline schedule and the current schedule update.

YES: If the 4D animation is consistent with the schedule.

## 5.4 COORDINATION STATUS

The clash detective tool enables effective identification, inspection, and reporting of interferences (clashes) in a 3d project model. Using clash detective can help you to reduce the risk of human error during model inspections. Clash detective can be used as a one-off "sanity check" for a completed design work, or it can be used as an ongoing audit check of the project.

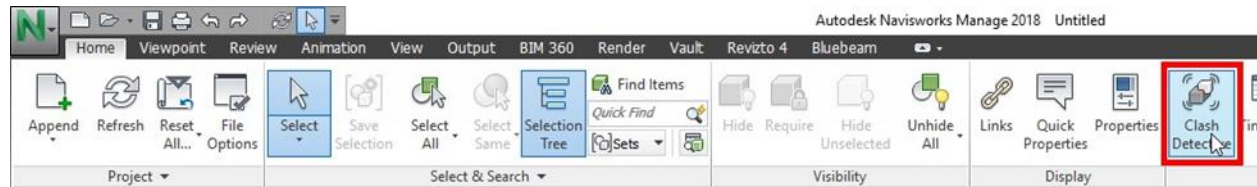


### 5.4.1 CLASH TEST

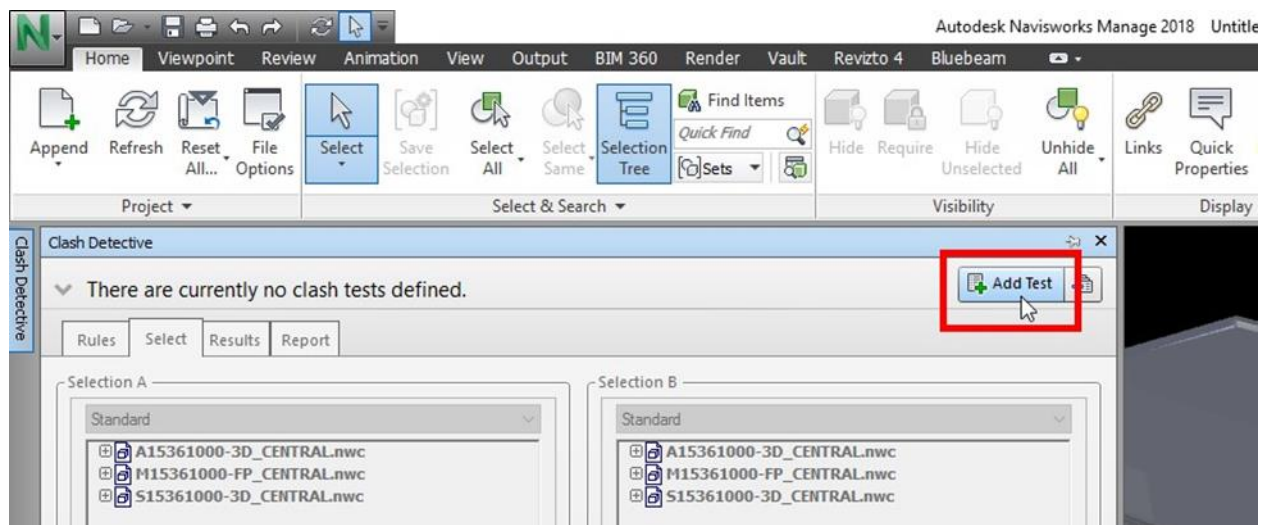
Clash tests must be created on the Federated model, the file must contain at least one test for each combination of two separate NWCs files appended.

#### CLASH DETECTIVE SETUP

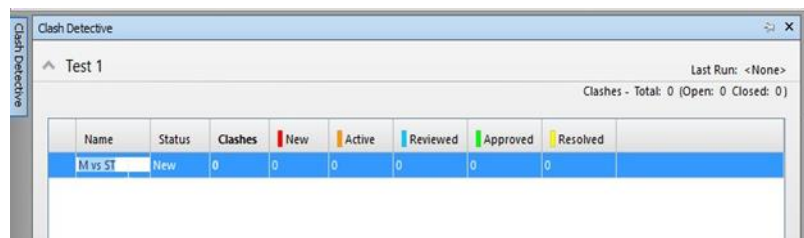
- 1) Open the Clash Detective.



- 2) Add a new Test:

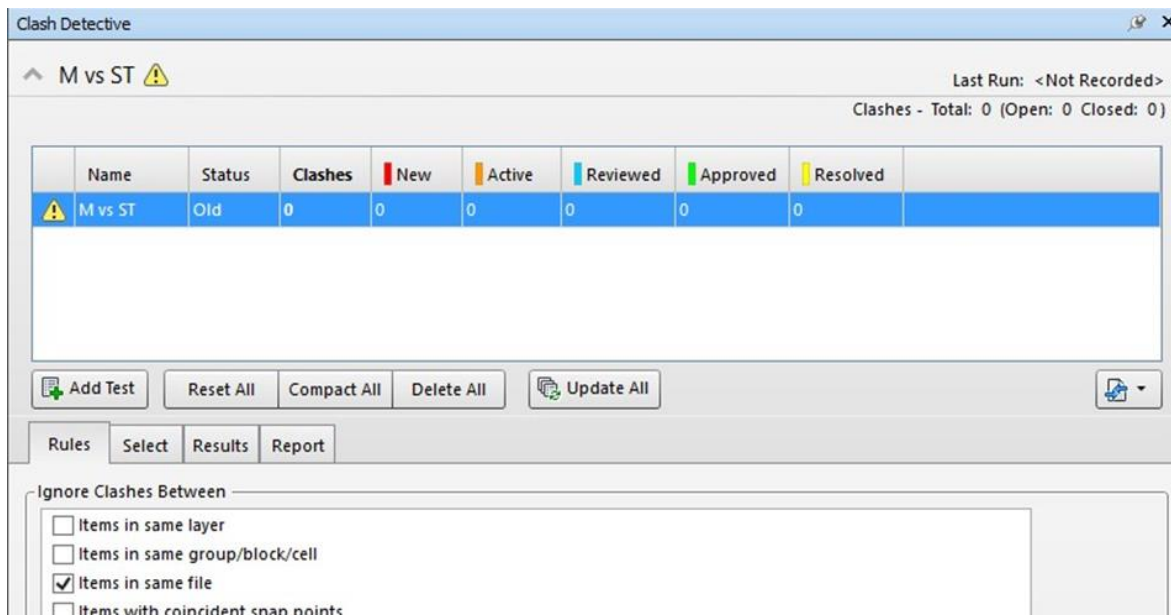


- 3) Name your New Test:

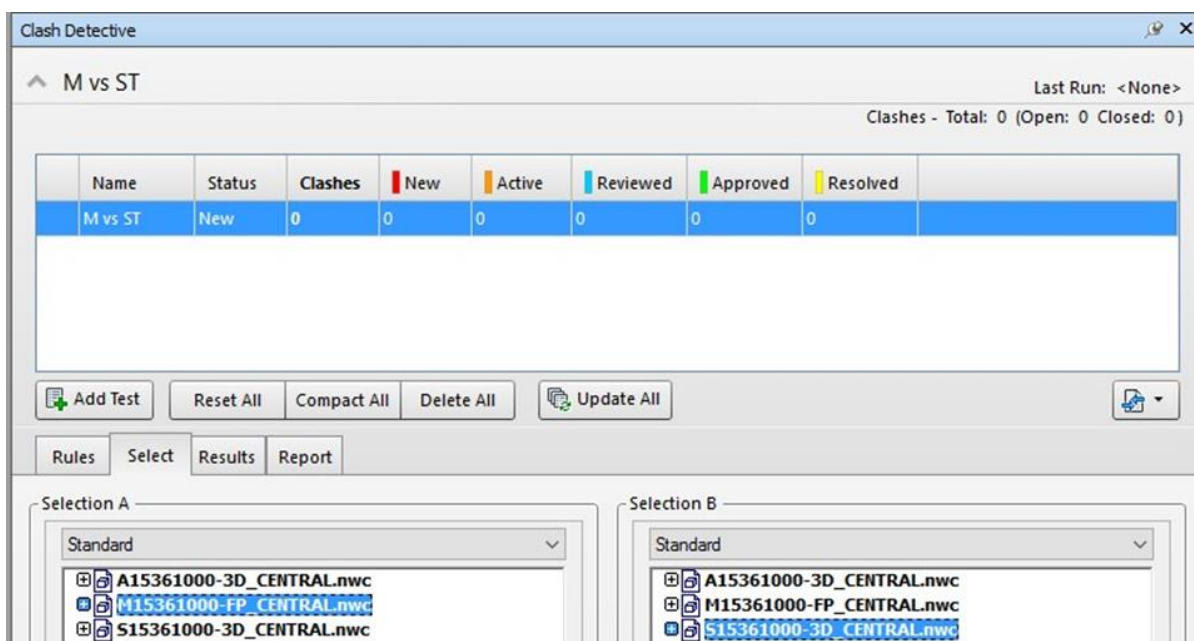


- 4) Select Rules:

RULES Tab: Usually only relevant for objects within the same model/file.

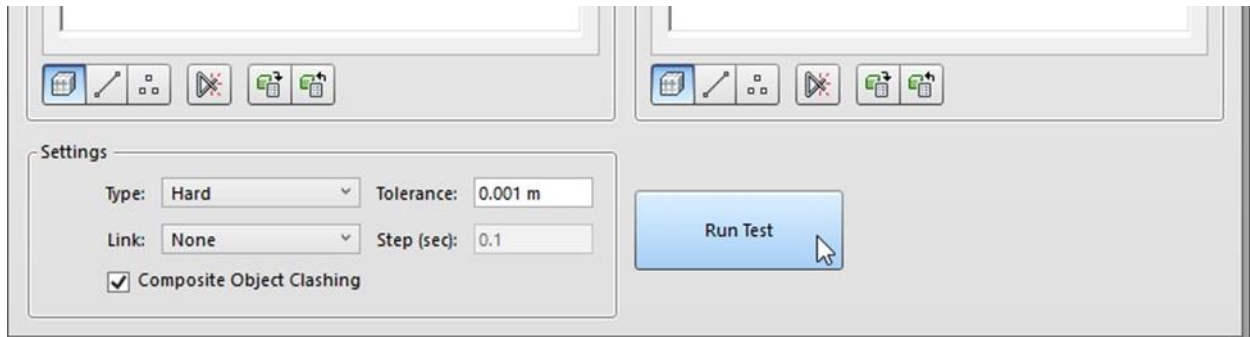


5) Select Disciplines involved:



SELECT Tab: Here, NavisWorks is “told” where to look for interferences, and what to interpret as such.

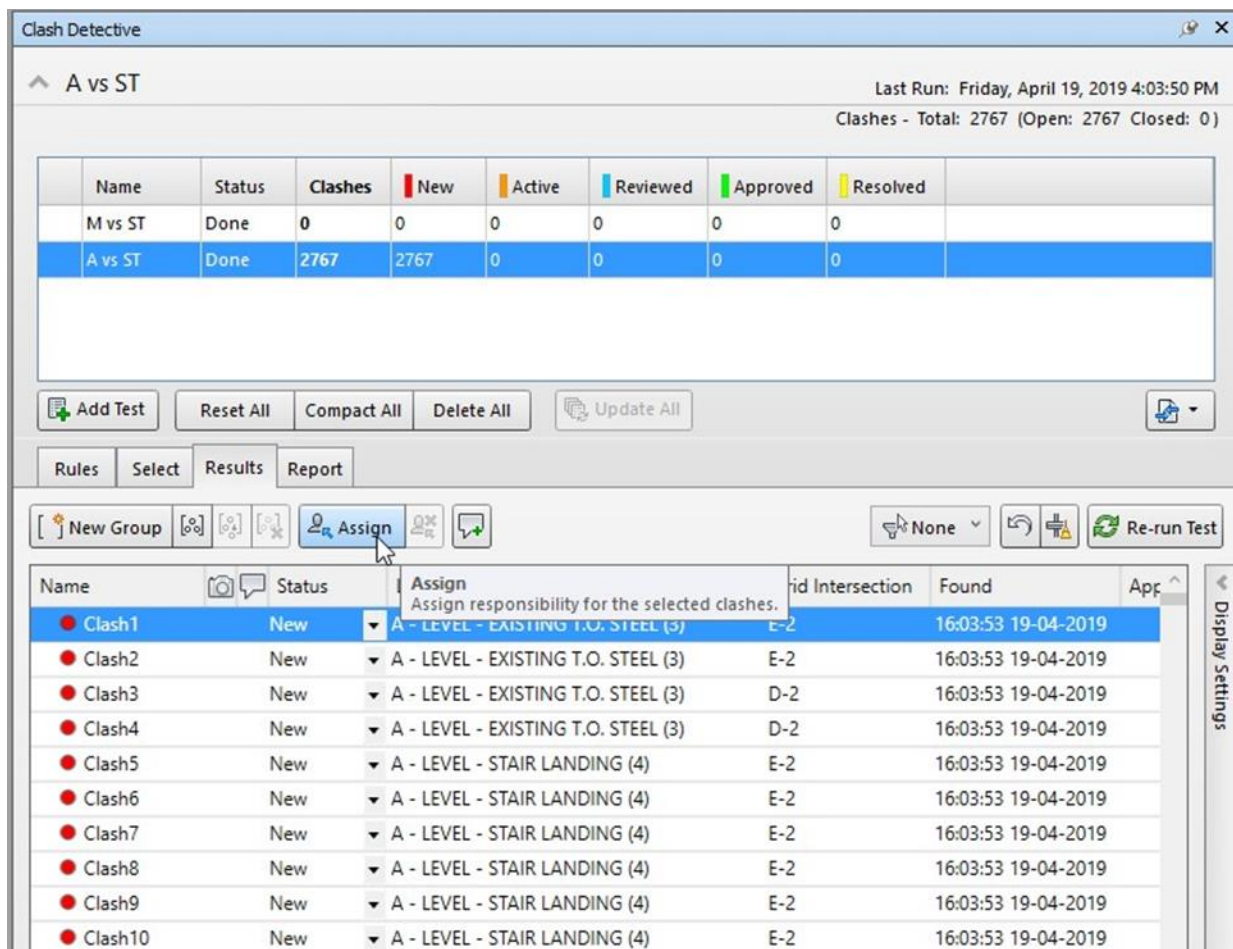
6) Define Clash type and tolerance and Run Test.



### 5.4.2 CLASH GROUPING

Clash grouping must be present on each clash test to allow users to manage all individual issues that contain 2 or more single interferences.

- 1) Review the results and assign issues to responsible parties.

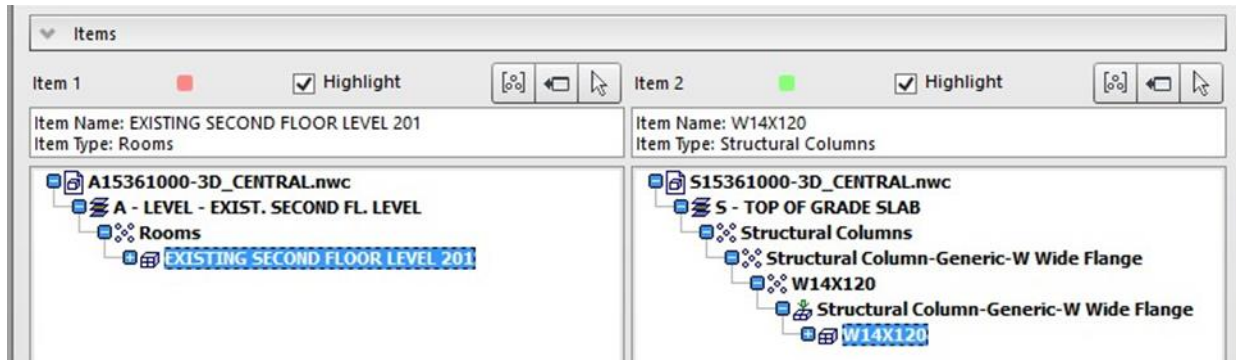


**RESULTS Tab:** It provides the tools and information to properly analyze, group, filter, comment, and assign clashes. It is the only tab that we can customize the information shown (Column selection).

## Engineering Operations BIM Guidelines

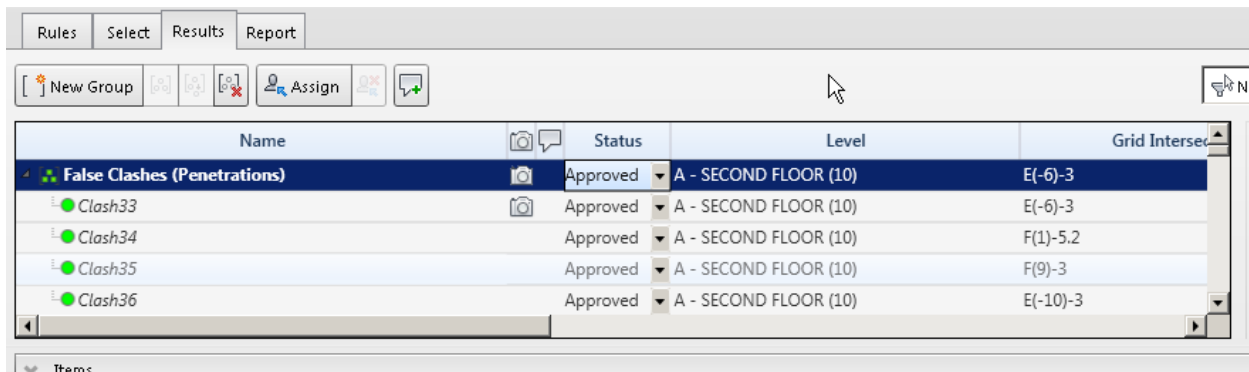
**DISPLAY SETTINGS** panel: Collapsible window that allows us to control visibility and behavior of viewpoints whilst analyzing the clashes.

**ITEMS PANEL:** Collapsible window that allows us to question the objects clashing. It also allows for locating the element both in NavisWorks and Revit.



### 5.4.3 CLASH STATUS

All clashes must be classified with their correspondent status at the moment of submission (New, Active, Resolved, etc.)



## 5.5 SCHEDULE INFORMATION

### 5.5.1 TASK NAME

All activities on the schedule must have a Name.

### 5.5.2 ACTIVITY IDS

All activities on the schedule must have an Activity Identification Number.

### 5.5.3 PLANNED DATES

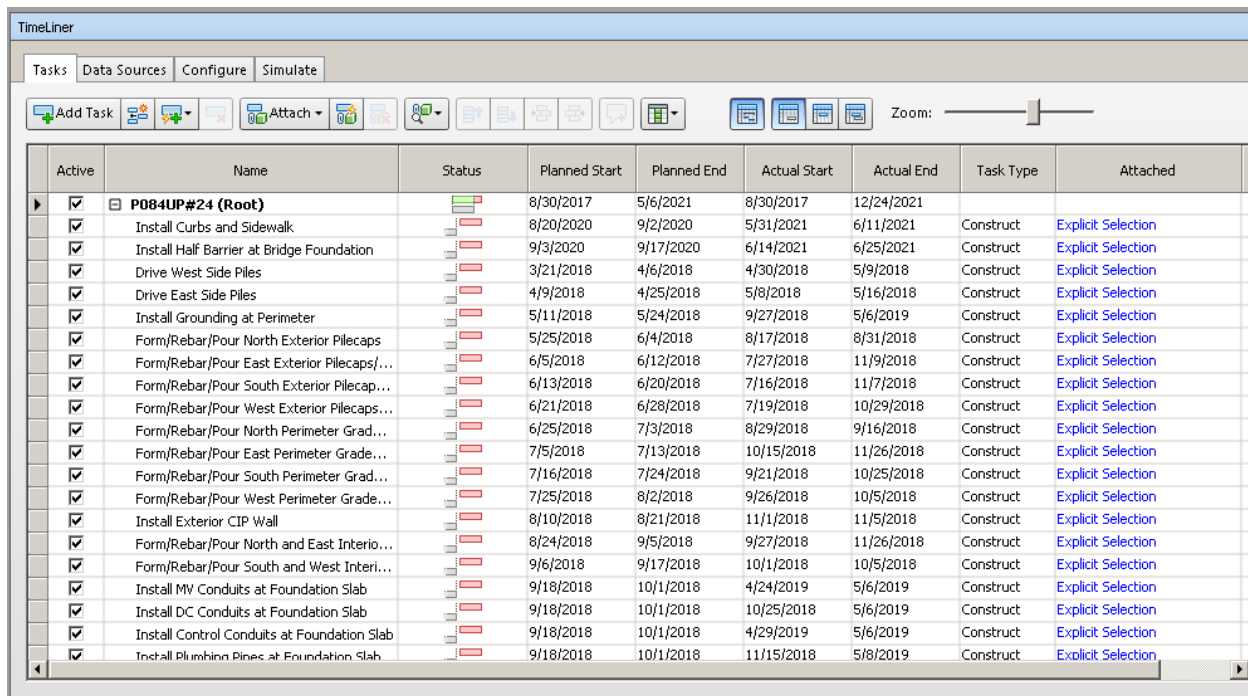
All schedule activities must contain Planned Dates, Start and Finish, as per Baseline Schedule.

### 5.5.4 ACTUAL DATES

All schedule activities must contain Actual Dates, Start and Finish, as per most current schedule update.

### 5.5.5 DATA SOURCES.

Data source files must correspond to latest schedule submission and must be defined on the monthly submission report.

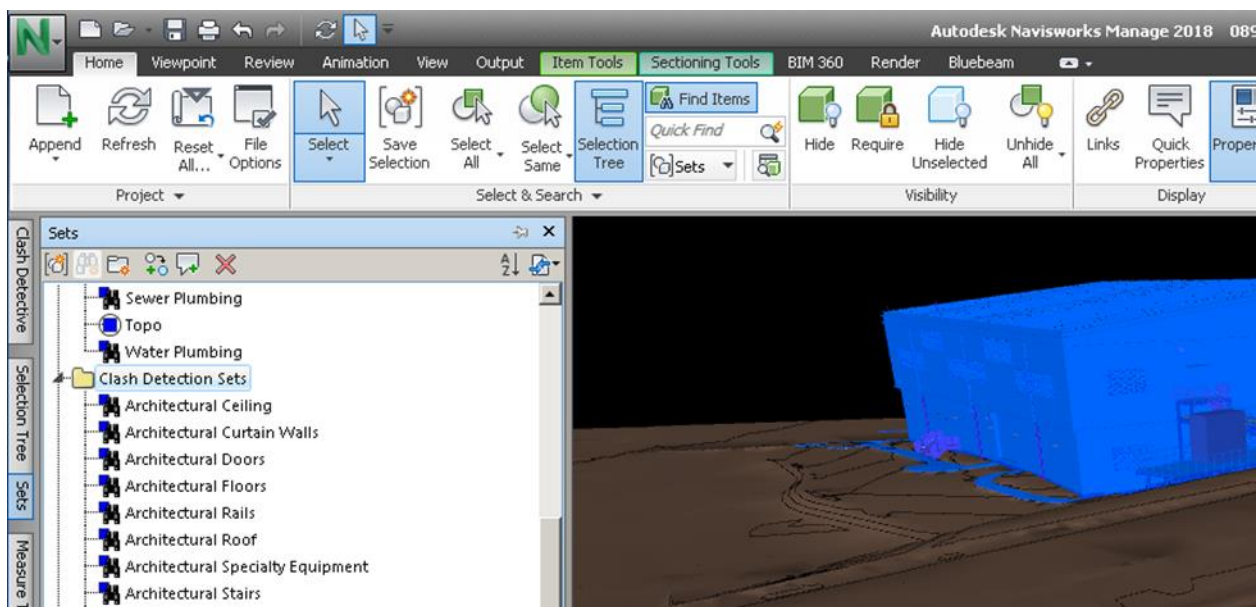


Active	Name	Status	Planned Start	Planned End	Actual Start	Actual End	Task Type	Attached
▶	☑ P084UP#24 (Root)		8/30/2017	5/6/2021	8/30/2017	12/24/2021		
	☑ Install Curbs and Sidewalk		8/20/2020	9/2/2020	5/31/2021	6/11/2021	Construct	Explicit Selection
	☑ Install Half Barrier at Bridge Foundation		9/3/2020	9/17/2020	6/14/2021	6/25/2021	Construct	Explicit Selection
	☑ Drive West Side Piles		3/21/2018	4/6/2018	4/30/2018	5/9/2018	Construct	Explicit Selection
	☑ Drive East Side Piles		4/9/2018	4/25/2018	5/8/2018	5/16/2018	Construct	Explicit Selection
	☑ Install Grounding at Perimeter		5/11/2018	5/24/2018	9/27/2018	5/6/2019	Construct	Explicit Selection
	☑ Form/Rebar/Pour North Exterior Pilecaps		5/25/2018	6/4/2018	8/17/2018	8/31/2018	Construct	Explicit Selection
	☑ Form/Rebar/Pour East Exterior Pilecaps/...		6/5/2018	6/12/2018	7/27/2018	11/9/2018	Construct	Explicit Selection
	☑ Form/Rebar/Pour South Exterior Pilecap...		6/13/2018	6/20/2018	7/16/2018	11/7/2018	Construct	Explicit Selection
	☑ Form/Rebar/Pour West Exterior Pilecaps...		6/21/2018	6/28/2018	7/19/2018	10/29/2018	Construct	Explicit Selection
	☑ Form/Rebar/Pour North Perimeter Grad...		6/25/2018	7/3/2018	8/29/2018	9/16/2018	Construct	Explicit Selection
	☑ Form/Rebar/Pour East Perimeter Grade...		7/5/2018	7/13/2018	10/15/2018	11/26/2018	Construct	Explicit Selection
	☑ Form/Rebar/Pour South Perimeter Grad...		7/16/2018	7/24/2018	9/21/2018	10/25/2018	Construct	Explicit Selection
	☑ Form/Rebar/Pour West Perimeter Grade...		7/25/2018	8/2/2018	9/26/2018	10/5/2018	Construct	Explicit Selection
	☑ Install Exterior CIP Wall		8/10/2018	8/21/2018	11/1/2018	11/5/2018	Construct	Explicit Selection
	☑ Form/Rebar/Pour North and East Interio...		8/24/2018	9/5/2018	9/27/2018	11/26/2018	Construct	Explicit Selection
	☑ Form/Rebar/Pour South and West Interi...		9/6/2018	9/17/2018	10/1/2018	10/5/2018	Construct	Explicit Selection
	☑ Install MV Conduits at Foundation Slab		9/18/2018	10/1/2018	4/24/2019	5/6/2019	Construct	Explicit Selection
	☑ Install DC Conduits at Foundation Slab		9/18/2018	10/1/2018	10/25/2018	5/6/2019	Construct	Explicit Selection
	☑ Install Control Conduits at Foundation Slab		9/18/2018	10/1/2018	4/29/2019	5/6/2019	Construct	Explicit Selection
	☑ Install Plumbing Pipes at Foundation Slab		9/18/2018	10/1/2018	11/15/2018	5/8/2019	Construct	Explicit Selection

## 5.6 TASKS LINK

### 5.6.1 BIM ACTIVITY SEARCH SETS

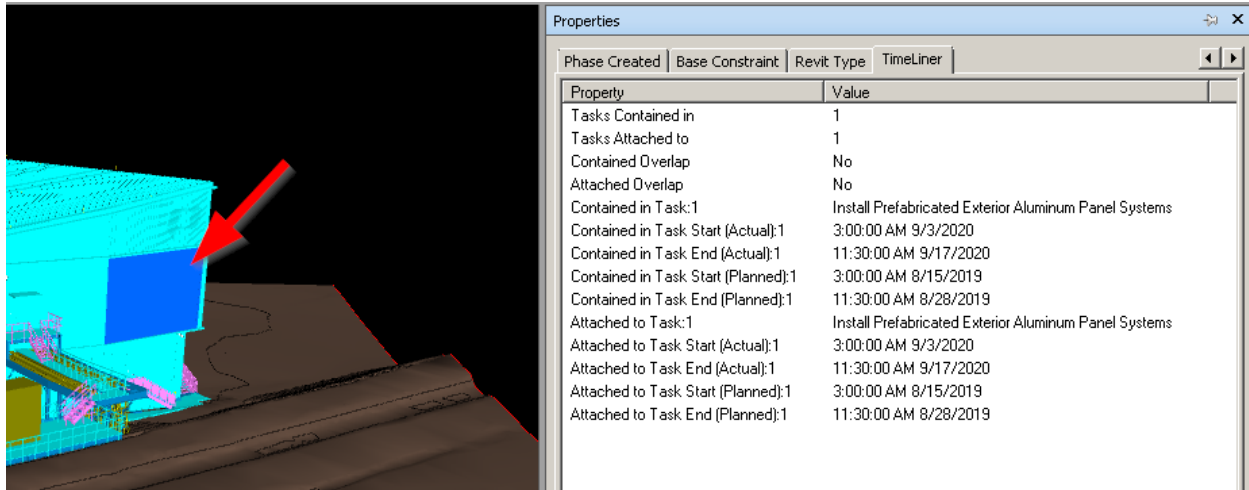
All BIM activities must have a specific search set associated containing all the related geometrical elements.





### 5.6.2 ATTACHED BY EXPLICIT SELECTION

All geometrical elements must be attached to their specific activities using the correspondent search set.



### 5.6.3 UNATTACHED ITEMS

All geometrical elements must be attached to one BIM activity.

### 5.6.4 ITEMS IN MULTIPLE TASKS

All geometrical elements must be attached to only one BIM activity.

### 5.6.5 ITEMS IN OVERLAPPING TASK

All geometrical elements must be attached to only one BIM activity.

## 5.7 CONSTRUCTION STATUS

### 5.7.1 PROJECT MILESTONES SEARCH SETS

All elements must be grouped by their current Milestone using Search Sets. Three Search Sets must be created in order to group elements:

- Basis of Design
- As per Approved Shop Drawing
- As Constructed

### 5.7.2 BASIS OF DESIGN PARAMETER

All elements as per Basis of Design Milestone must be assigned to the correspondent status using the parameter that identifies it as so.

### 5.7.3 AS PER SHOP DRAWING PARAMETER

All elements as per Approved Shop Drawing Milestone must be assigned to the correspondent status using the parameter that identifies it as so.

### 5.7.4 AS CONSTRUCTED PARAMETER

All elements on As Constructed Milestone must be assigned to the correspondent status using the parameter that identifies it as so.

VIEWPOINTS: Areas of Interest Viewpoints, Coordination Issues Viewpoints, Viewpoints Folder Structure

## 5.8 VIEWPOINTS

### 5.8.1 AREAS OF INTEREST VIEWPOINTS

All defined Areas of Interest must have at least one viewpoint that shows the area in detail.

### 5.8.2 COORDINATION ISSUES VIEWPOINTS

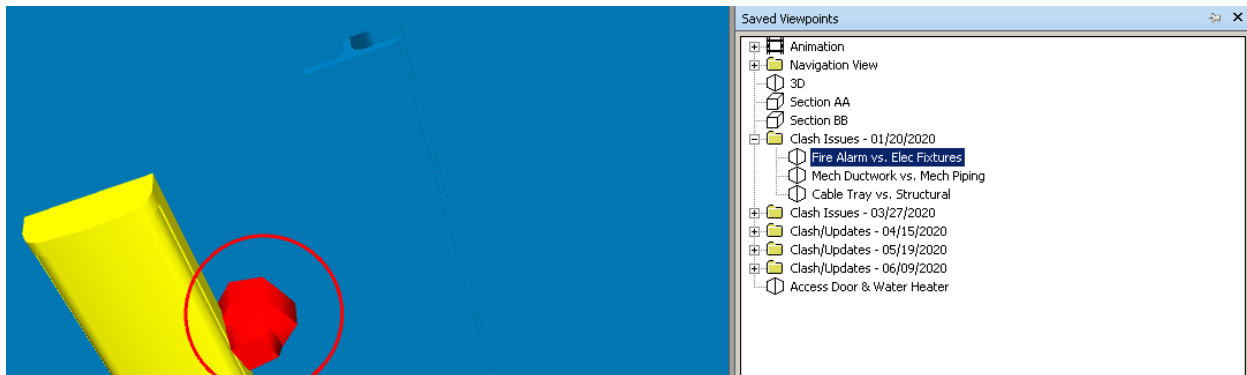
All reported coordination issues must have at least one viewpoint that shows the issue in detail.

As Viewpoints creates a folder in the Saved Viewpoints dockable window (this window is automatically displayed when the report is run), with the same name as the test. Each clash is saved as a viewpoint in this folder, with a comment attached containing the clash result details.

**NOTE:** The home view is the default camera orientation for clash viewpoints.

### 5.8.3 VIEWPOINTS FOLDER STRUCTURE

All viewpoints must be grouped and managed in an organized manner for ease of use.



## 6.0 HOW TO SEND A REQUEST FOR BIM REVIEW

You can go to the Port Authority Website:

<https://panynj.sharepoint.com/sites/Engineering/SitePages/Home.aspx>

1) Click in Request for CAD/BIM Review in the left column

2) Complete the form with the project information.

#### **NOTE:**

- Before every submission, each discipline's BIM Coordinator is responsible for having all their team members save their changes to the Central File and to release any workset ownership.



## Engineering Operations BIM Guidelines

- At the completion of every milestone, each discipline's BIM Coordinator shall copy their discipline's BIM, MANAGEMENTDOCS, MODEL, PHOTOS, PLOTSHEETS, and PUBLISH folders into the appropriate milestone sub-folder within SUBMITTALS.
- Once the folders have been copied, each discipline's BIM Coordinator shall complete the form and notify the BIM Lead Coordinator who will notify the VDC Group via email (engbim@panynj.gov).
- Upon notification, the VDC Group shall move the files to the archive server, mapped internally as the N:\ drive, leaving behind a text file named ARCHIVED YYYY-MM-DD.txt, which contains the exact location where the files can be found.
- Projects received from an outside resource should be sent directly to the discipline's BIM Coordinator.

Request for CAD/BIM Review

Date: 5/12/2020

Review Type: [v]

LEA: [Enter a name or email address...]

Discipline: [v]

Facility: [v]

PID: [v]

Project Group: [v] CAD [v] BIM

Submittal Percentage: [v] %

Stage: [v]

Project Manager: [Enter a name or email address...]

Project Title: [v]

Confidential: [v]

Contract Number: [v]

Confidential Privilege: [v]

Folder Path: [v]

Please ensure that every discipline involved in the project has placed their MODEL, PLOTSHEETS and PUBLISH folders within their own discipline SUBMITTALS folder so we can archive the project.

CAD/BIM	Discipline	Task Leader	Consultant/Contractor
[v]	Architecture	[v]	[v]
[v]	Landscape	[v]	[v]
[v]	Civil	[v]	[v]
[v]	Electrical	[v]	[v]
[v]	Electronics	[v]	[v]
[v]	Environmental	[v]	[v]
[v]	Geotechnical	[v]	[v]
[v]	Mechanical	[v]	[v]
[v]	Fire Protection	[v]	[v]
[v]	Plumbing	[v]	[v]
[v]	Structural	[v]	[v]
[v]	Traffic	[v]	[v]
[v]	Federated Model - BIM group only	Resident Engineer (if on Stage 4)	Consultant/Contractor
[v]	3D Coordination	[v]	[v]
[v]	4D Schedule Simulation	[v]	[v]

Comments: [v]

Save Cancel

The image above shows the form: The first part is about the project information: LEA; Facility; Stage; Project Title; Contract Number; Review Type; Discipline; PID; Submittal Percentage; Project Manager

The second part of the form is a detail about the files that are part of the submission: CAD or BIM file; Discipline; Task Leader; Consultant or Contractor Name. If a Federated model is part of the submission, please fill in the corresponding fields.