OSU COBie Extension Tutorial Revit 2019/2020

## Install COBie Extension Tool

Install the COBie Extension for your current version of Revit from the following link.
http://www.biminteroperabilitytools.com/cobieextensionrevit.php

Complete in Each Separate Model

- In the ribbon toolbar you will see the BIM Interoperability Tools section
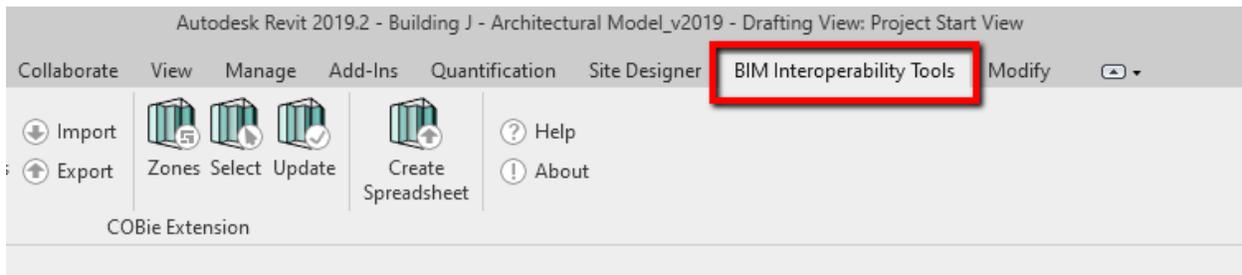
- click "Contacts" button in the COBie Extension section
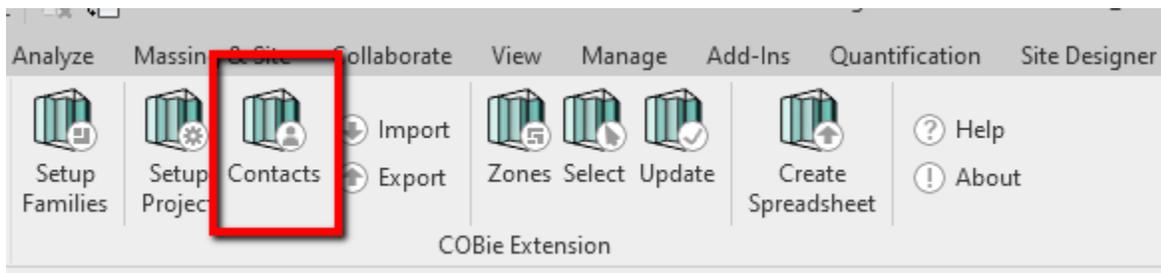
- Click "Add Contact…"
- Fill in the parameters in the "Required" Section and Optional Section as you see fit
- Change CreatedBy from "<not set>" to the Email user you entered
- When finished select "Save and Close"

THE OHIO STATE UNIVERSITY

* **Visit https://youtu.be/7aoc7dtOz-Q if you are having issues with the Manage Contacts function for further instructions.***

- Next click the "Setup Project" button in the COBie Extension section

- In the General Tab, make sure the "Identification" option is set to "Global Unique Identifier (GUID)"

- In Revit the design teams should make sure they have run the Space Naming tool in the Analyze Tab to synchronize the Rooms and Spaces in each model. Be sure to use the default settings in the Space Naming tool, where "Names and Numbers" are selected in the Options pane and "All Levels" is selected in the Selection pane.
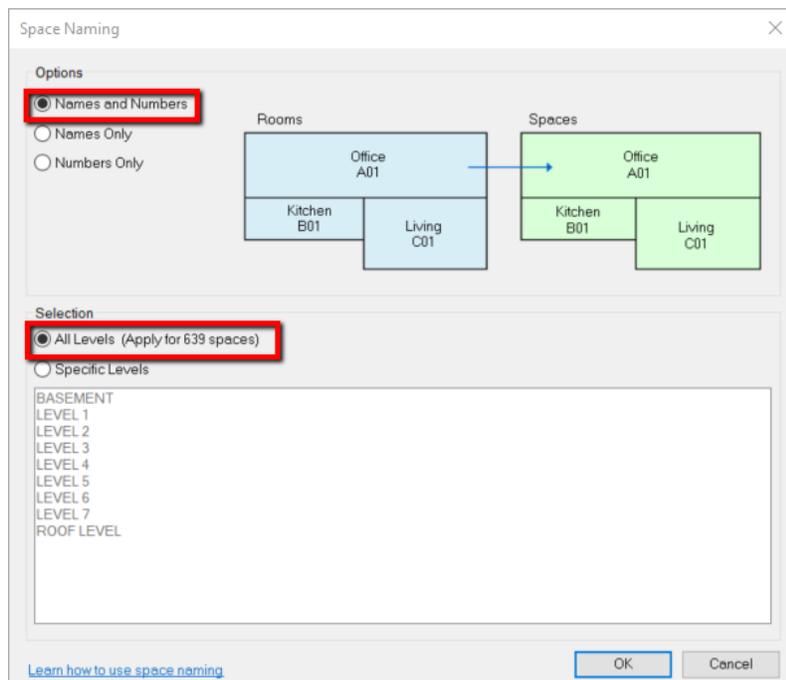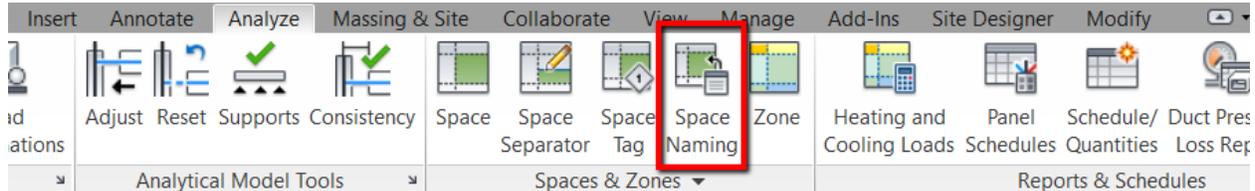

- In the Spaces tab, you will need to define if elements are located in a Room or Space.

- If you are in an Architectural Model use "Select Rooms for all"
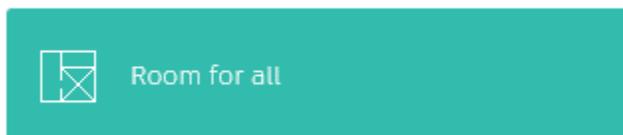
- If you are in a MEP Model then use "Select Spaces for all"

THE OHIO STATE UNIVERSITY

- In the Types tab, make sure Description is set to "Family:Type" (which is the default setting), and make sure the Type Name Builder: Fields is set to "Revit Category", "Family", and "GUID"

THE OHIO STATE UNIVERSITY

- All other tabs within this Setup dialog box will remain unchanged and using the default settings.

- Click "Save and Close"

- You will not need to open the "Modify Parameter Mappings for this Project" section as OSU has already captured these settings in an .XML file that can be imported into you project. You can download this file from the FOD website. File is located under the Vendor Resources > Design Guidelines, Specifications, Standards > Building Information Modeling (BIM) > OSU BIM PDS Tools (zip) file. https://fod.osu.edu/resources

Please Note: If you are working on an existing project that didn't implement the COBie Extension from the outset in you will need to follow the steps in Appendix 1 at the end of this document.

Please Note: Empty Schedules are to be expected, the schedules are showing the COBie.parameters. The parameters start out empty and stay empty until they are filled in either

THE OHIO STATE UNIVERSITY

manually or by running the Update tool. For more information on the Update feature please visit
https://youtu.be/xa7utLOcnss

- Go to Import button to search for
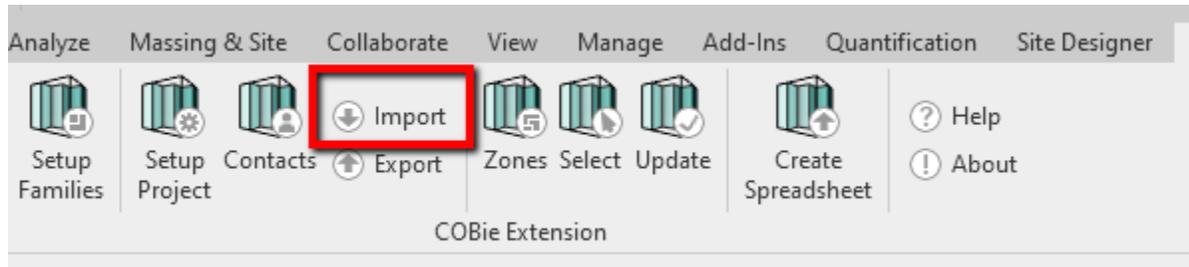
- Click the "…" to browse for the "OSU COBie Confguration.xml" file that was downloaded above. And Hit "Ok"
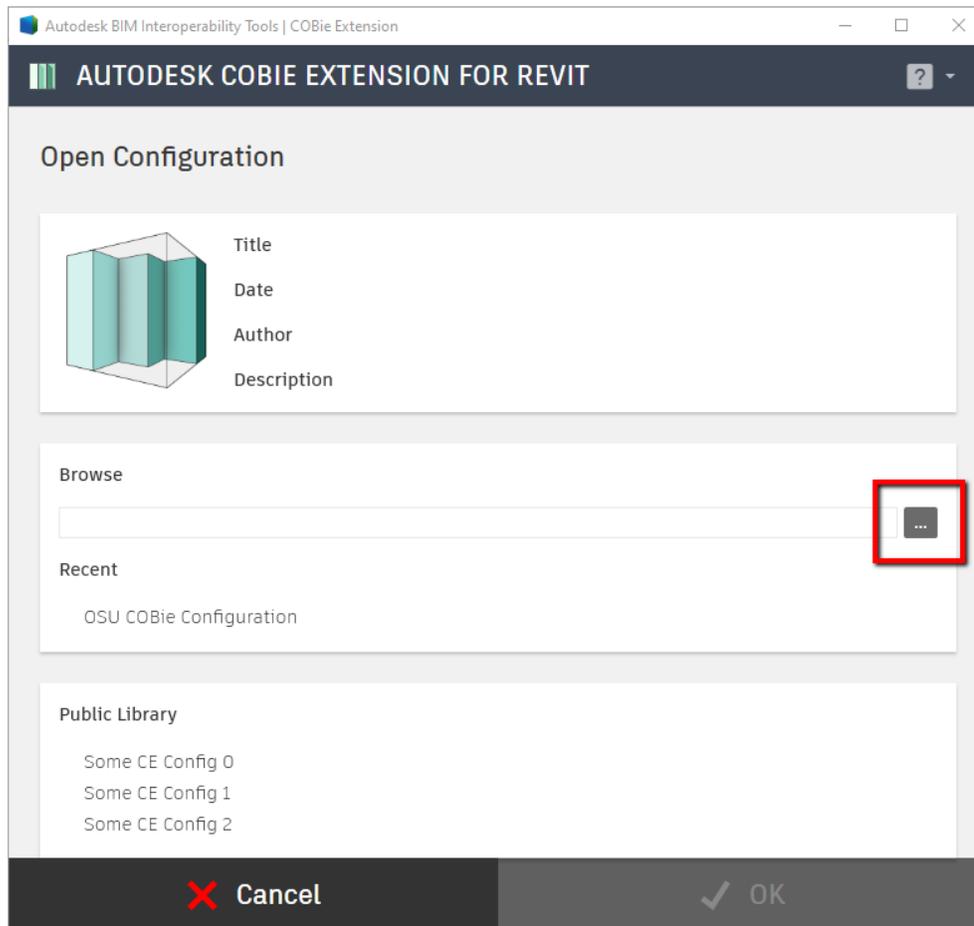

- Check "Import Parameter Mapping" then choose Import.
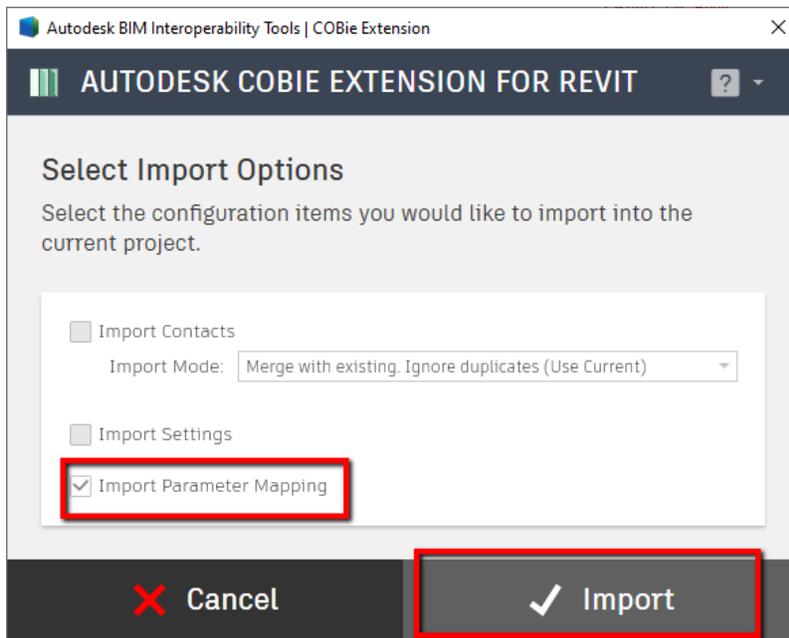
- Next go to the "Select" tool.
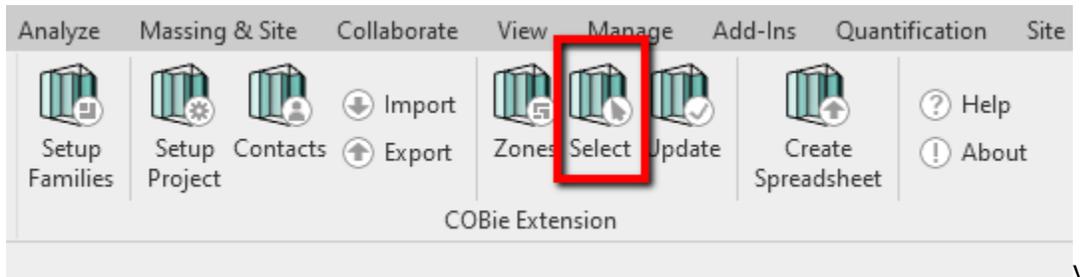
- Select which Revit families, types and elements will get exported to the COBie spreadsheet. Only check the following elements in the dialog box

Data Devices	Mechanical Equipment
Doors	Nurse Call Devices
Electrical Equipment	Pipe Accessories
Electrical Fixtures	Plumbing Fixtures
Fire Alarm Devices	Rooms
Generic Models	Security Devices
Levels	Spaces
Lighting Devices	Specialty Equipment
Lighting Fixtures	Telephone Devices

THE OHIO STATE UNIVERSITY
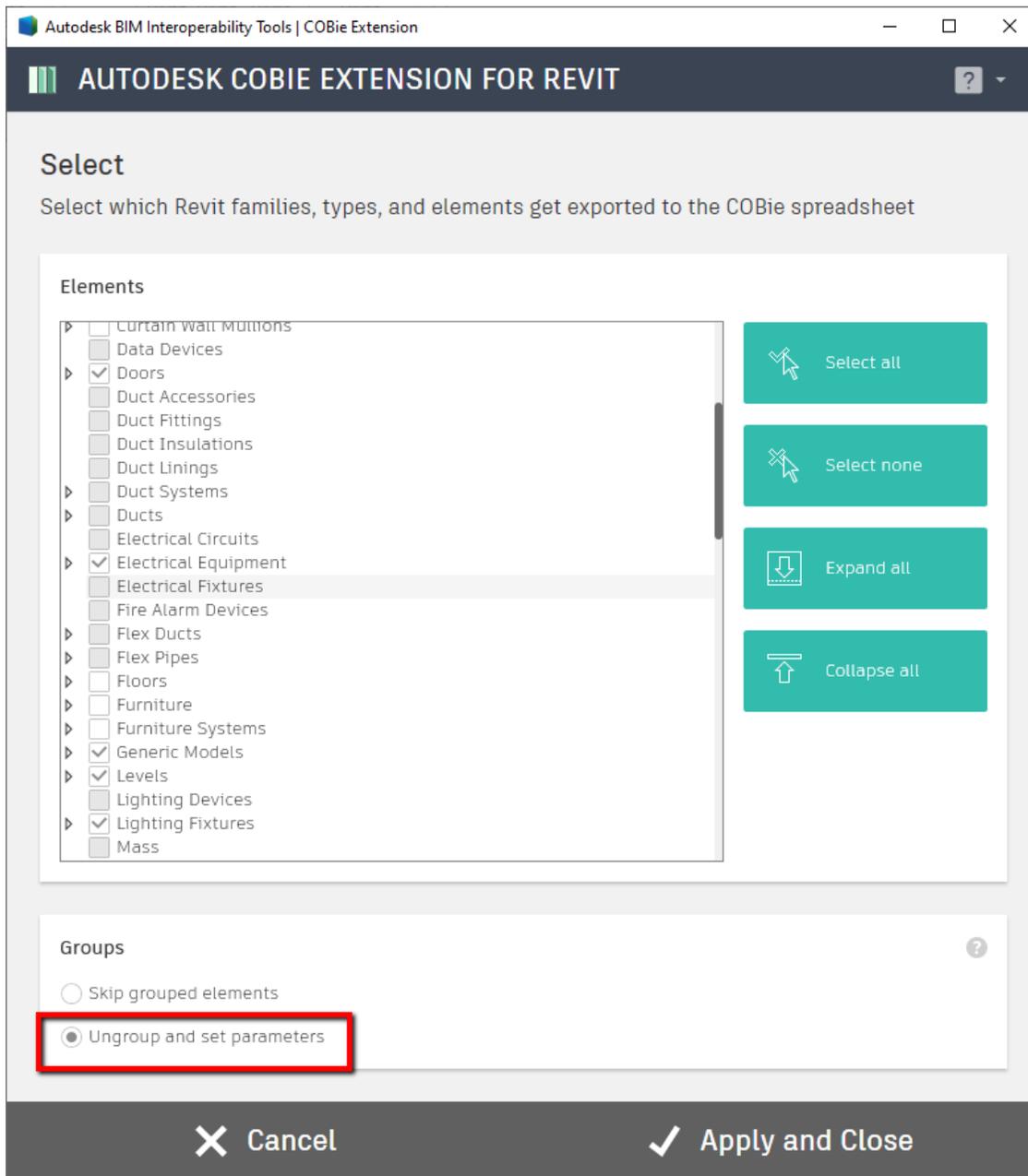
- Make sure the "Ungroup and set parameters" is selected.

- Select "Apply and Close"

- The categories above provide the overall intent of what should be exported from the model, but each design and construct team shall coordinate to make sure the export is in alignment with the items defined in the Asset Tag & COBie Required Column of the LOD Matrix of BIM Deliverables Worksheet, which can be downloaded here: https://pare.osu.edu/servicesfacilities-information-and-technology-services/building-information-modeling.

THE OHIO STATE UNIVERSITY

Type and Component Clean Up

- It will be expected that some modeled components will need to be unchecked in the COBie.component Schedule in the Revit file before exporting the final COBie file in order to be compliant with the LOD Matrix of BIM Deliverables. The blank check boxes (highlighted with red boxes) in the COBie field in the image below will not be exported to the final COBie sheet.
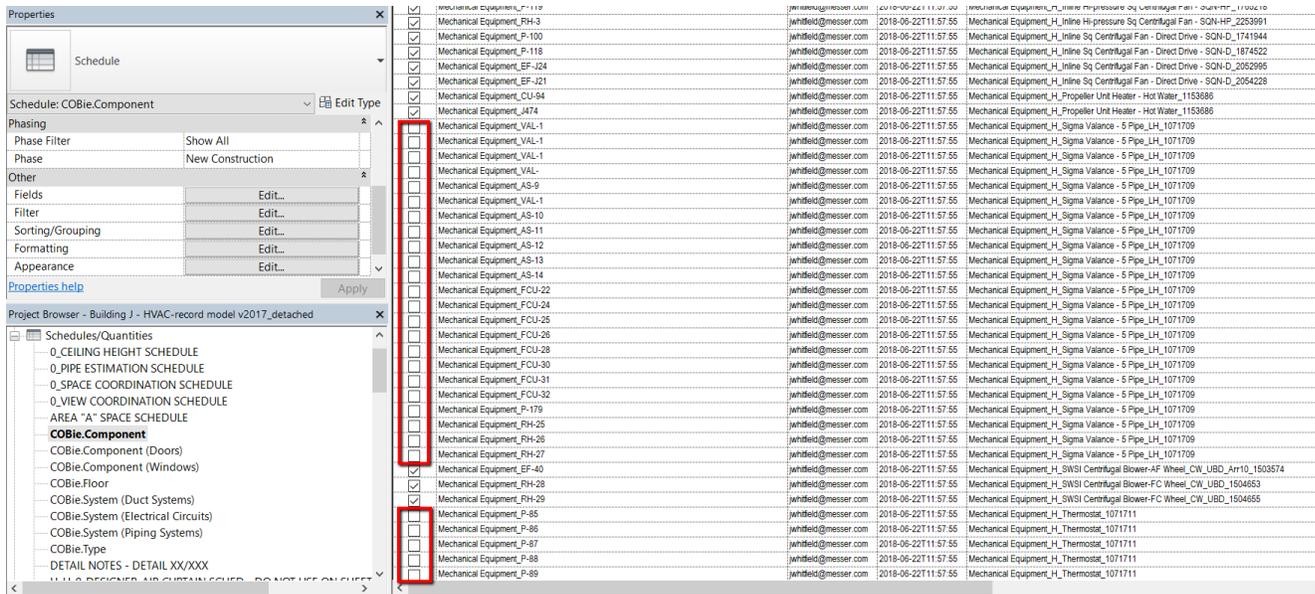
Levels Clean Up

- Levels should be checked in only the architectural model to remove any duplication that may occur.

Door Selection and Location Clean Up

- The COBie Extension does not understand which doors are fire rated or which room a door should be associated with, and will assign both rooms on either side of the door in the space column of the COBie worksheet. To resolve these items prior to submitting to OSU the following steps should be followed.
    - Prior to exporting the COBie worksheet, non-fire rated doors should be unchecked in the same fashion as the components in the above step, so they are not exported from the model.

THE OHIO STATE UNIVERSITY

- o Once in Excel, only one room number should be listed in the space column. Doors should be associated with the room they are going into or coming from (excluding corridors).
- o If a door is going from one room to another, the larger room shall take precedent (i.e. sub rooms, closets, storage space, etc.)
- o The only time a corridor will be listed as the associated room is when the door is between two corridors or other unique conditions that may arise on a project.

- Next you will click the "Update" button

THE OHIO STATE UNIVERSITY
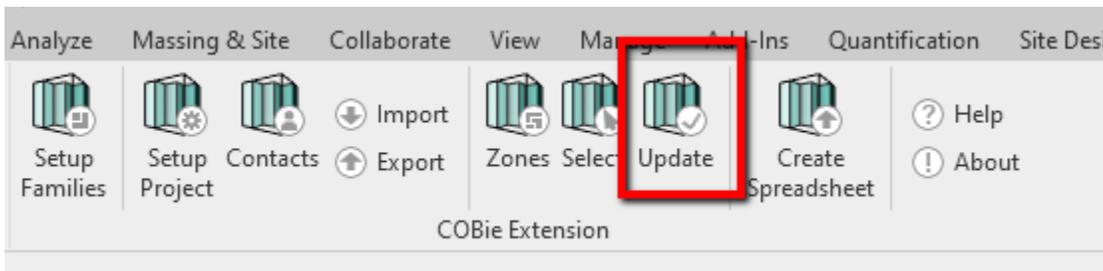
- The following fields will need to be manually controlled and should be switched from "Blank" in the "Update only Blank Parameters" column to be set to "Skip" in the "Skip parameters" columns:
  - Facility – Name
  - Floor – Name
  - Type – ModelNumber

- The following field will need to be manually controlled and should be switched from "Blank" in the "Update only Blank Parameters" column to be set to "All" in the "Update All Parameters" column:
  - Type – Name

- Make sure the "Ungroup and set parameters" is checked.

- Click "Apply and Close"

- Select Finish in the "COBie Extension Modify" dialog box.

- The steps above need to be completed in each individual model.

THE OHIO STATE UNIVERSITY

Complete Only in Overall File

- Once the above is completed for all models, you can then go to the overall file where all models are linked to export all of the data at once.

- Go to the "Create Spreadsheet" button
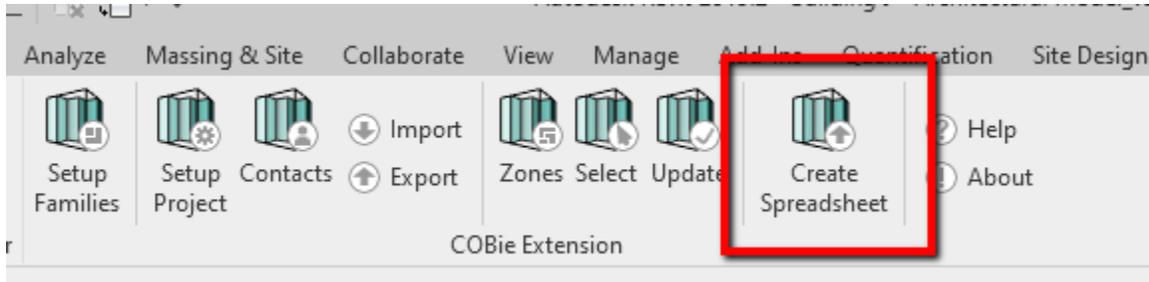
- Make sure each link to be exported is checked in the "Export Links" section and the following items have been unchecked in the "Select Worksheets" section:
  - Zone
  - System
  - Attribute
  - Coordinate
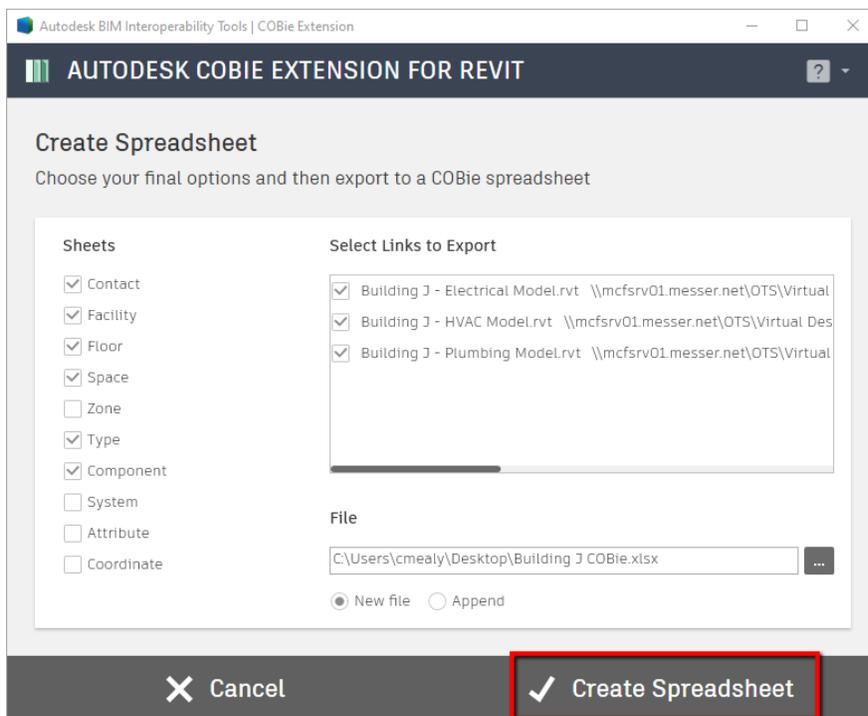
- Set your "Export to a File" location and select "Create Spreadsheet".

THE OHIO STATE UNIVERSITY

- Again, it will be expected that some exported data will need to be deleted from the spreadsheet before providing to OSU to be in compliance with the LOD Matrix of BIM Deliverables, including Door Location Clean Up.

Before Submitting the File to OSU complete the following steps

- From the BIM Interoperability Tools tab Revit you will now see the COBie Extension tools as seen below
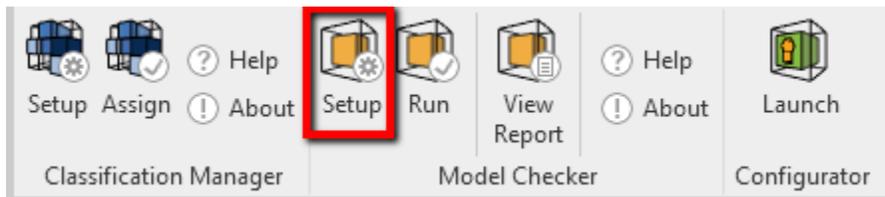
- Select the Setup button in the Model Checker

- Choose "The Ohio State University (OSU) – Project Delivery Standards" from the Public Library section and hit "OK"

- Click Save and Close

THE OHIO STATE UNIVERSITY
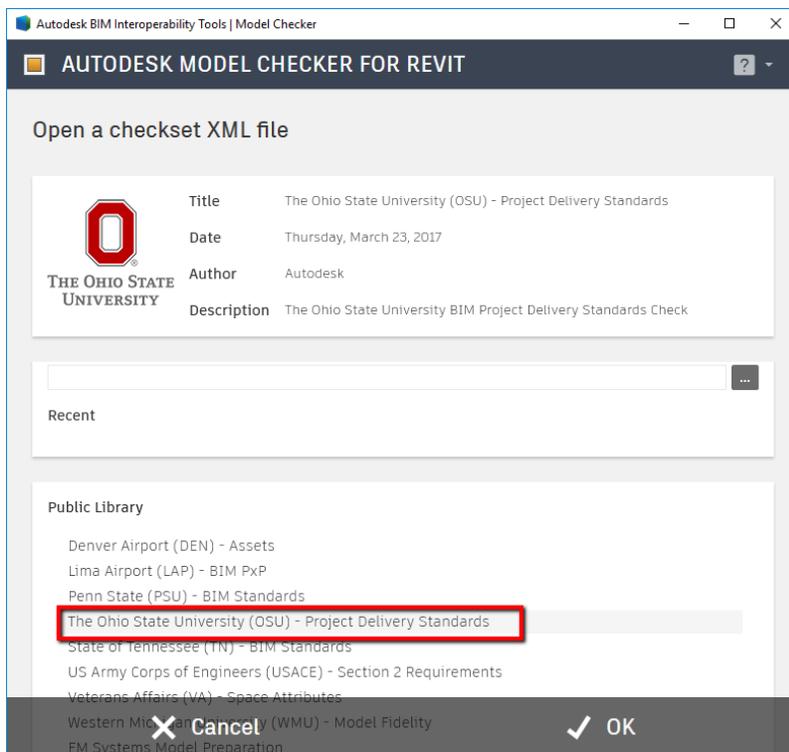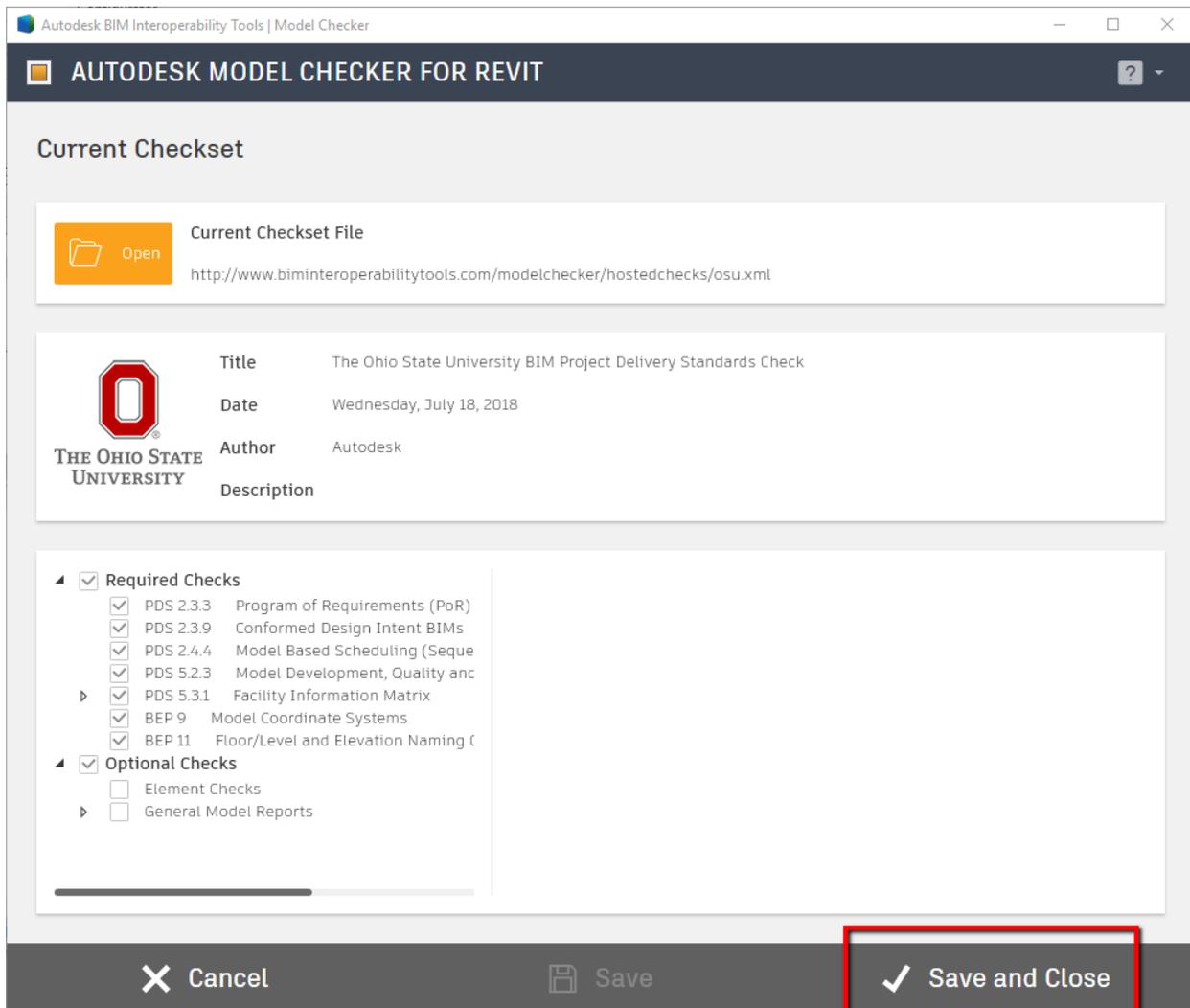
- Click the "Run" button in the Model Checker section
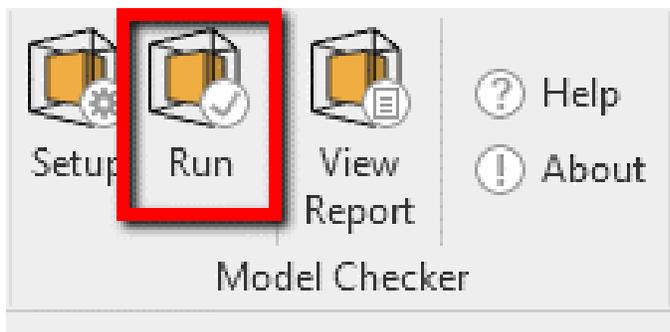
- Select all models to be checked, add models as necessary and check or uncheck the links to run the report against the models

THE OHIO STATE UNIVERSITY
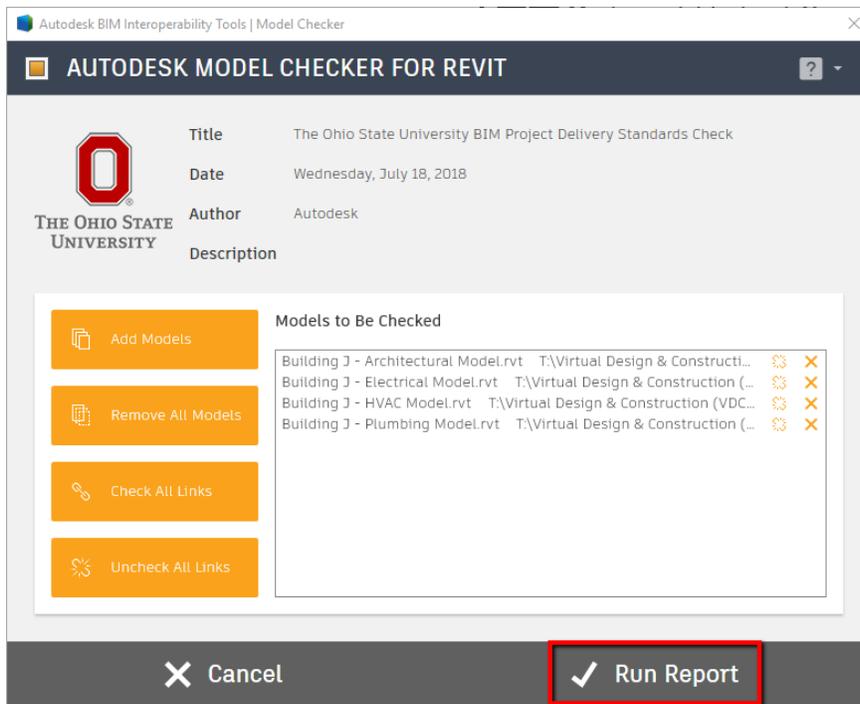
- Click Run Report, review findings and fix what is necessary before submission to OSU
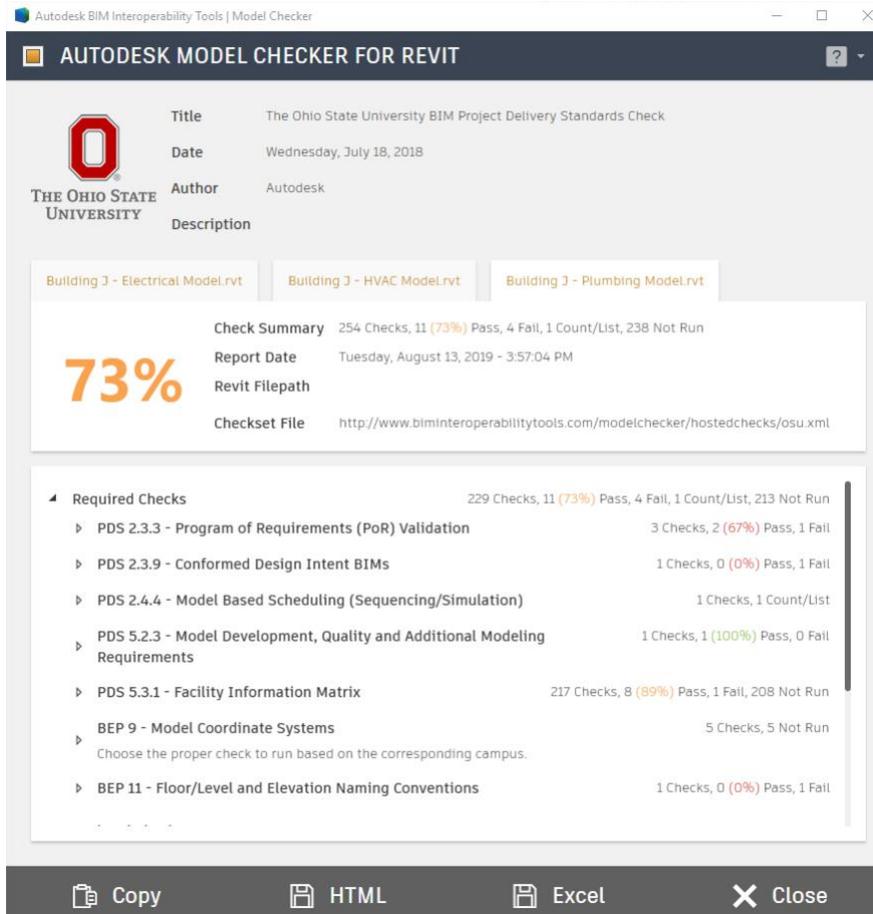
Appendix 1

If parameters are not showing up in the exported COBie sheet, you will need to "Modify Parameter Mappings For This Project" in the setup tab of the COBie Extension toolkit.

- Select the "Project Setup" button from the ribbon.
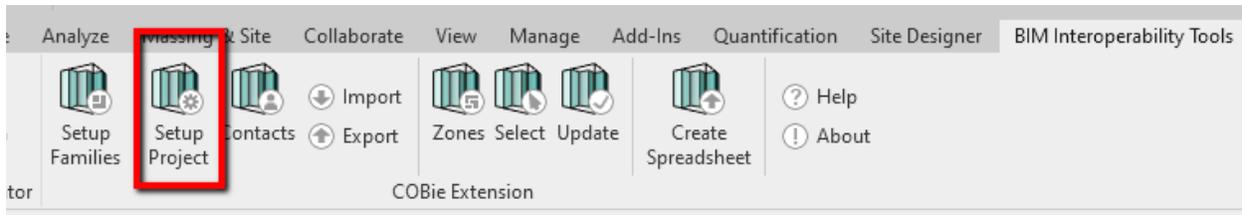
- Select "Parameter Mappings" tab

THE OHIO STATE UNIVERSITY
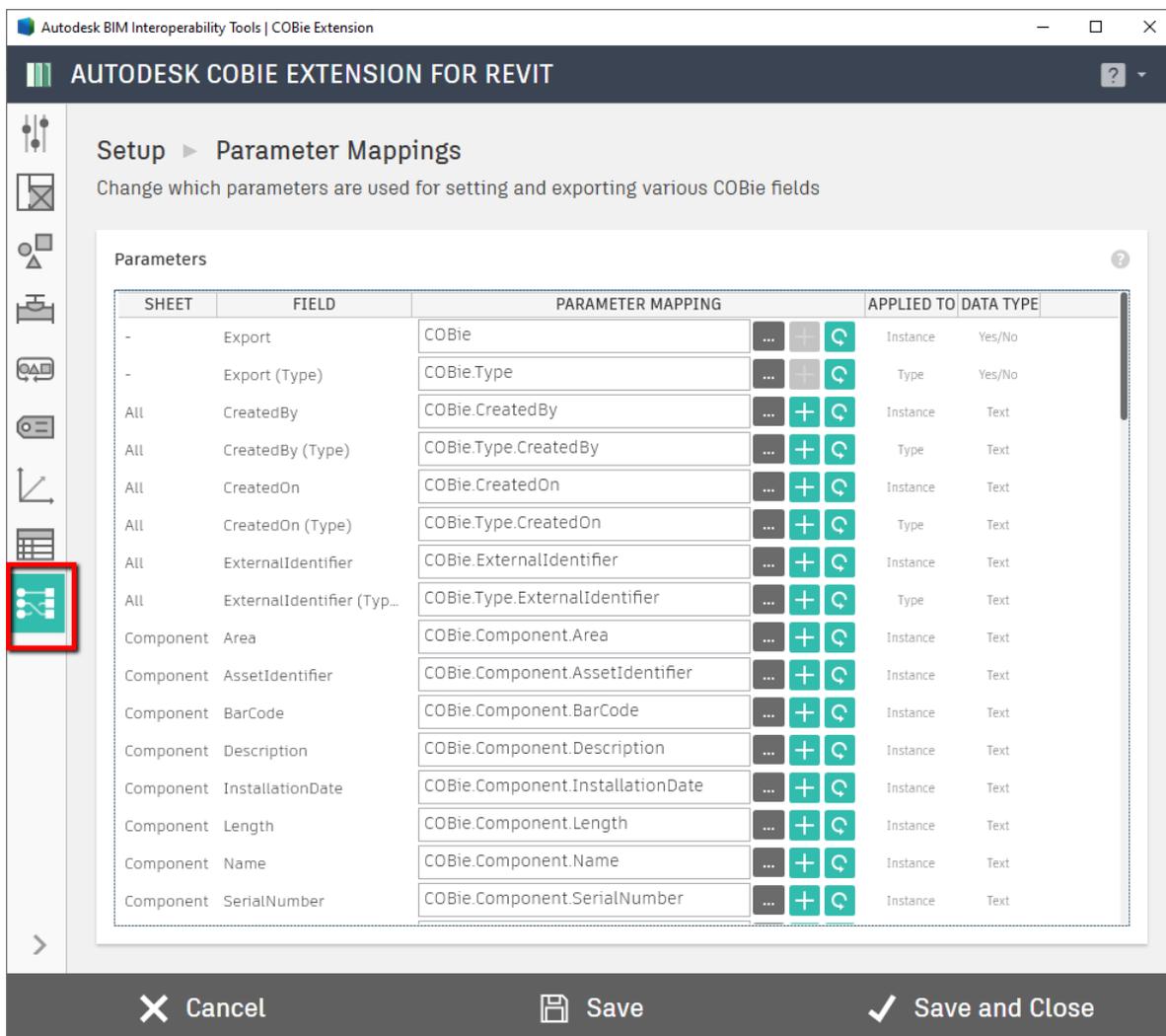
- Find the Type or Instance Parameters that are missing and change the Parameter Mapping to the Parameter that works with the Type or Instance.
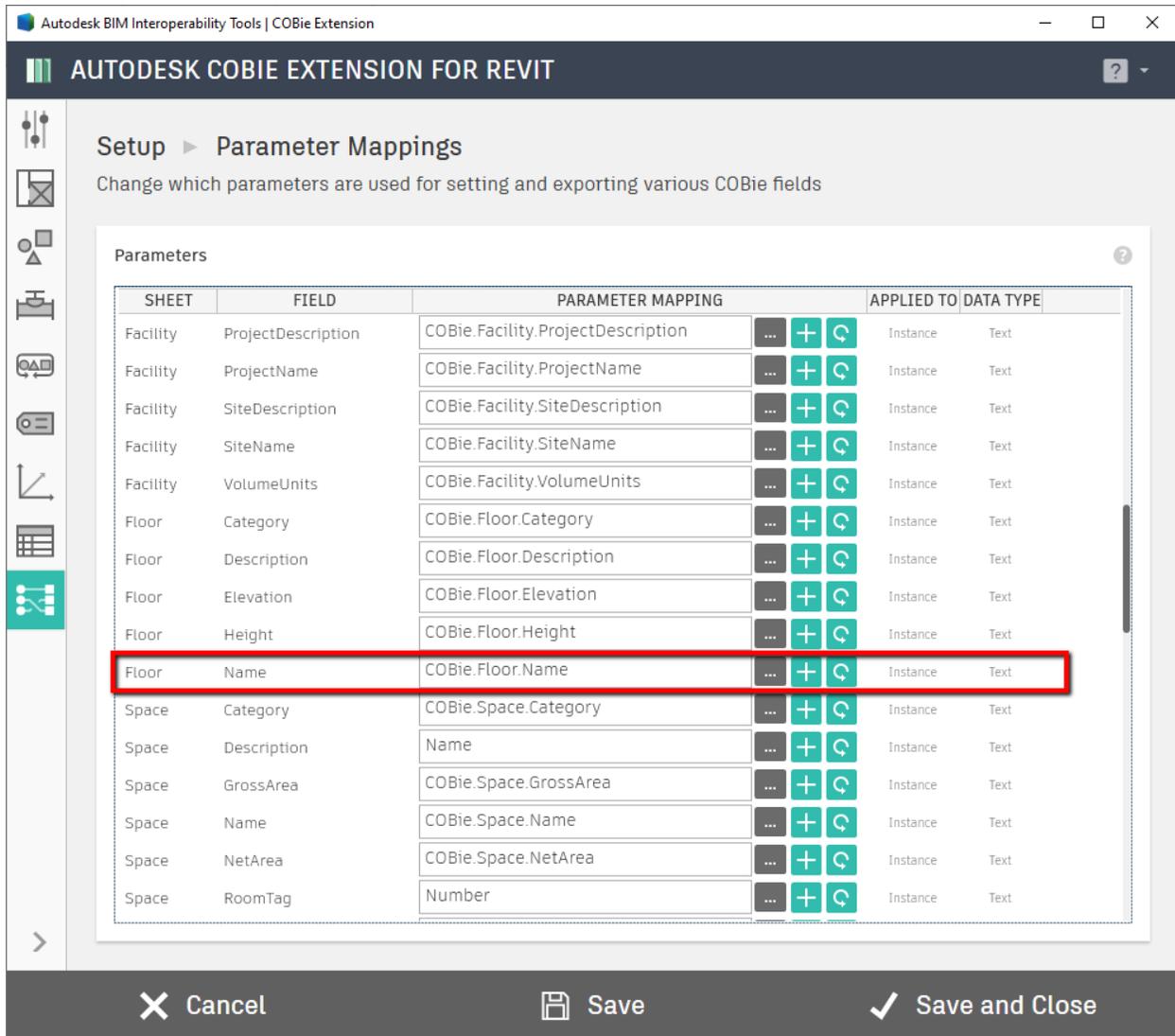
- For example, if the Floor Name is not populating find the Instance Parameter for Floor Name and click the three dots at the end of the COBie.Floor.name map

- In the Select Parameter dialog box that just opened, choose the appropriate parameter (in this case it will be "Name") the select "Ok".

THE OHIO STATE UNIVERSITY
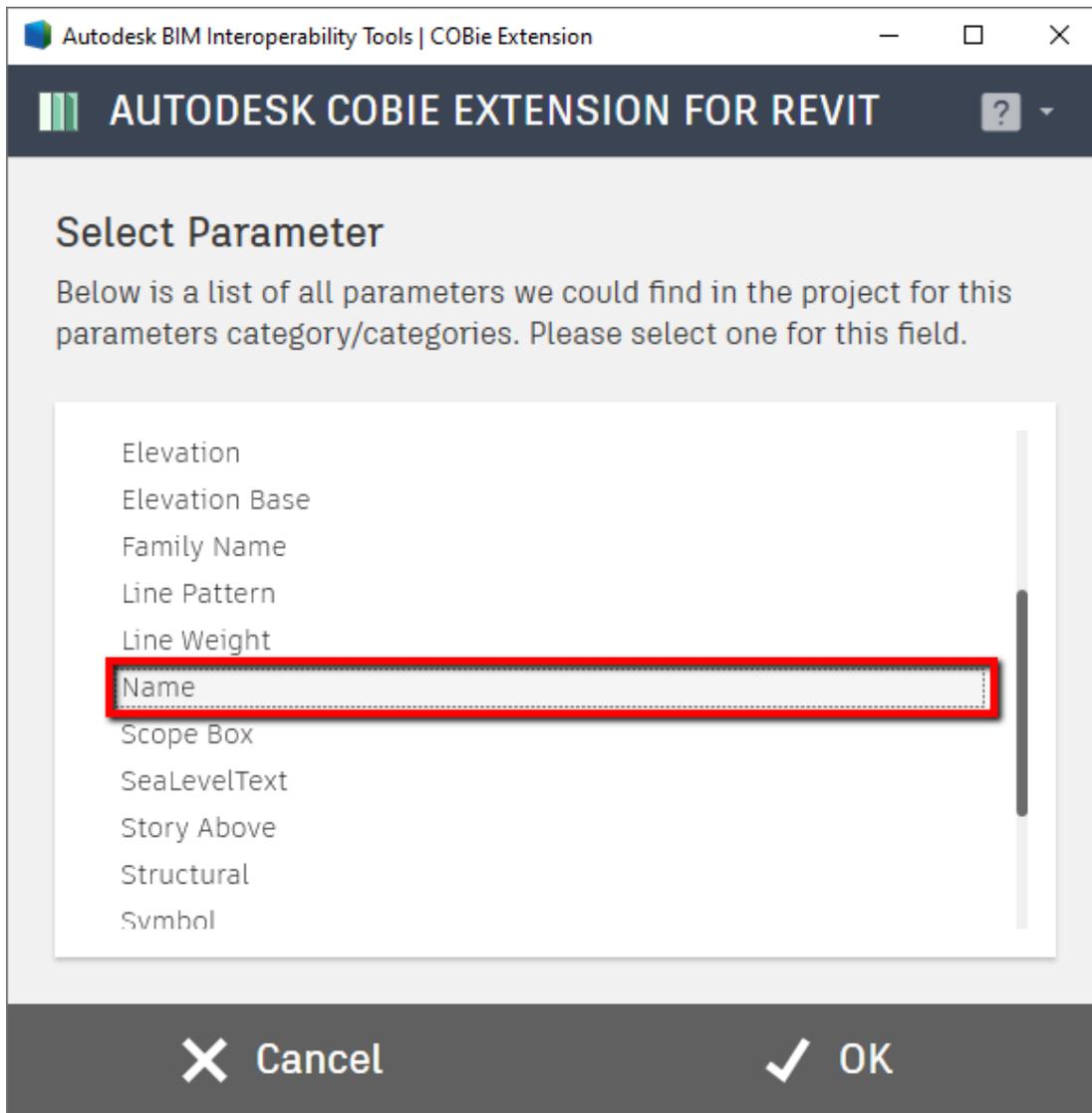
- You Parameter map should now show the update accordingly and pull in the correct data to your COBie sheet.

- Repeat for any other Type or Instance Parameters that are problematic (different Type and Instance Parameters will have different Parameters to select when changing, you will need to validate that the parameter you choose is pulling the correct information into the COBie sheet).

- Click the "Save and Close" button

- If you are having issues with the Modify Parameter Mappings, please visit https://youtu.be/EZzLTSR3ix0 for more information and further instructions.

THE OHIO STATE UNIVERSITY