

AS10154

# **“Bringing the Napkin Sketch into the Model” - Integrating the real world of sketching into the BIM process.**

Mike Engel

ESG Architects – Designer – Associate AIA

Twitter – [mengelmn](#)

Email – [mike.engel@esgarch.com](mailto:mike.engel@esgarch.com)

# Class summary

- With the integration of hand sketching into the digital workflow, we are no longer bound to the finite limitations of our tools. Step through an integrated design process, utilizing laptops and iPads in conjunction with SketchBook Pro software, FormIt software, Fusion 360 software, Revit software, and Dynamo visual programming language extension. In this course, learn how to integrate and capitalize on the power of design sketching in fluid conjunction with the Building Information Modeling (BIM) model. Learn how to utilize SketchBook Pro in the IOS/iPad to create initial sketch concept(s) and import into FormIt software as background for underlay and development of design into a 3D massing model. Develop the massing model utilizing cloud-based FormIt software in conjunction with further overlays and sketching in SketchBook Pro on a pen/tablet interface. Utilize FormIt conceptual energy modeling to orient and refine the initial design concept. Using Autodesk 360 cloud-computing platform and Revit Model software within the massing environment, models and concepts are shared with the Production Team and distributed to the contractor/owner teams.

# Key learning objectives

At the end of this class, you will be able to:

- **Understand** the design workflow in moving from an analog to digital environment
- **Create** a process for integrating sketching into the digital workflow
- **Work** fluidly within the design process between various interfaces and software applications
- **Integrate** multiple software tools into your BIM workflow





# Why digital vs analog?



# Why digital vs analog?

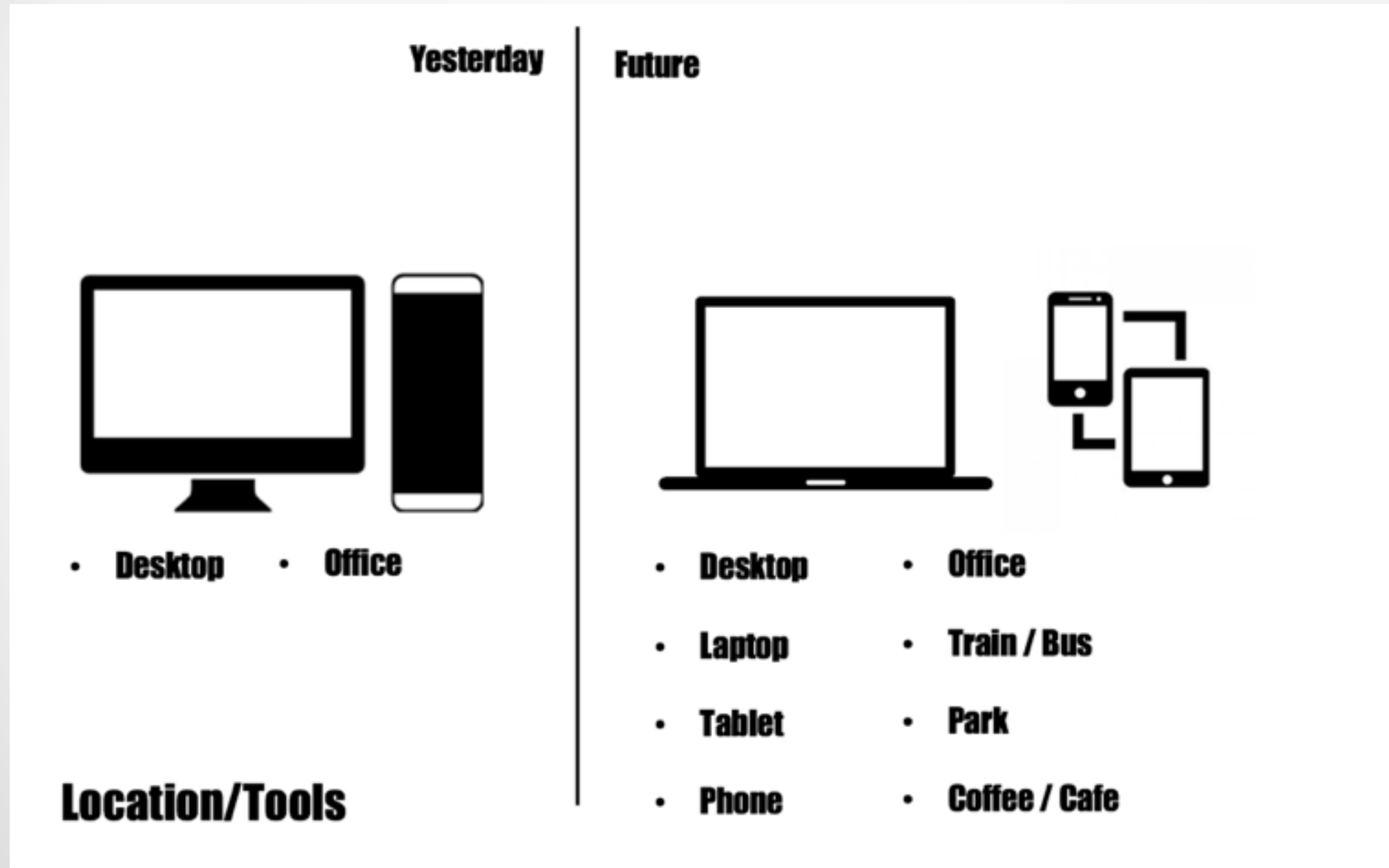
- Mobility
- Flexibility
- Control

# Why digital vs analog?

## ■ Mobility

## ■ Flexibility

## ■ Control



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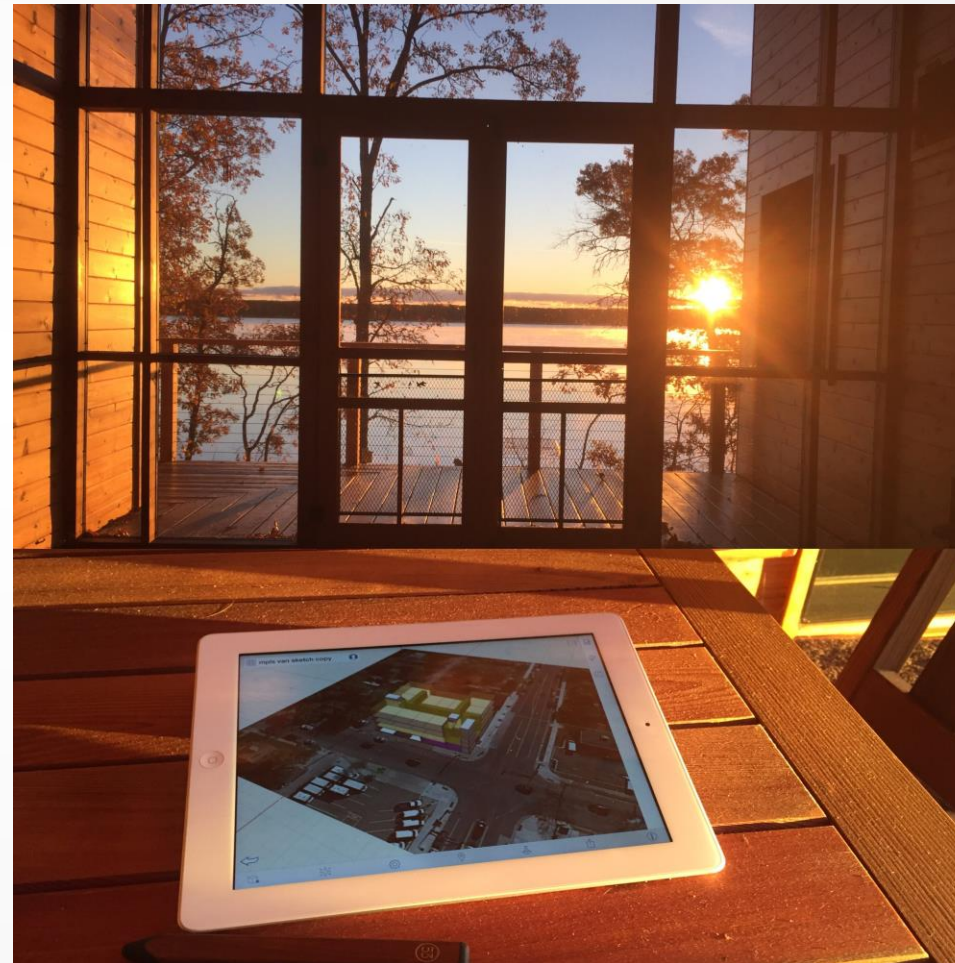
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# Why digital vs analog?

- Mobility
- Flexibility
- Control



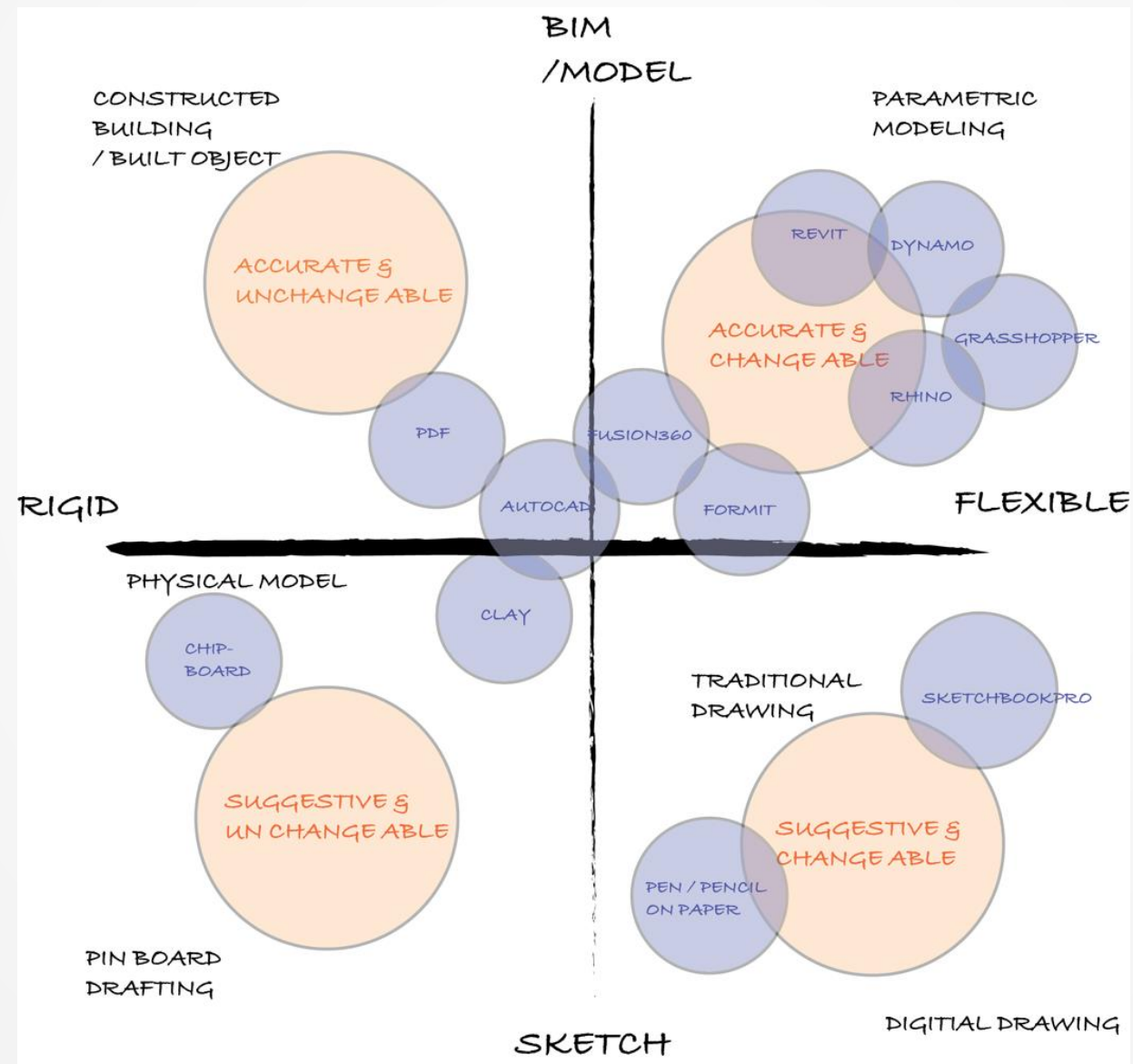


# Why digital vs analog?

- Mobility

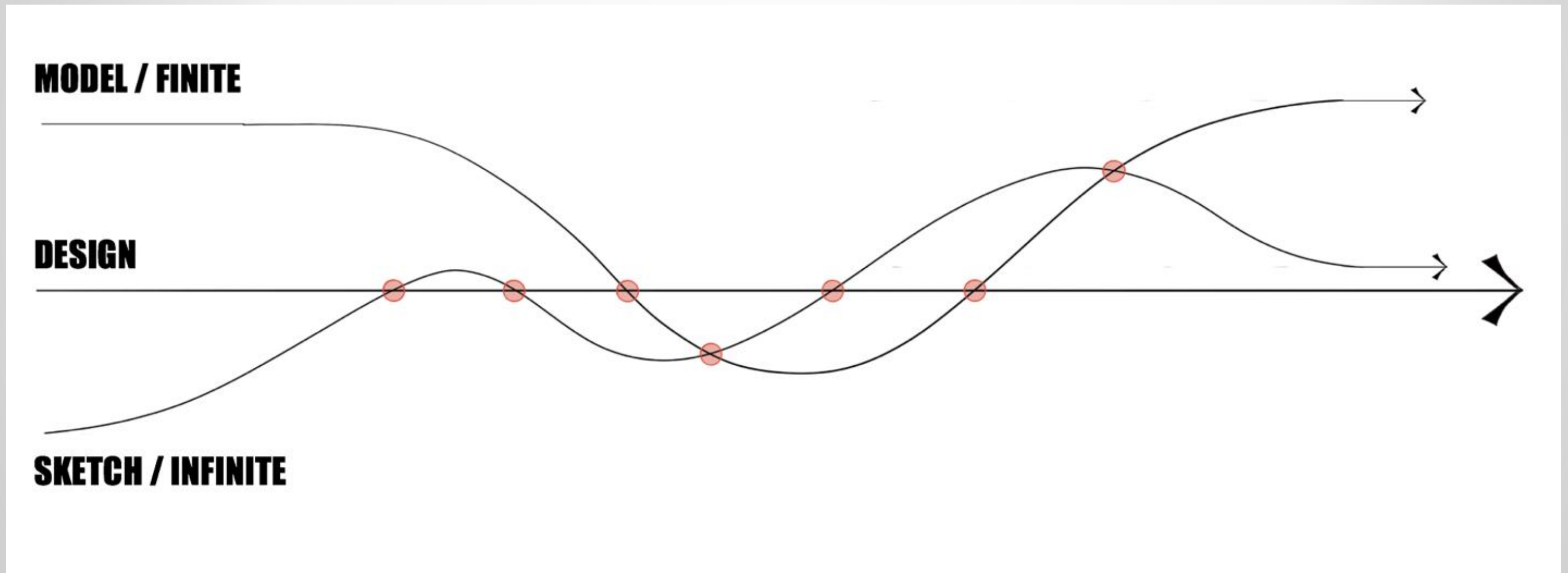
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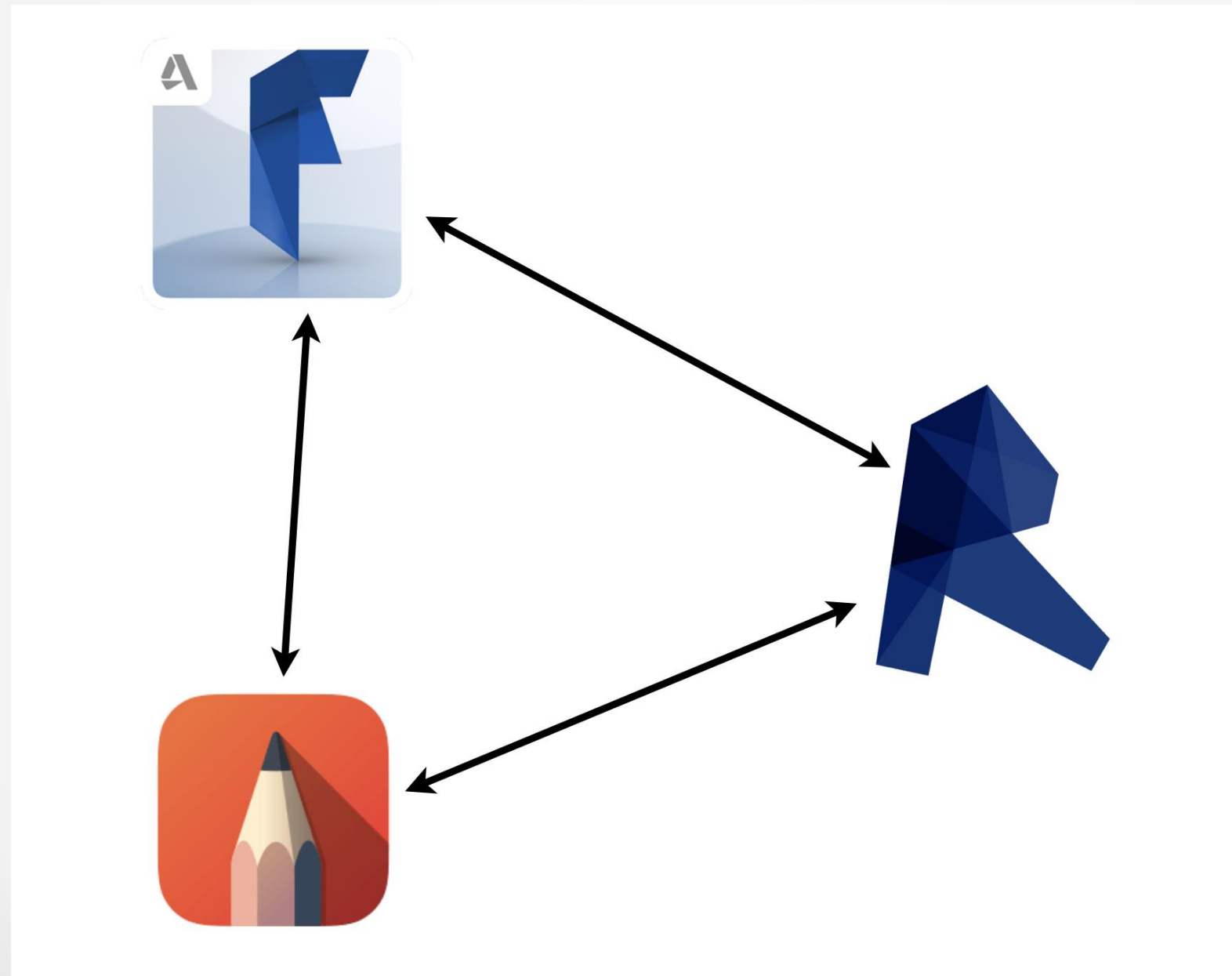


# Why digital vs analog?

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- Control



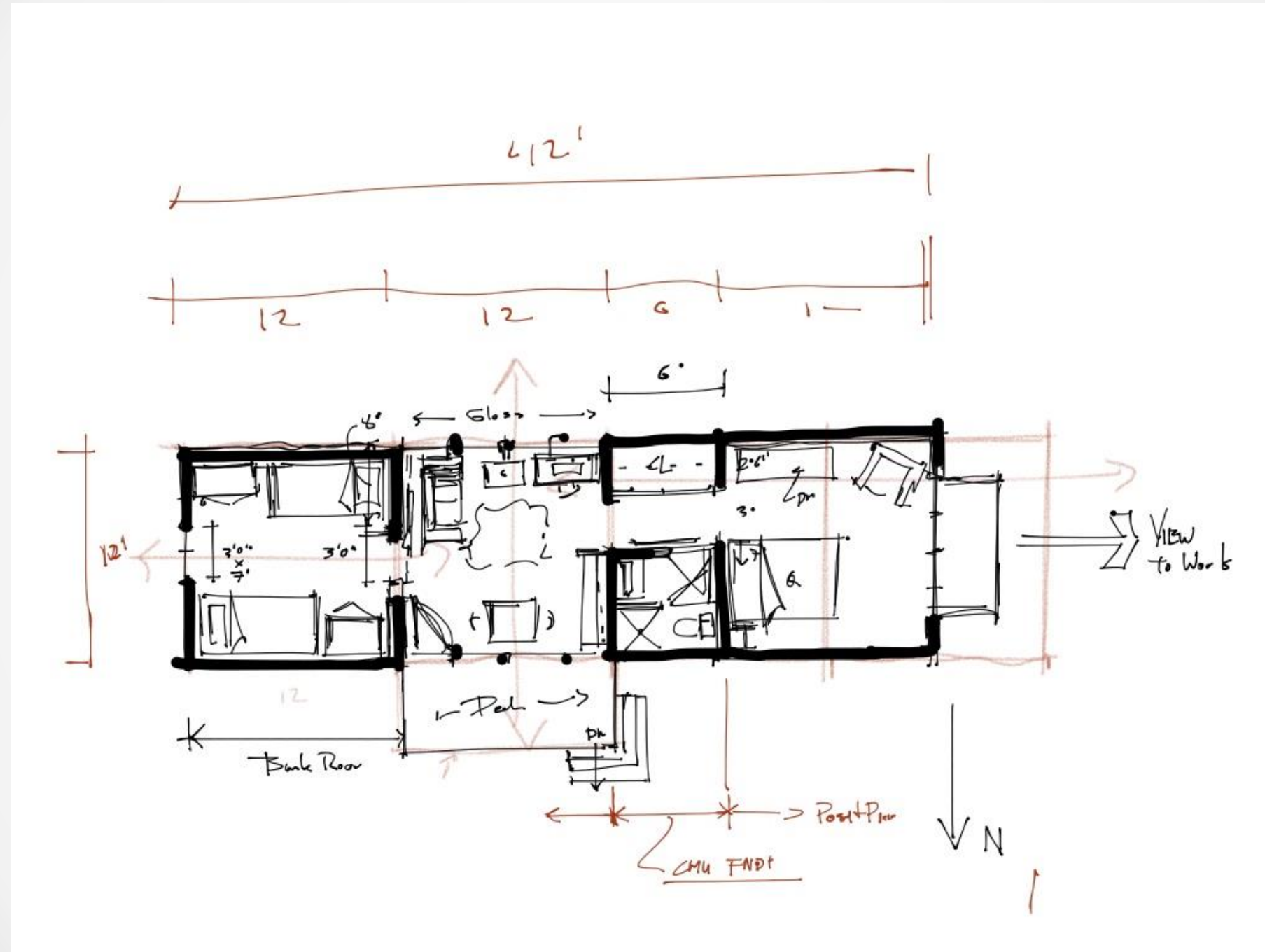




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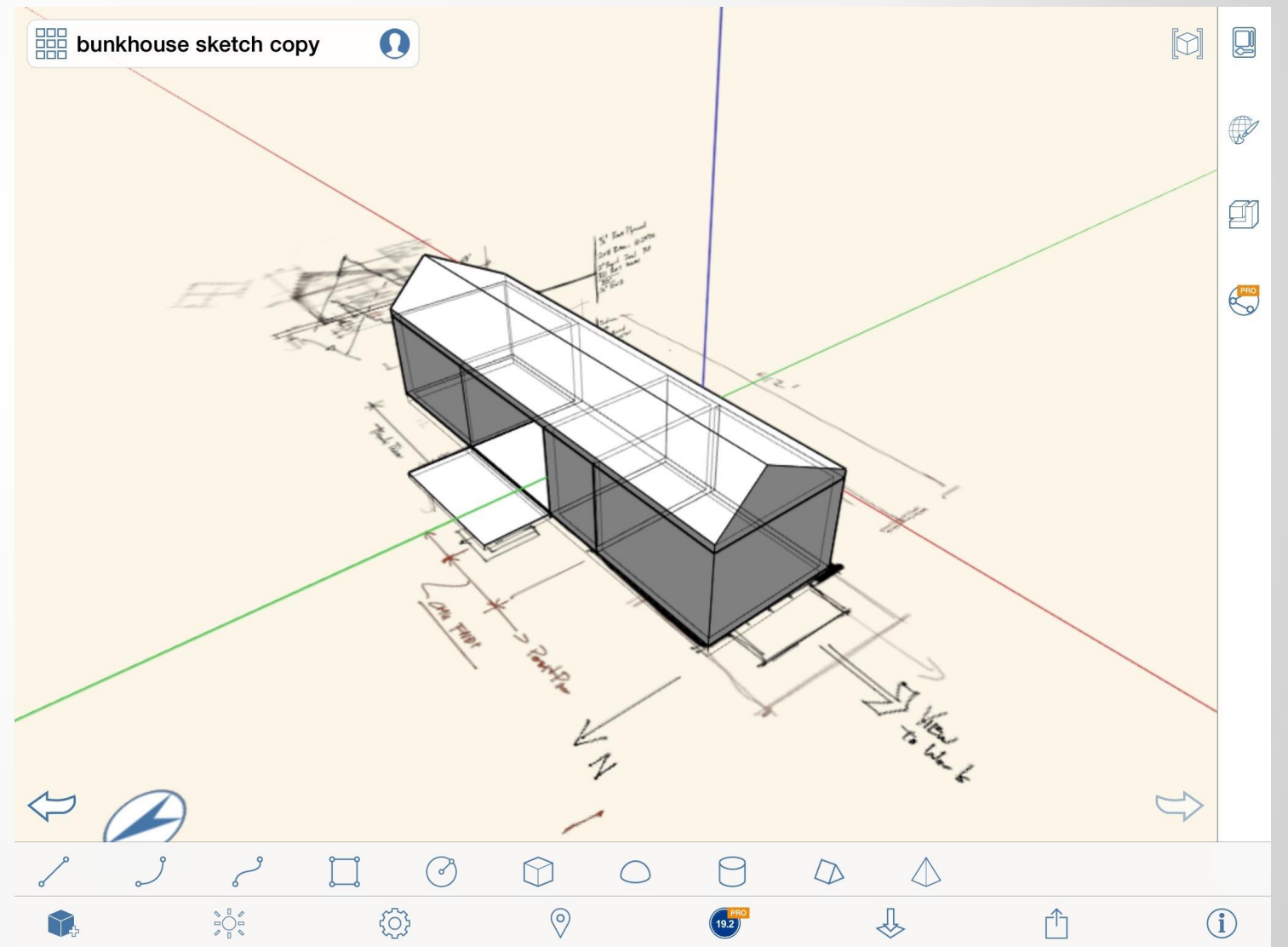
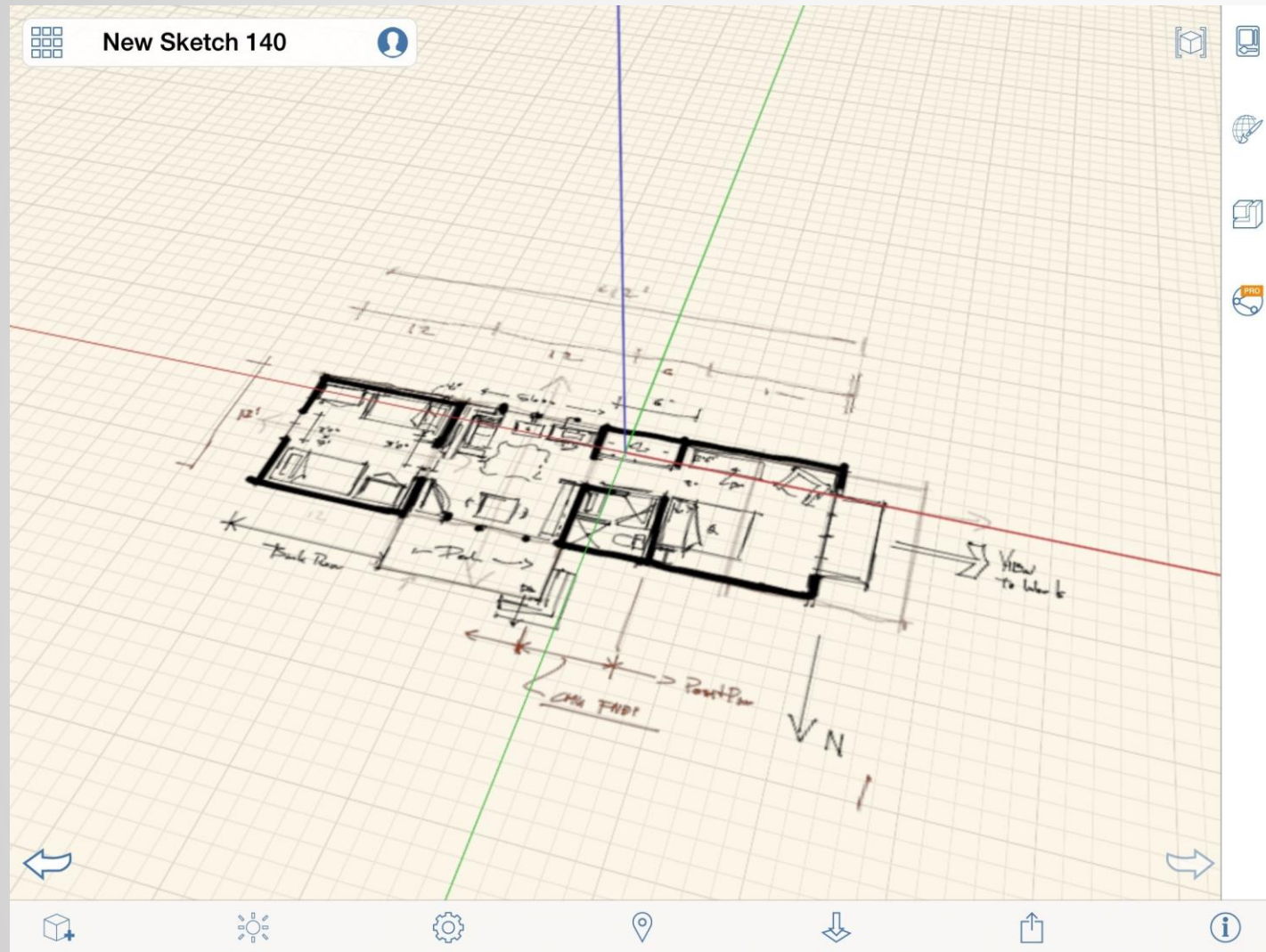


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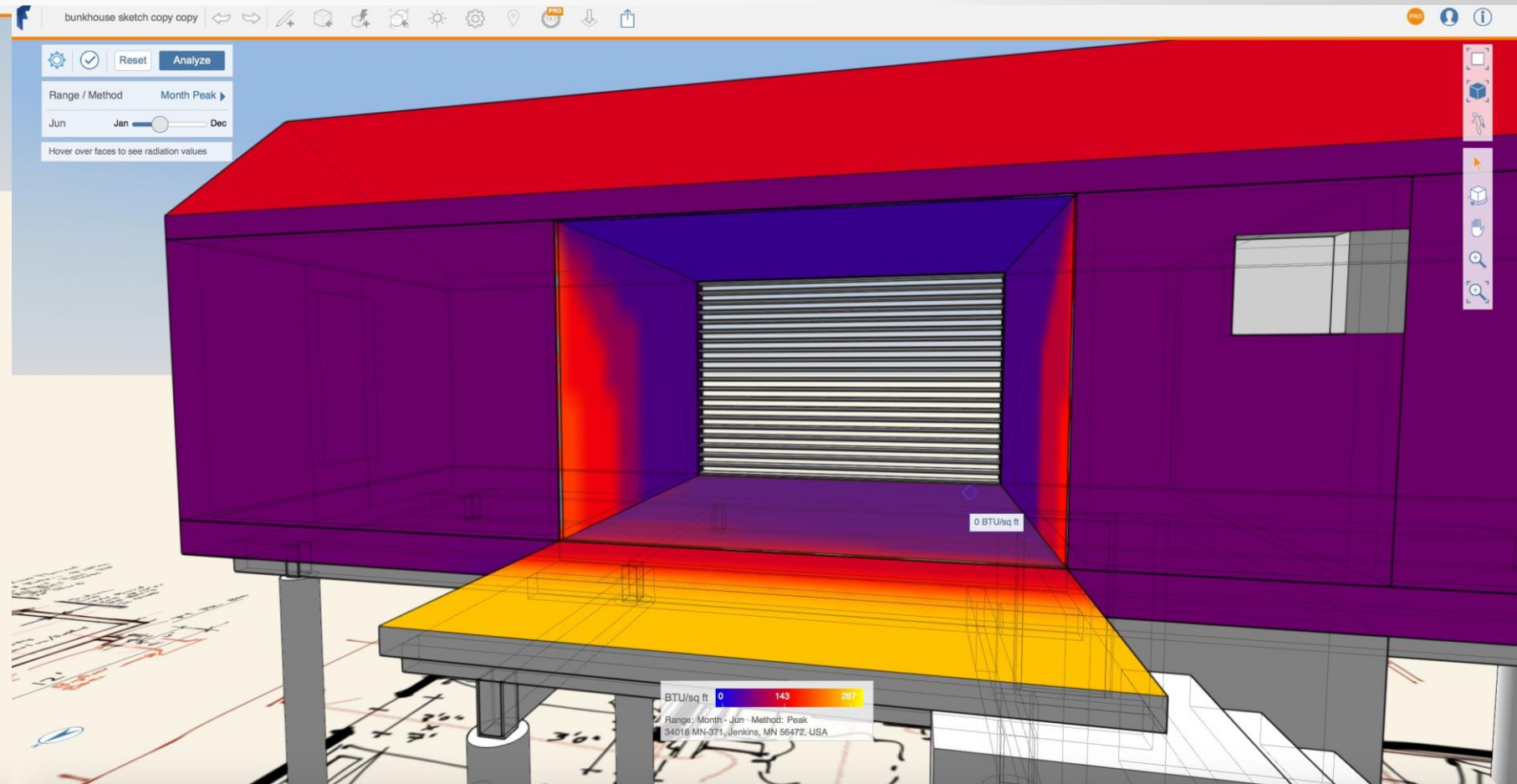
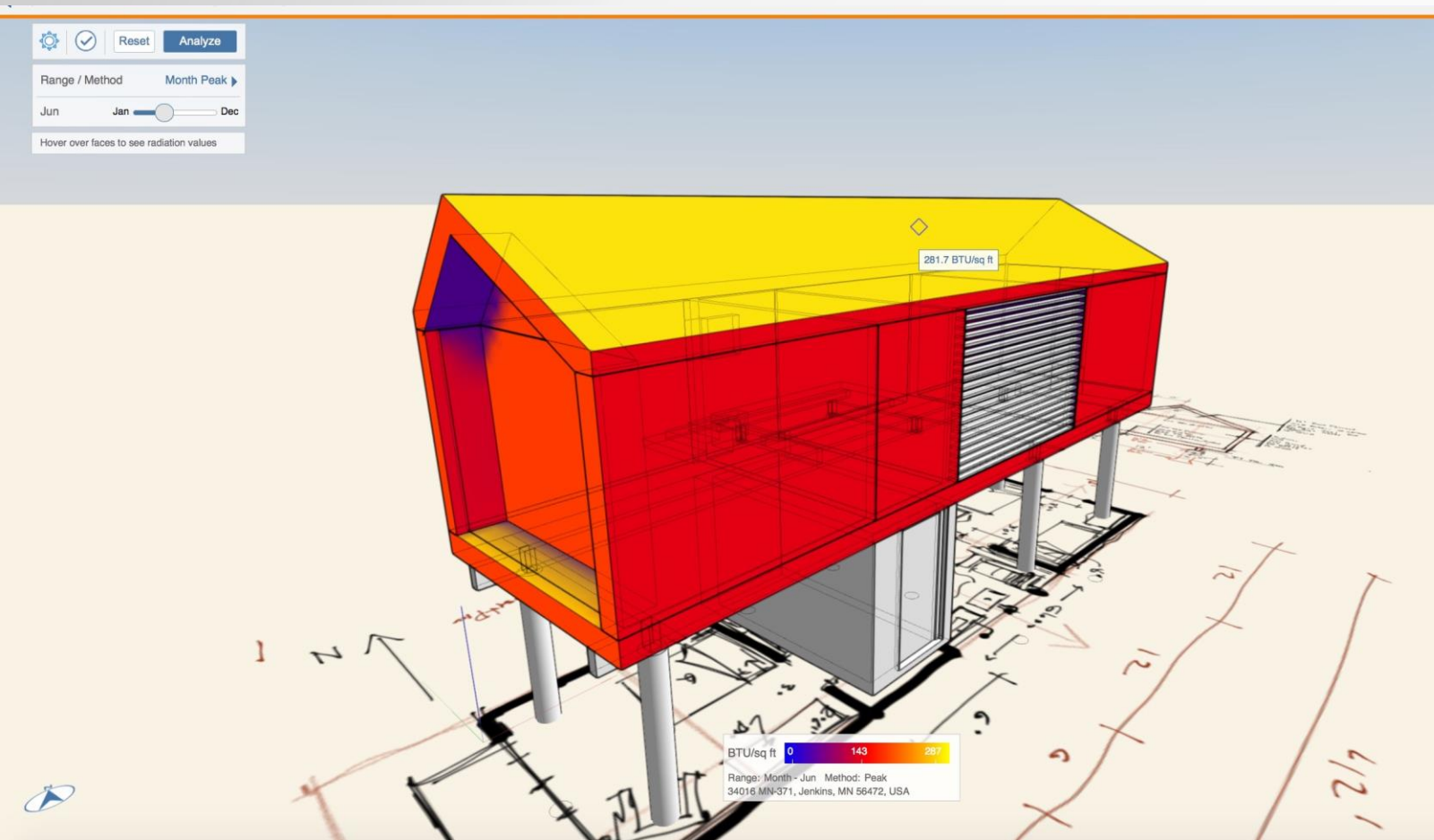


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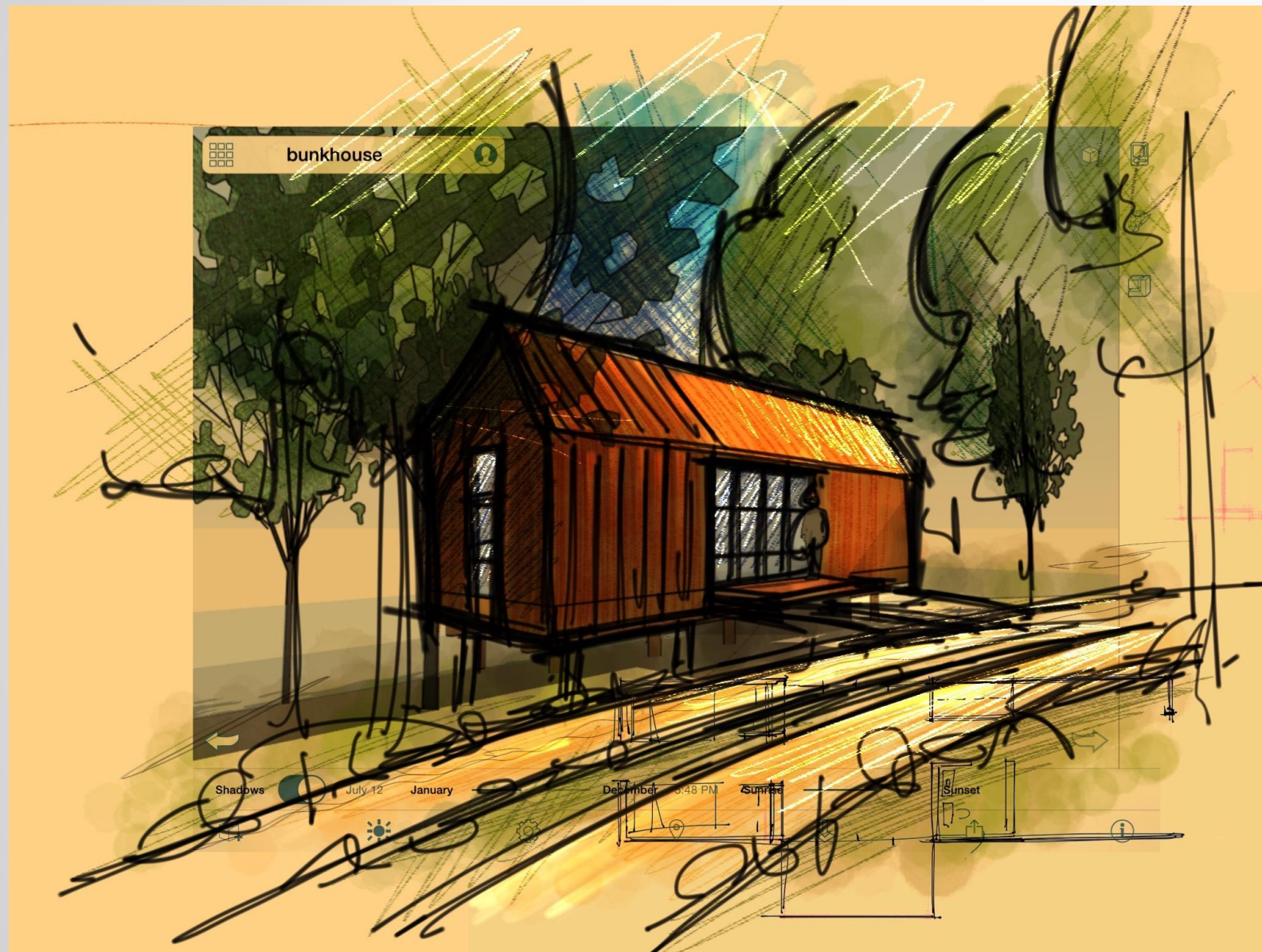


# Create: Process – Ipad / Formit / Revit





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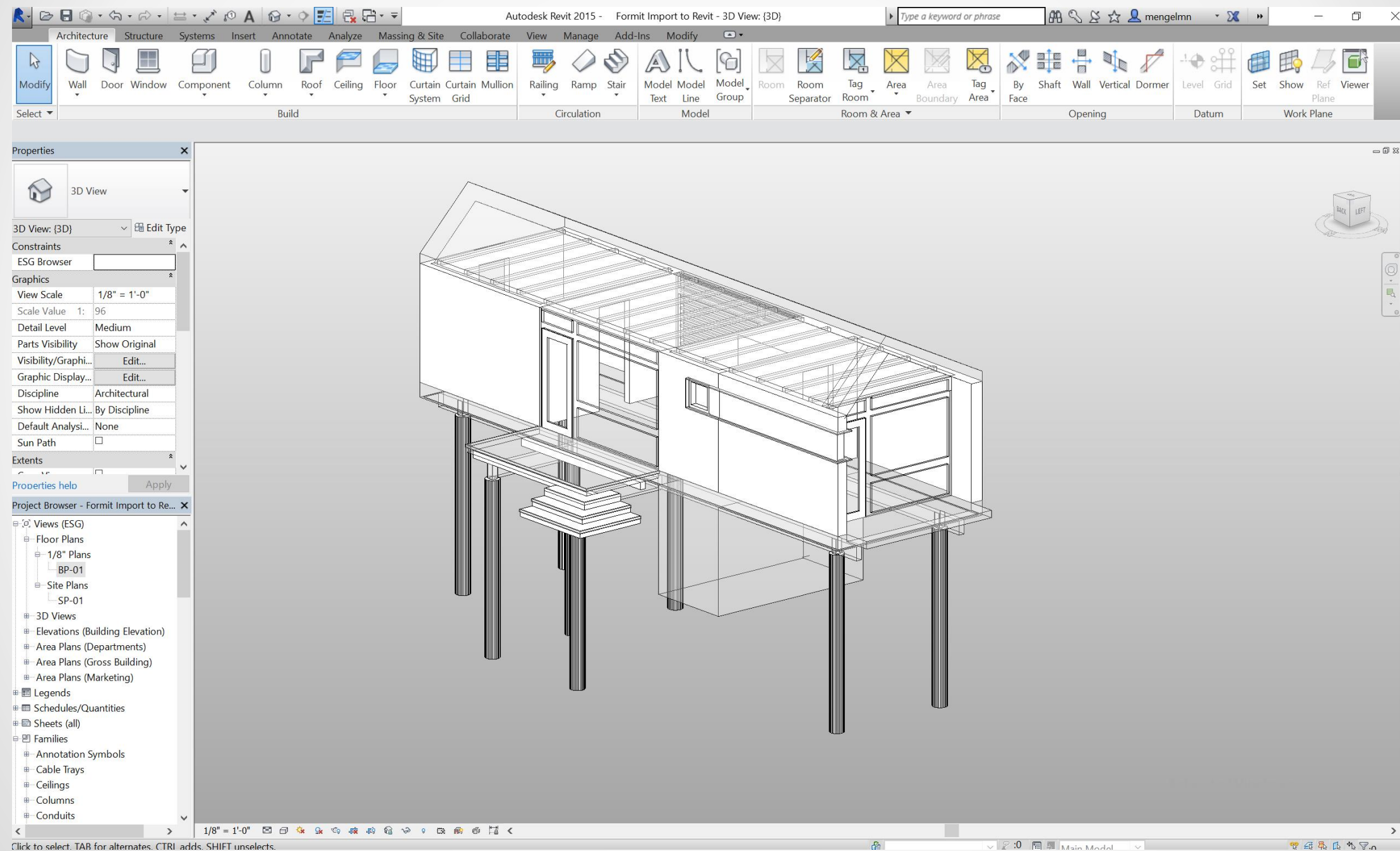


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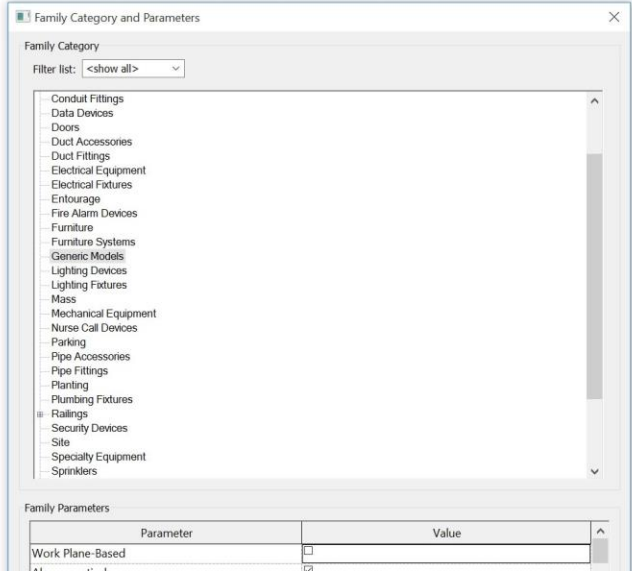
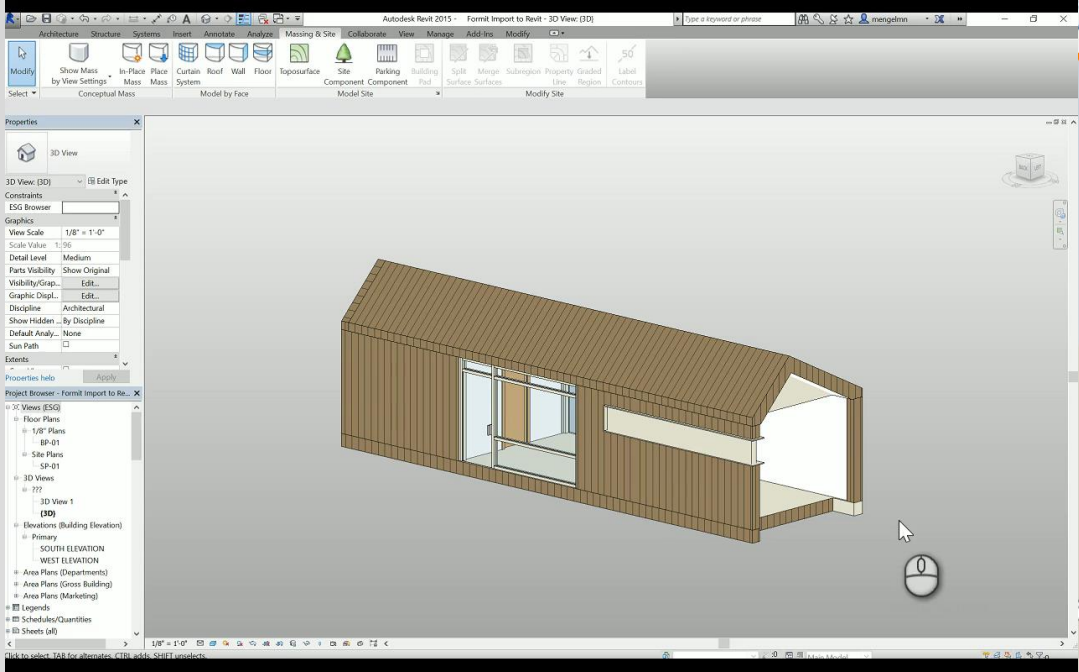


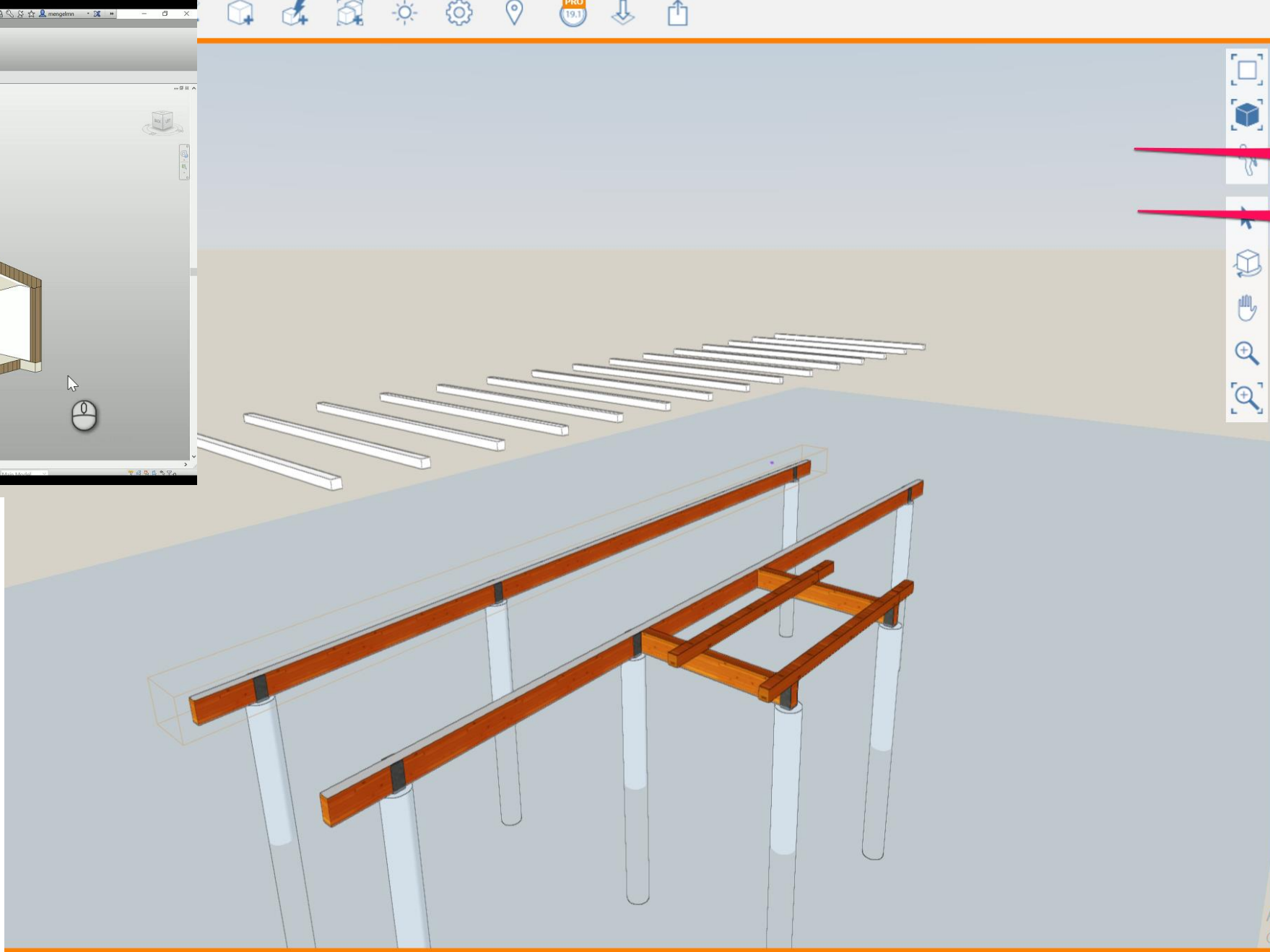


# Create: Process – Ipad / Formit / Revit



# Create: Process – Ipad / Formit / Revit





Properties

Group Properties

Name *Girder*

Category **Generic Models**

*Name your group, then set the category. When you convert this Formit file to Revit, this Formit group will become a Revit family of the specified category*

*A group with a mass category cannot be nested into a non-mass group*

Activate Windows  
Go to Settings to activate Windows.



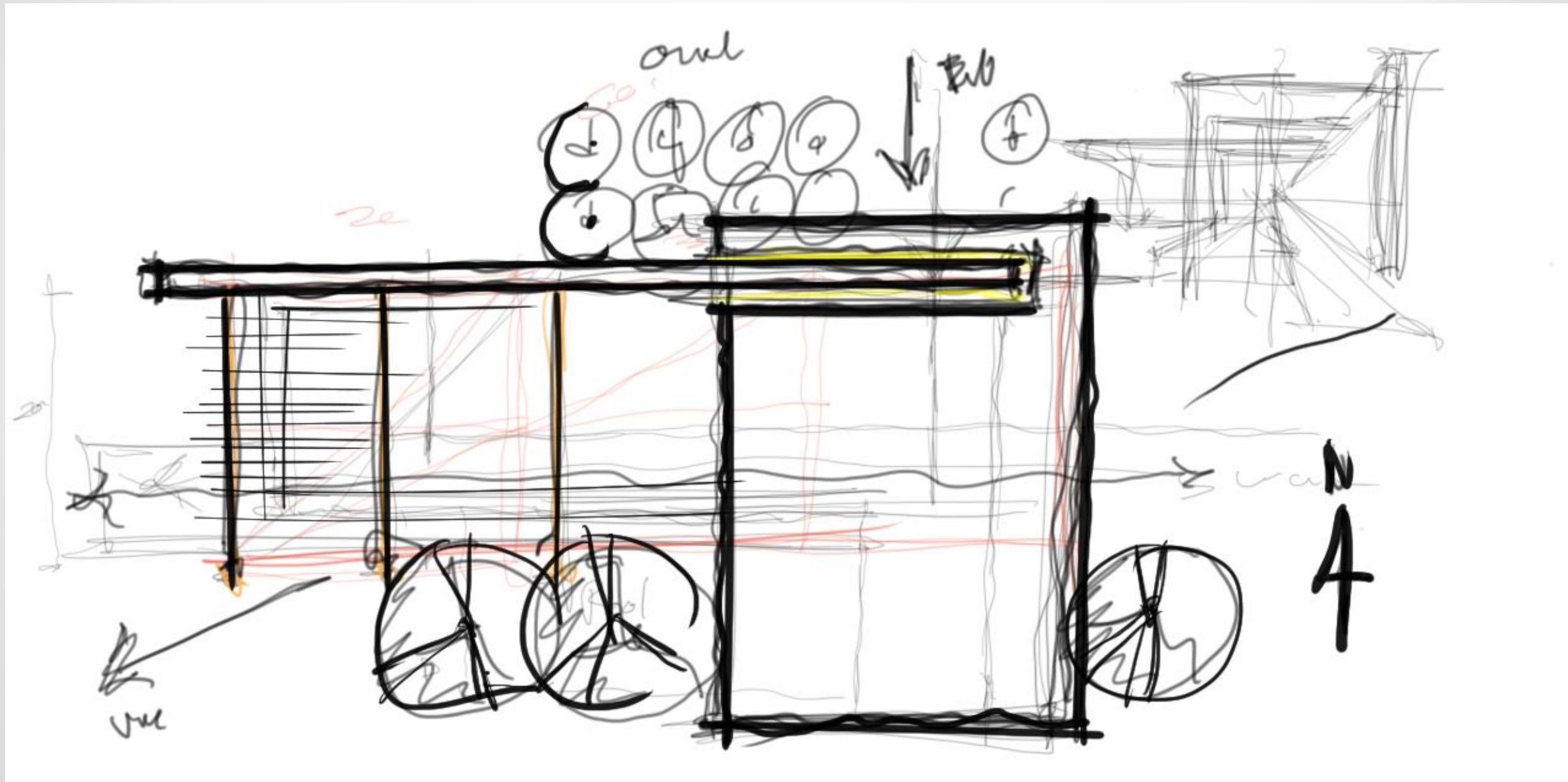


# Create: Process – Sketchbook / Formit / Revit / Cloud



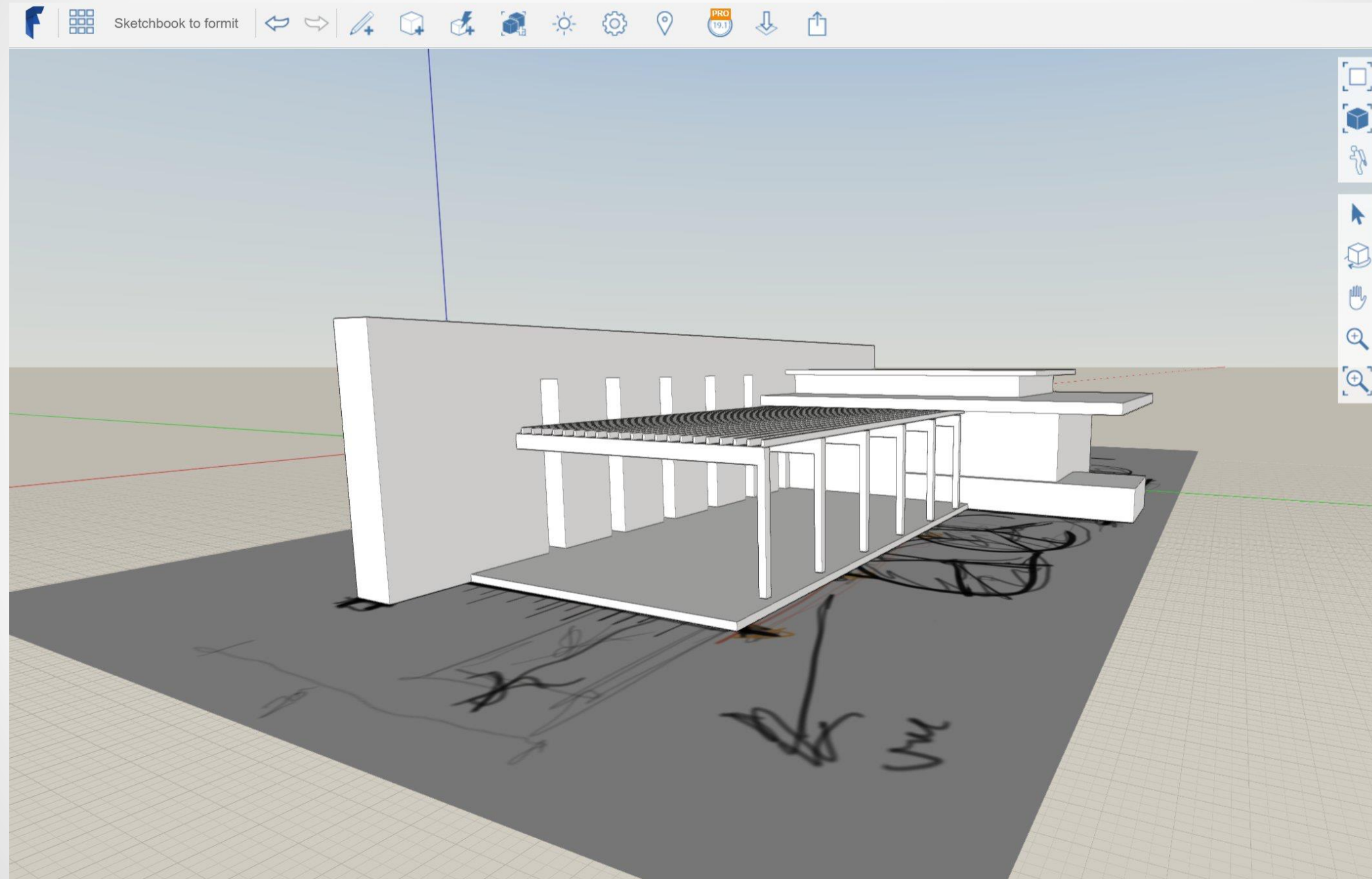
**Work:**

**Process – Sketchbook / Formit / Revit / Cloud**



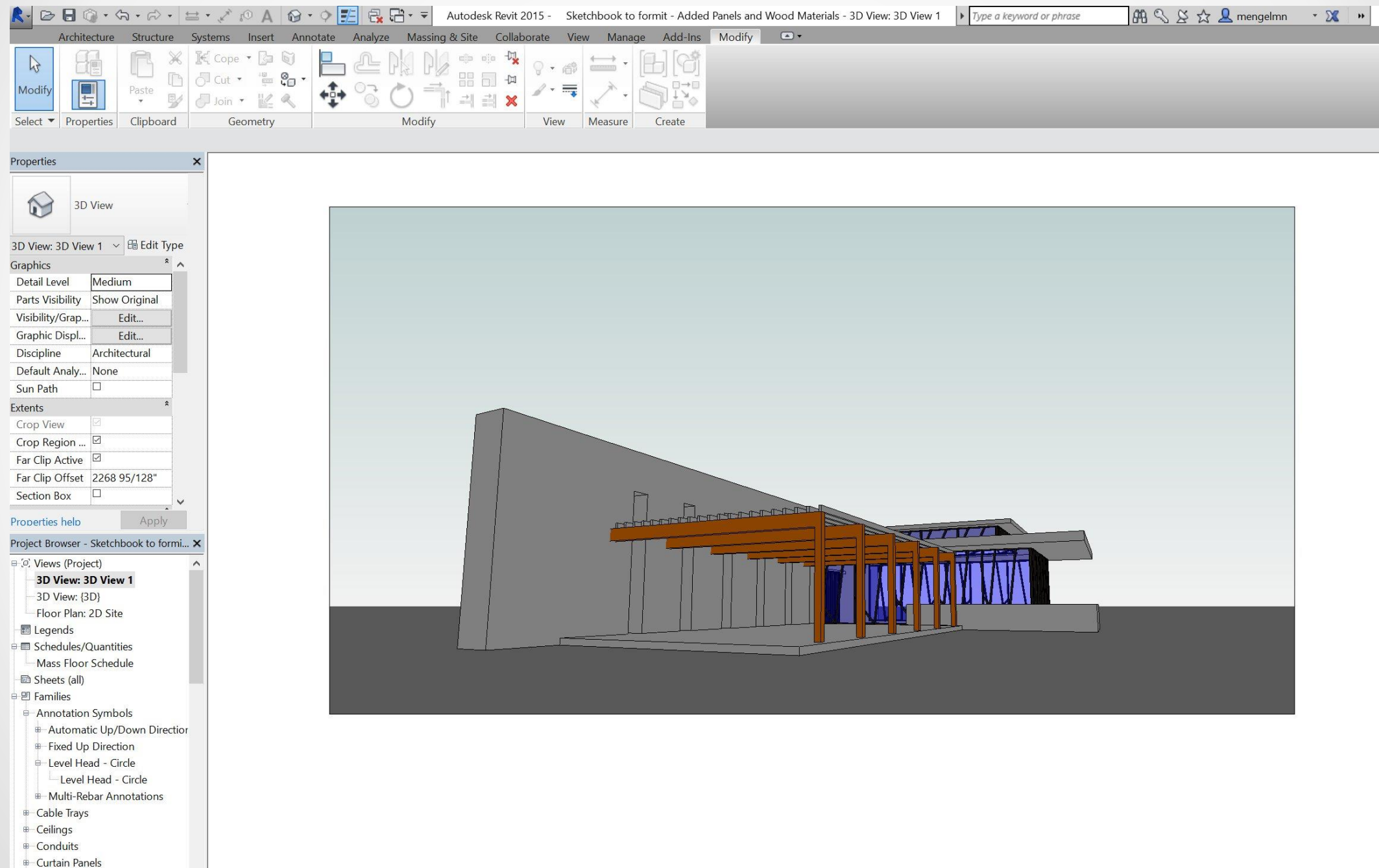
# Work :

## Process – Sketchbook / Formit / Revit / Cloud



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**Work :**

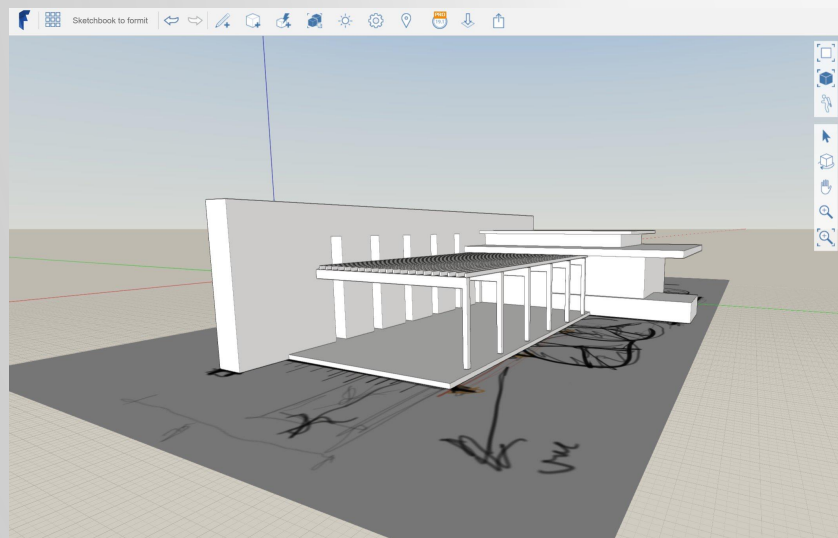
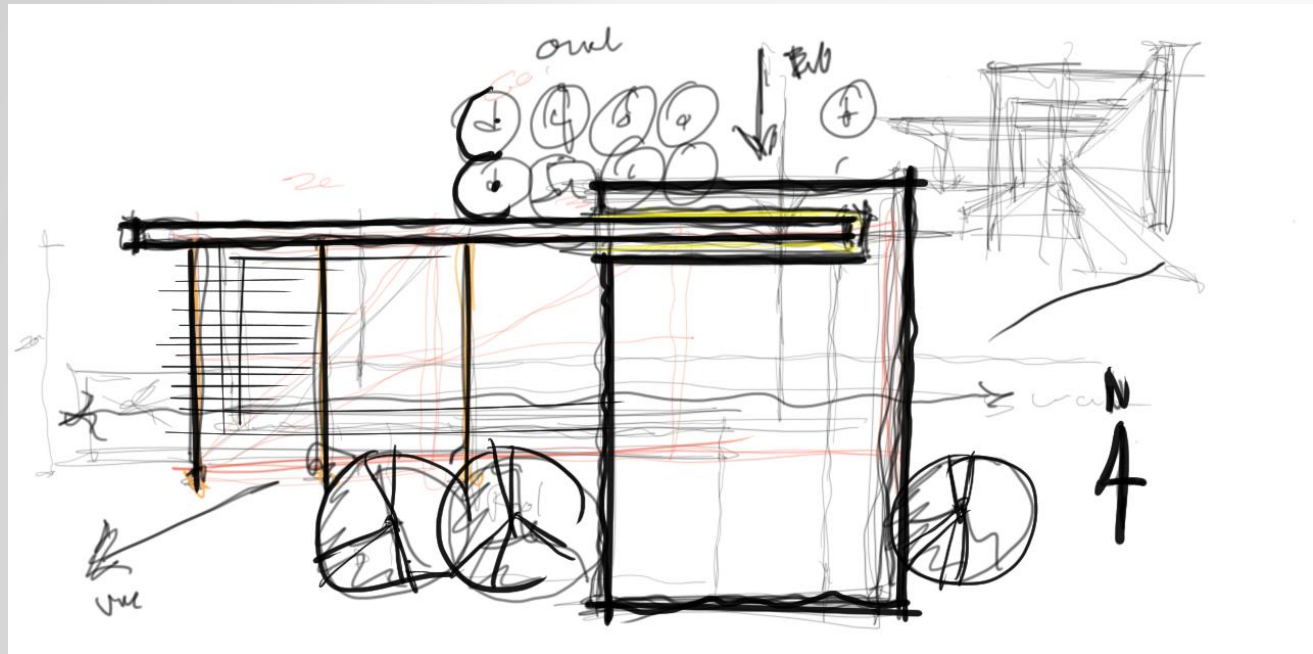
**Process – Sketchbook / Formit / Revit / Cloud**





# Work :

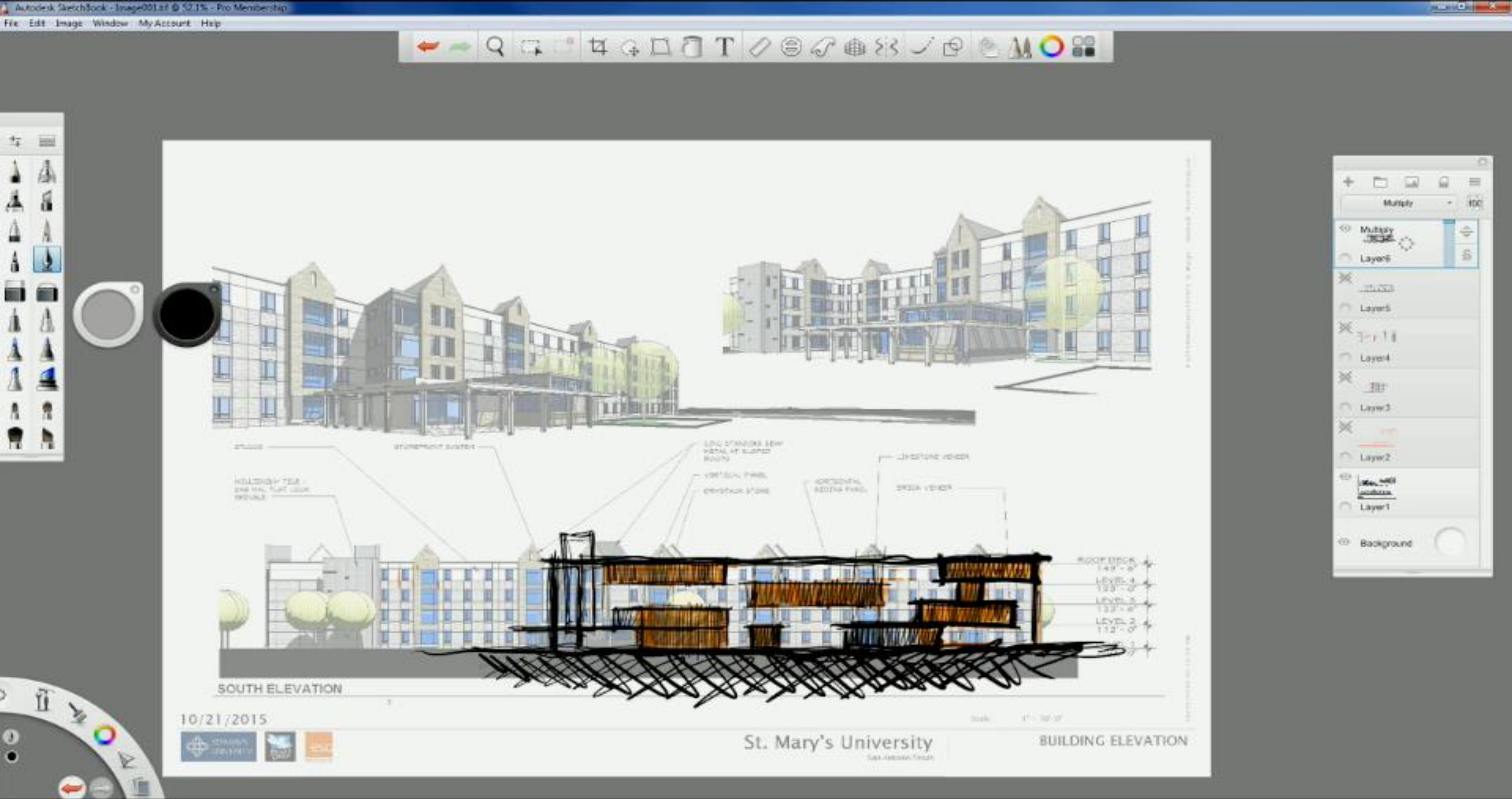
## Process – Sketchbook / Formit / Revit / Cloud







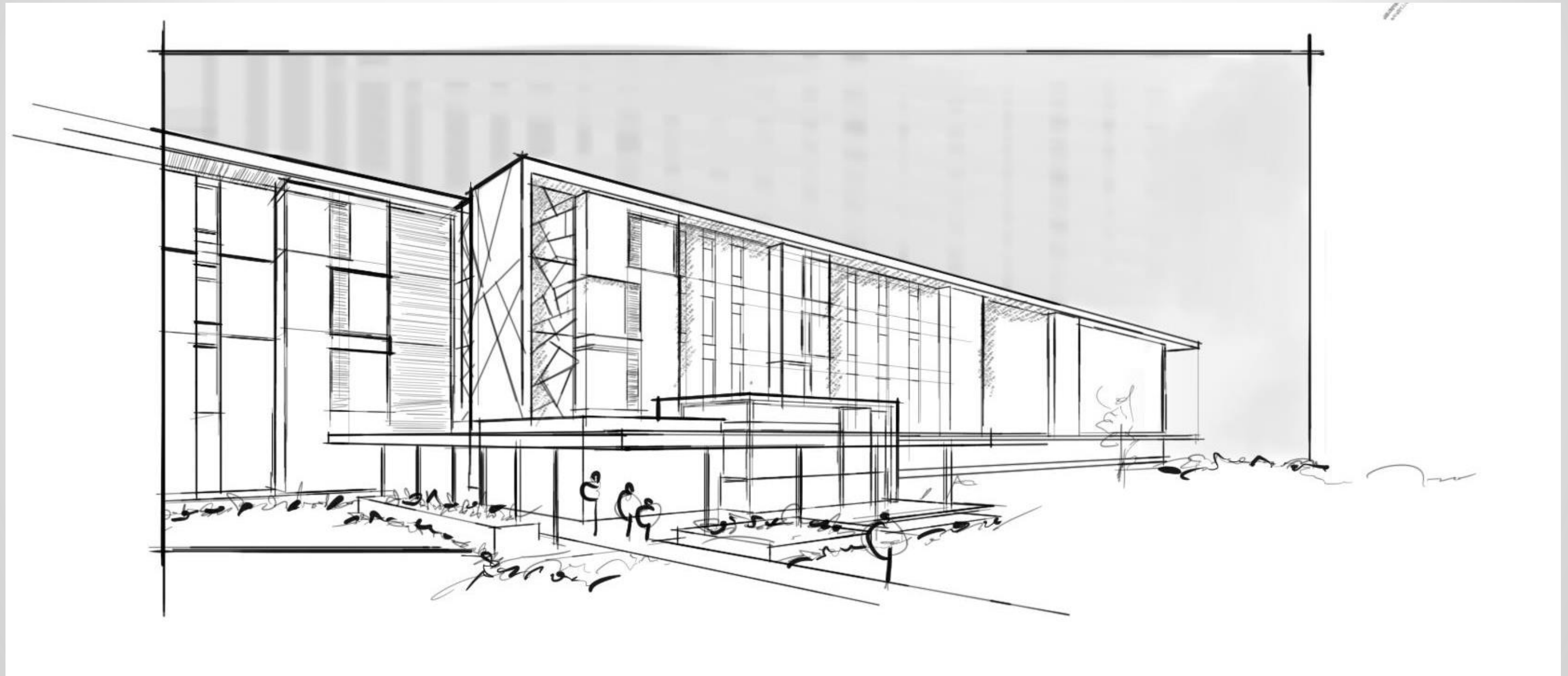
# Work : Process – Revit / Sketchbook / Formit





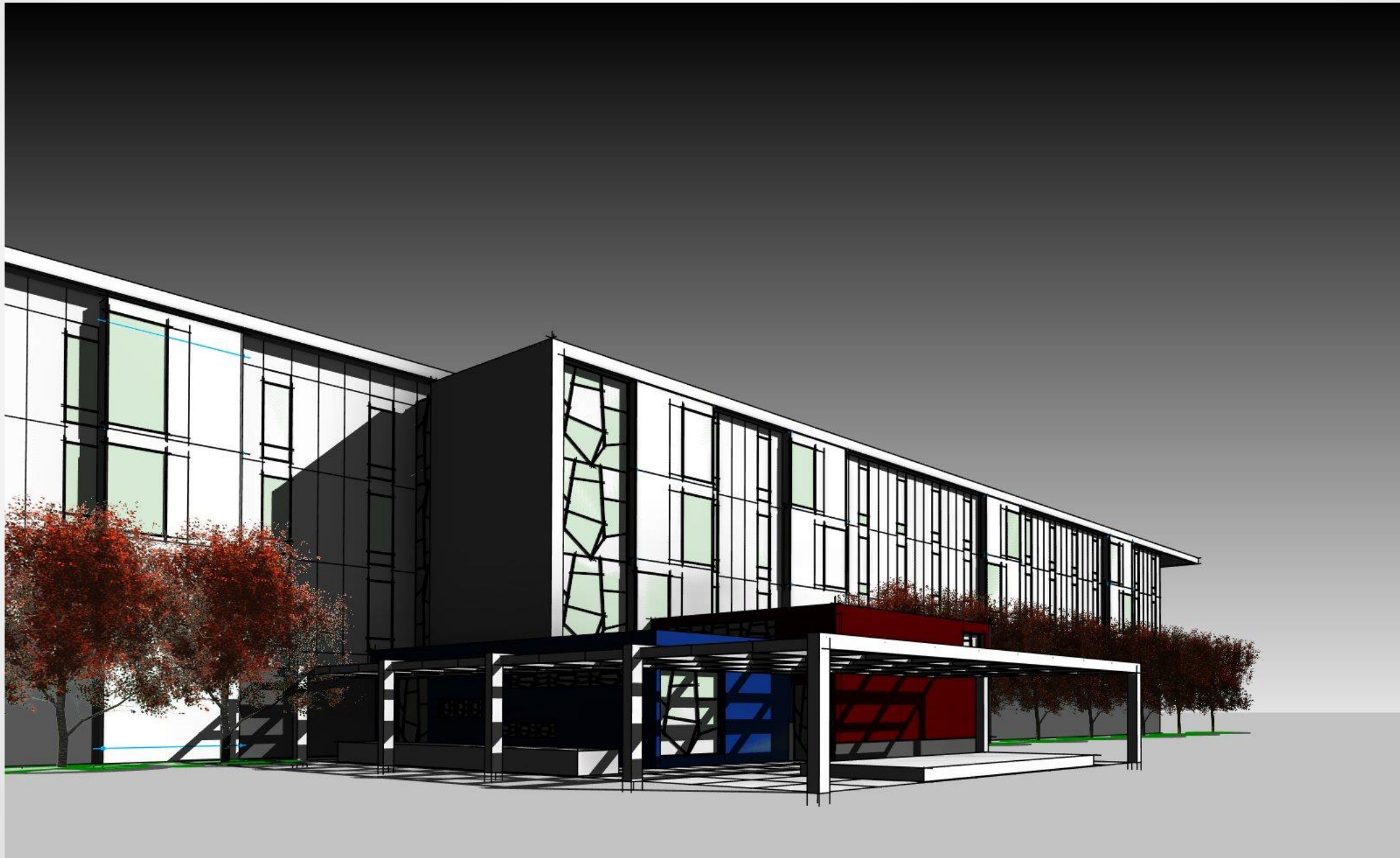
# Work :

## Process – Revit / Sketchbook / Formit



**Work :**

**Process – Revit / Sketchbook / Formit**





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# Integrate **multiple software tools** into your **BIM workflow**

Dynamo  
Fusion 360  
Cloud Rendering

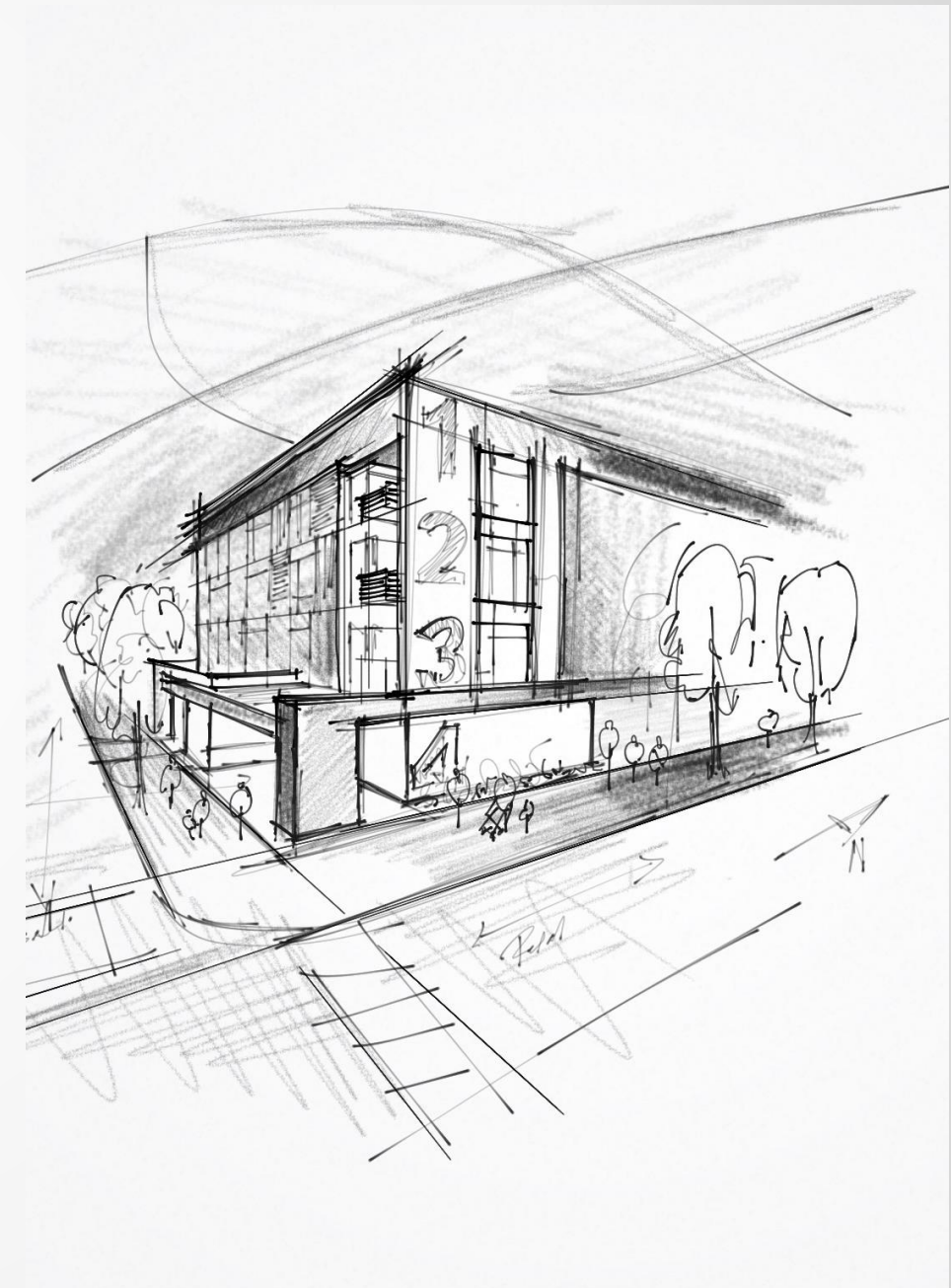
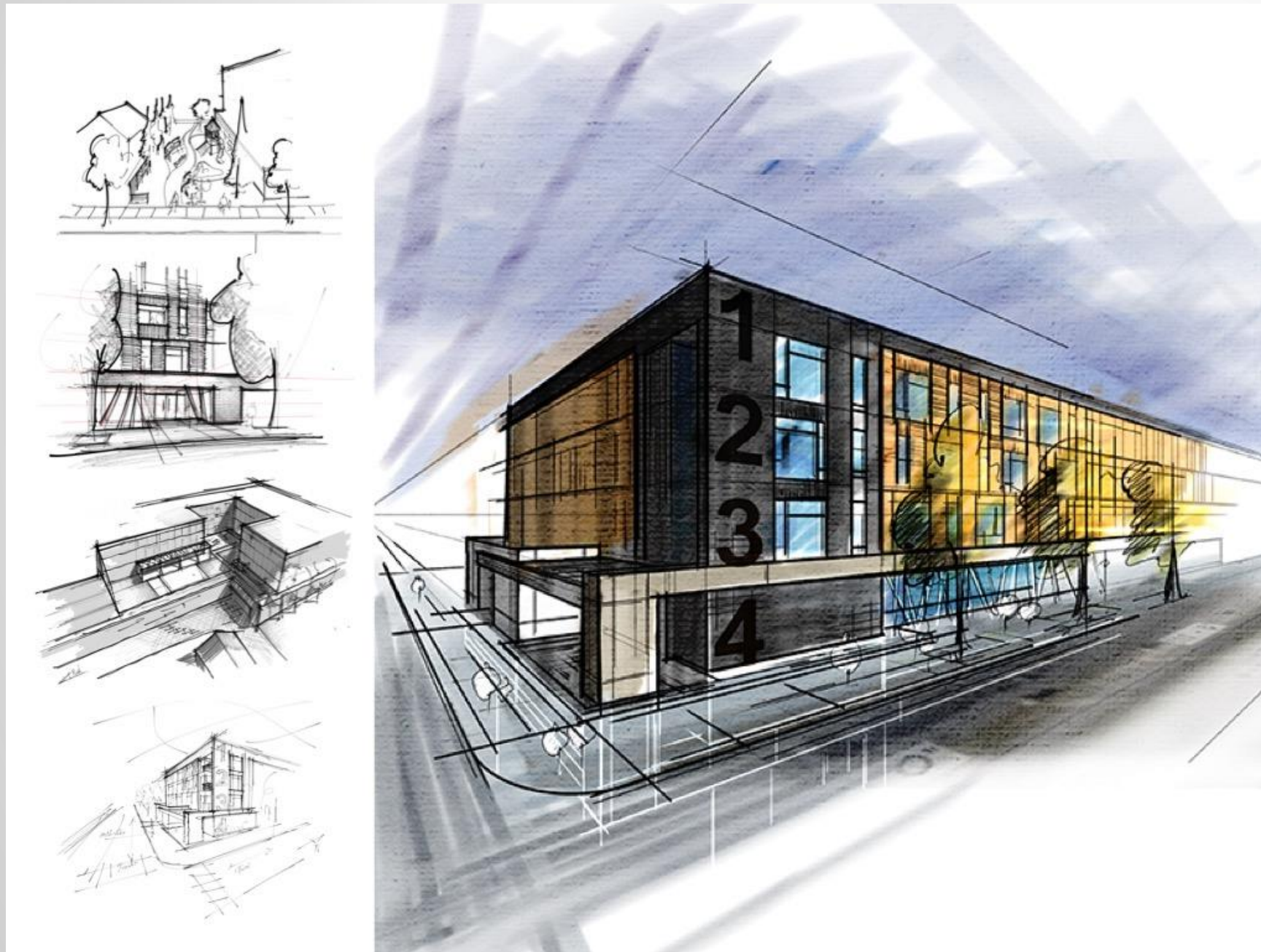


# Integrate **multiple software tools** into your **BIM workflow**

- Formit 360
- Revit
- Sketchbook Pro
- Autodesk A360 Sync / Drive
- Dynamo
- Fusion 360
- Cloud Rendering

# Integrate - Sketch to BIM

## Sketchbook Pro – Formit 360 – Revit - Dynamo





# Integrate - Sketch to BIM

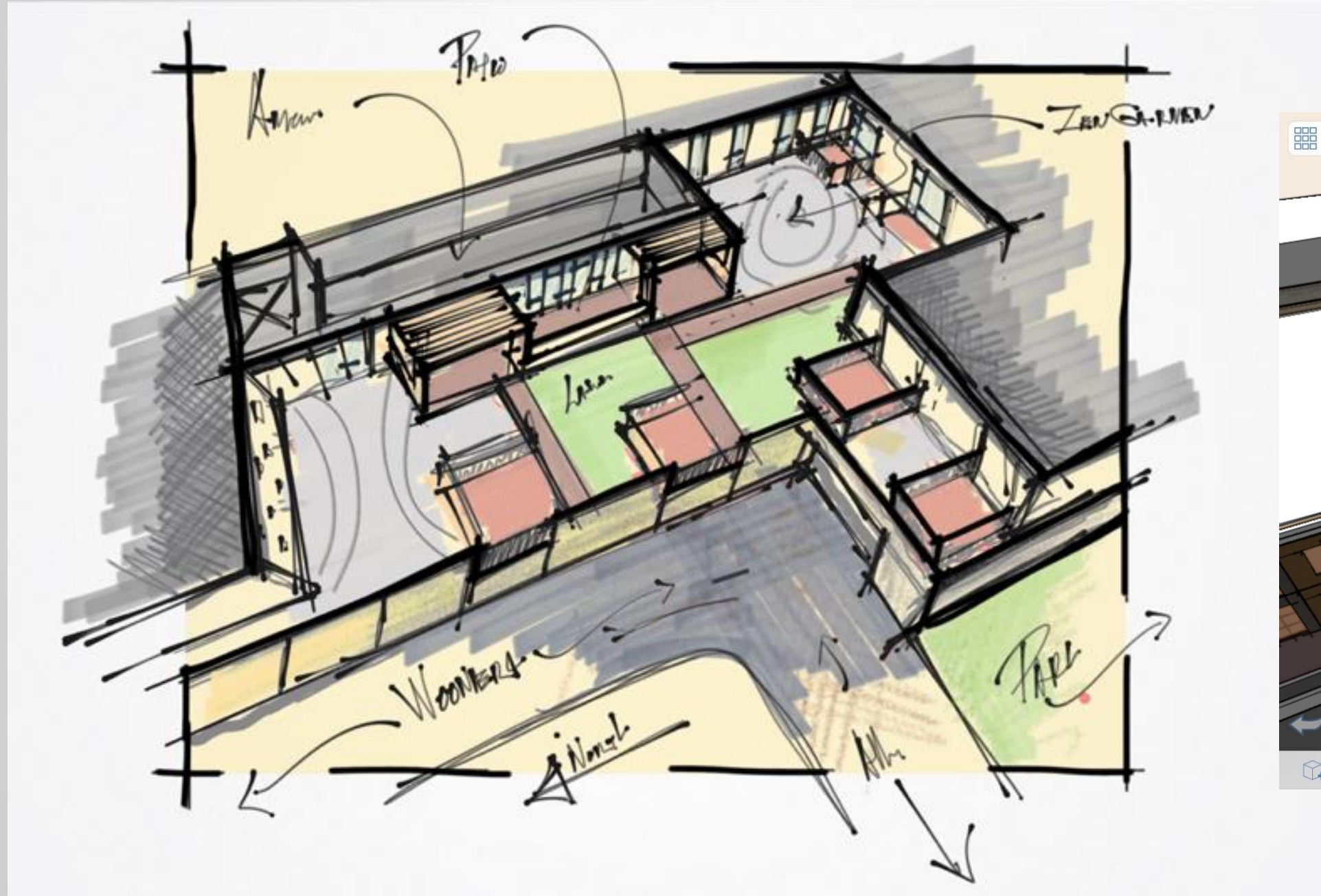
## Sketchbook Pro – Formit 360 – Revit - Dynamo





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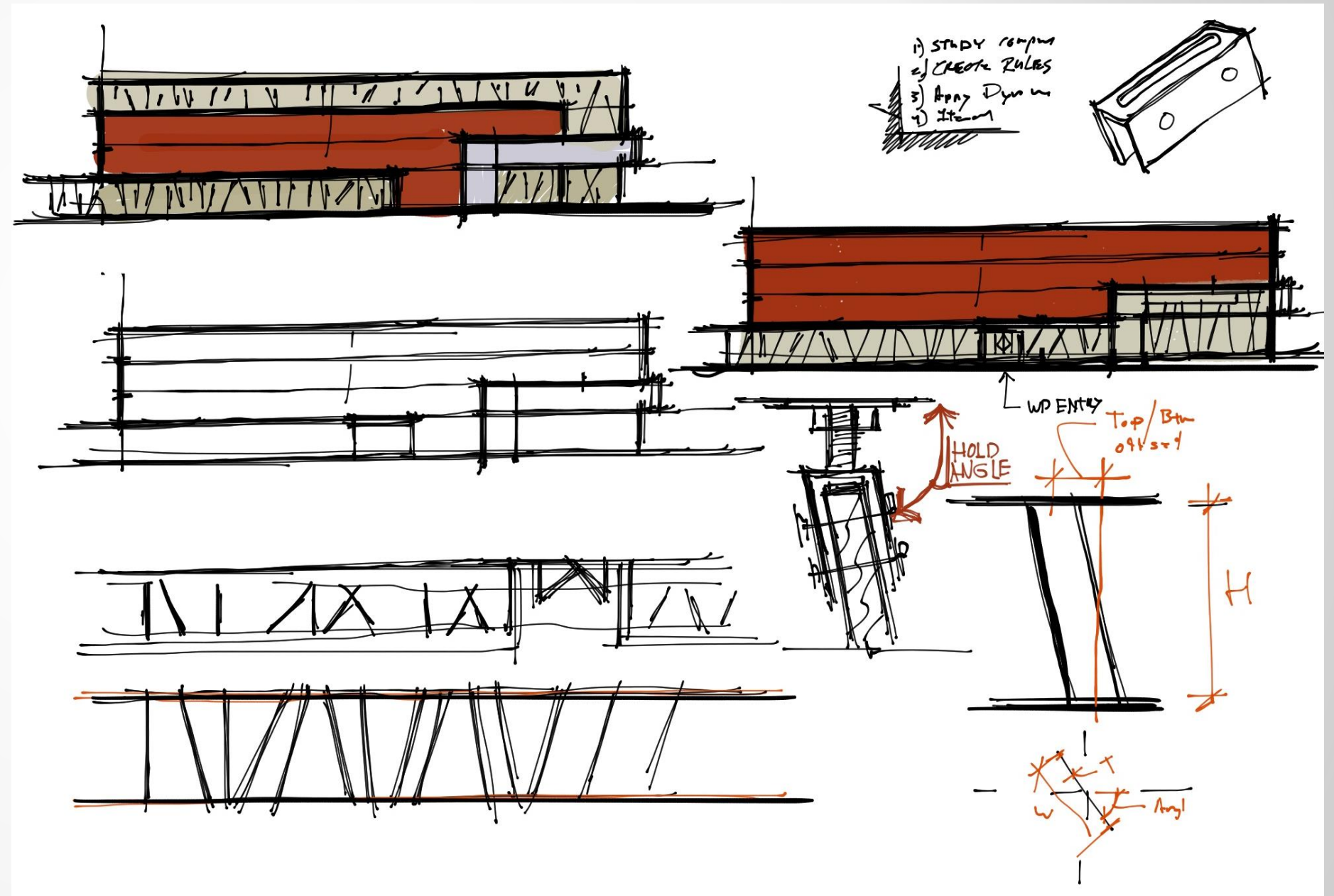
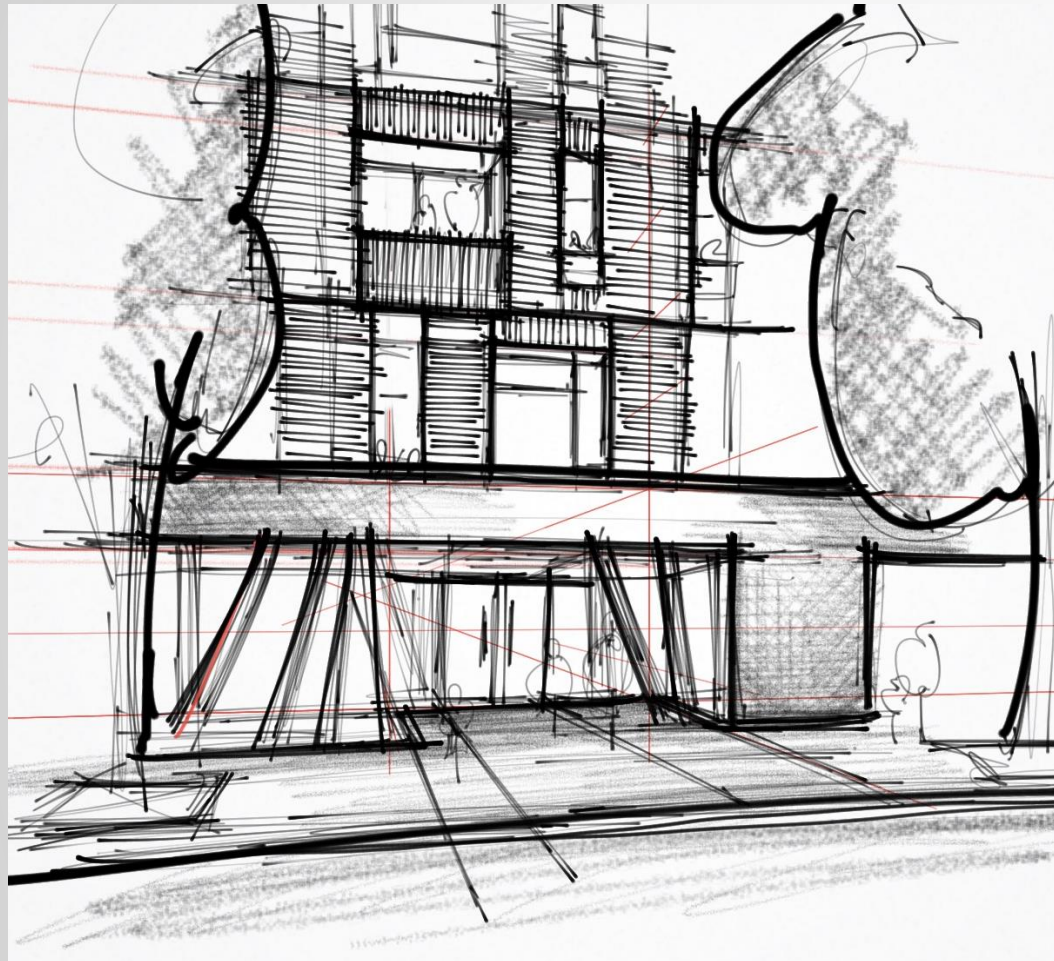
## Sketchbook Pro – Formit 360 – Revit - Dynamo





# Integrate - Sketch to BIM

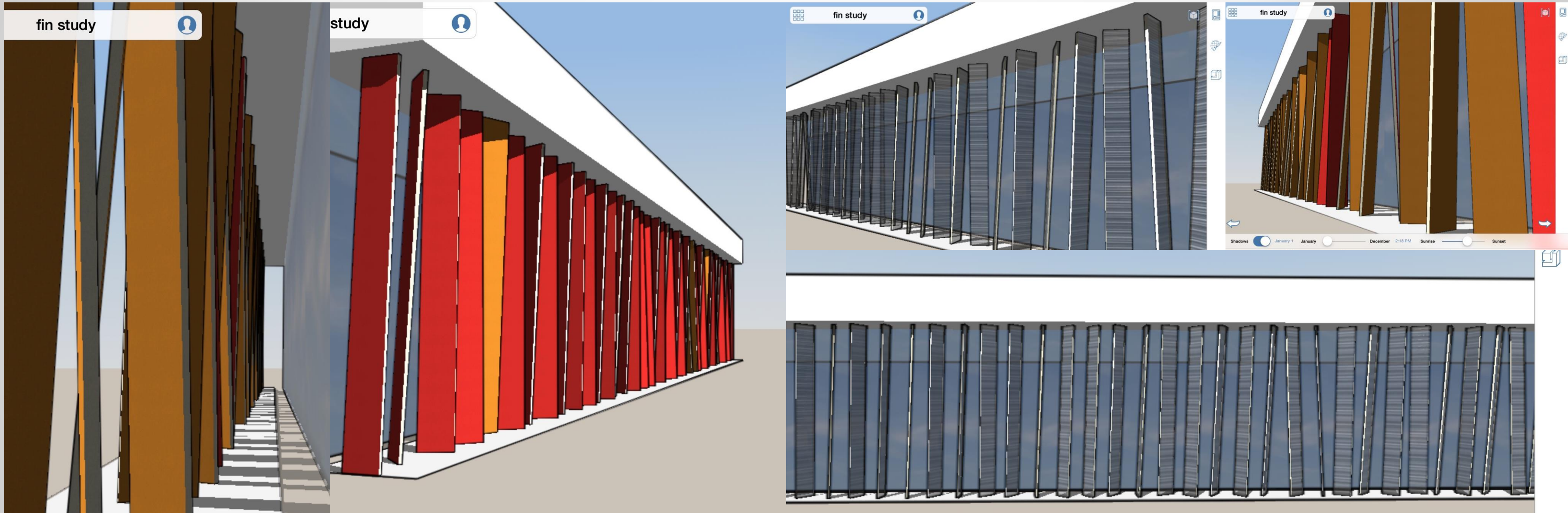
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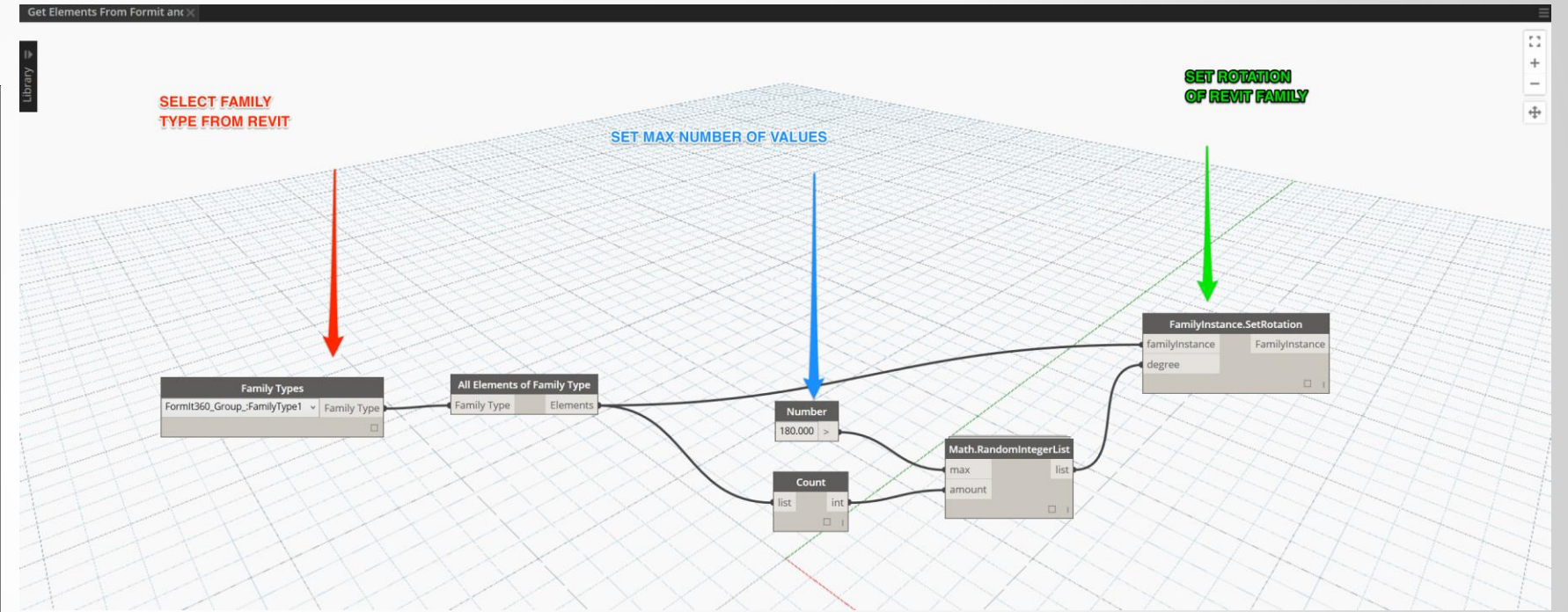
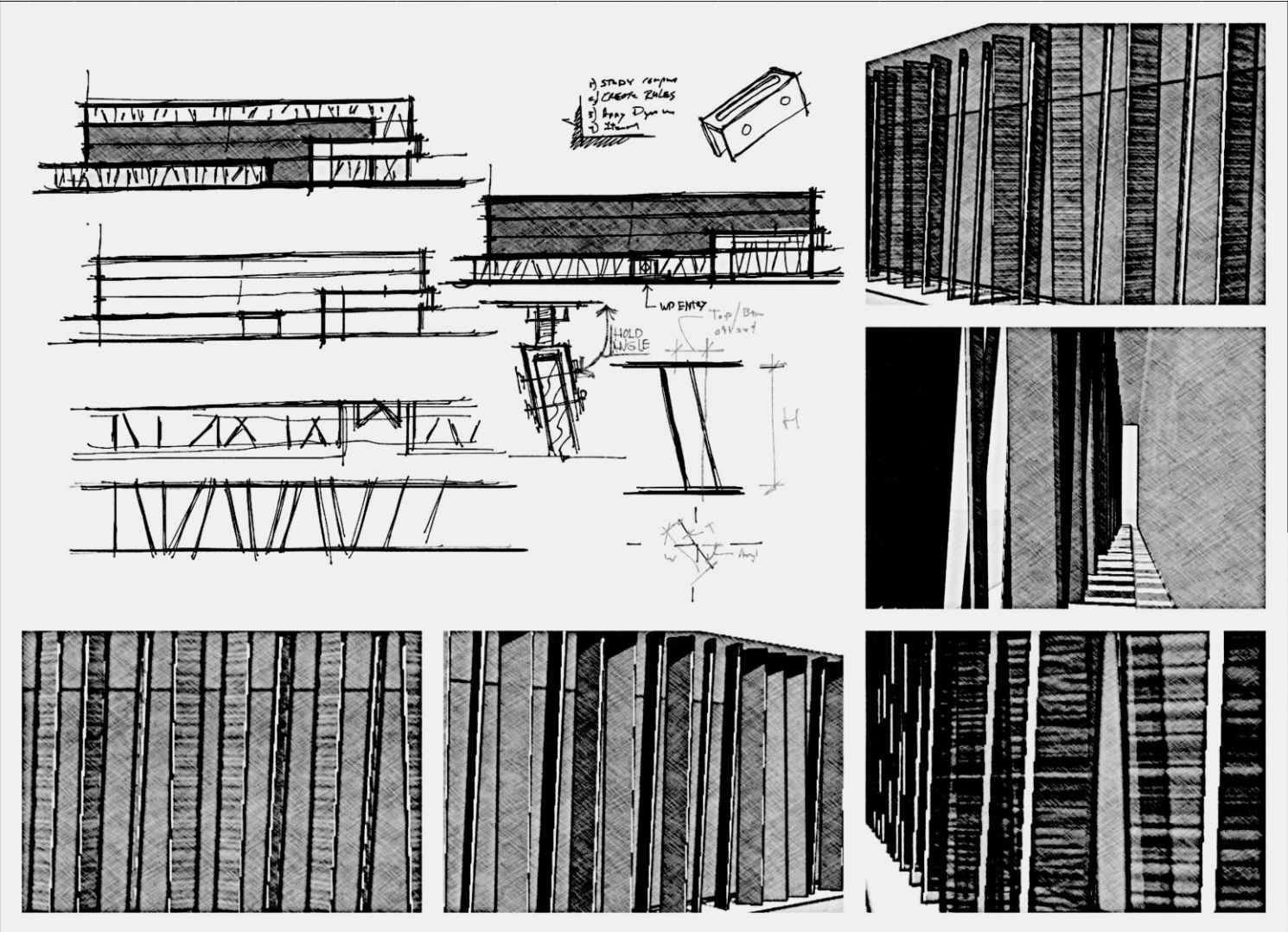
## Sketchbook Pro – Formit 360 – Revit - Dynamo





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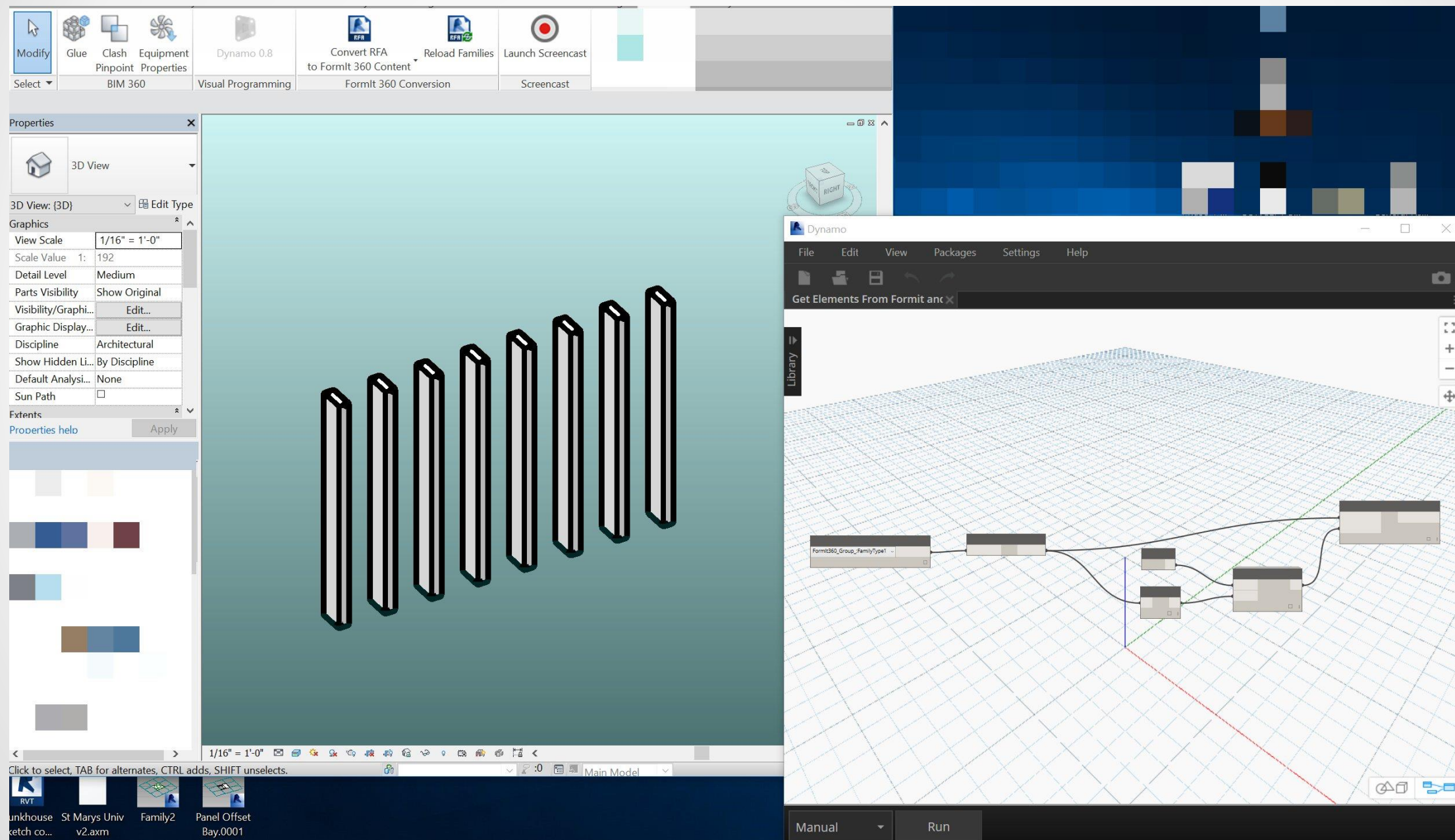
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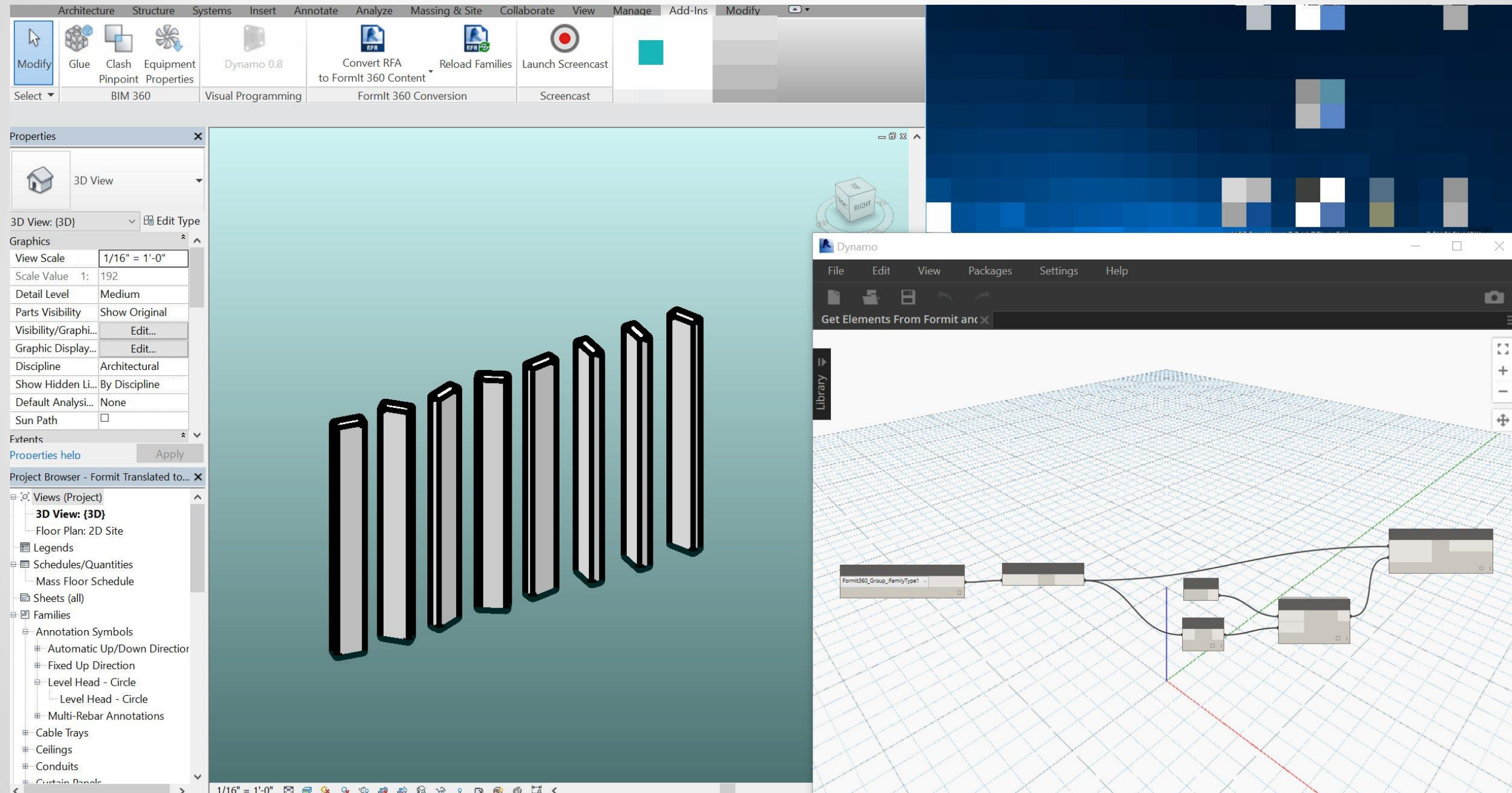
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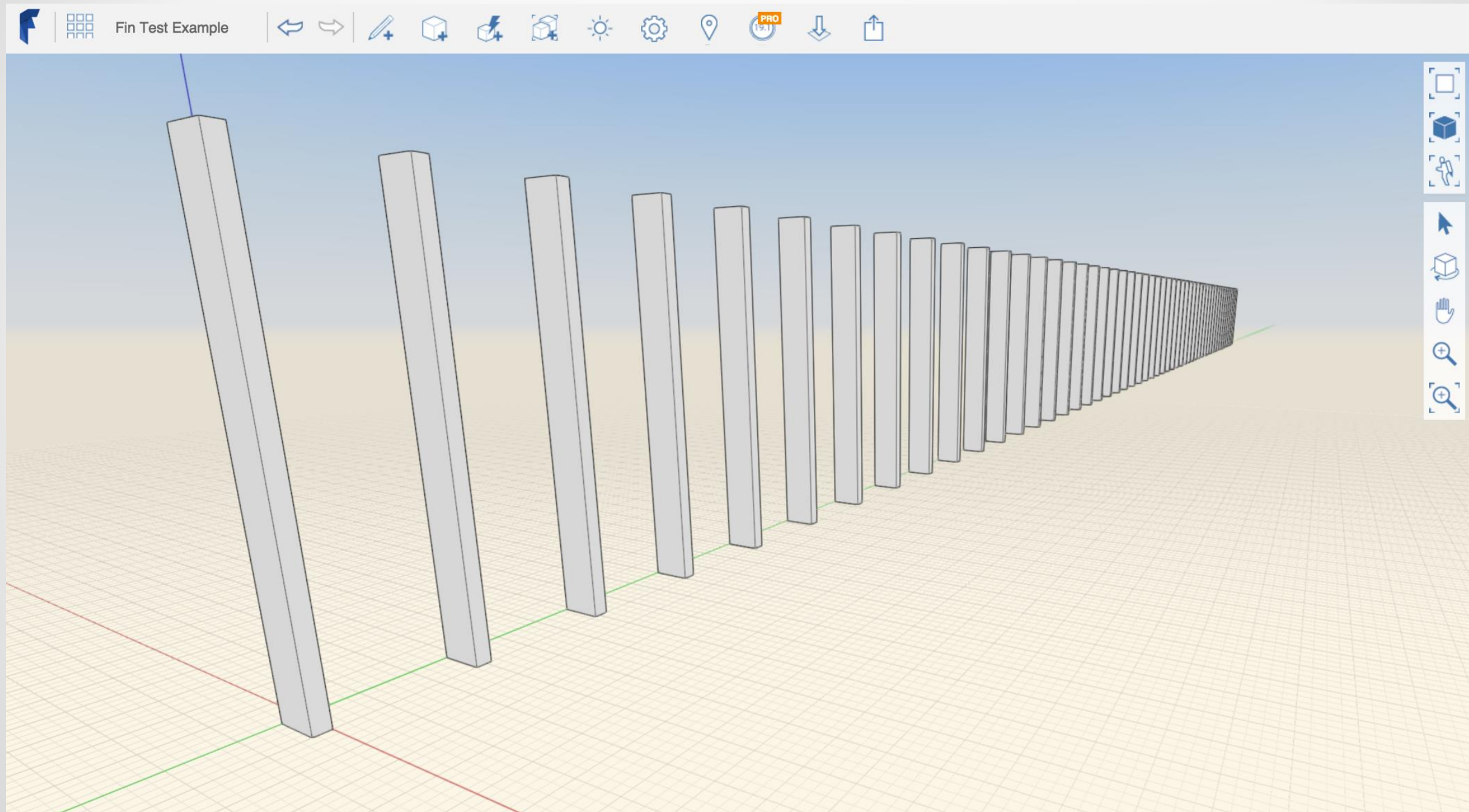
## Sketchbook Pro – Formit 360 – Revit - Dynamo





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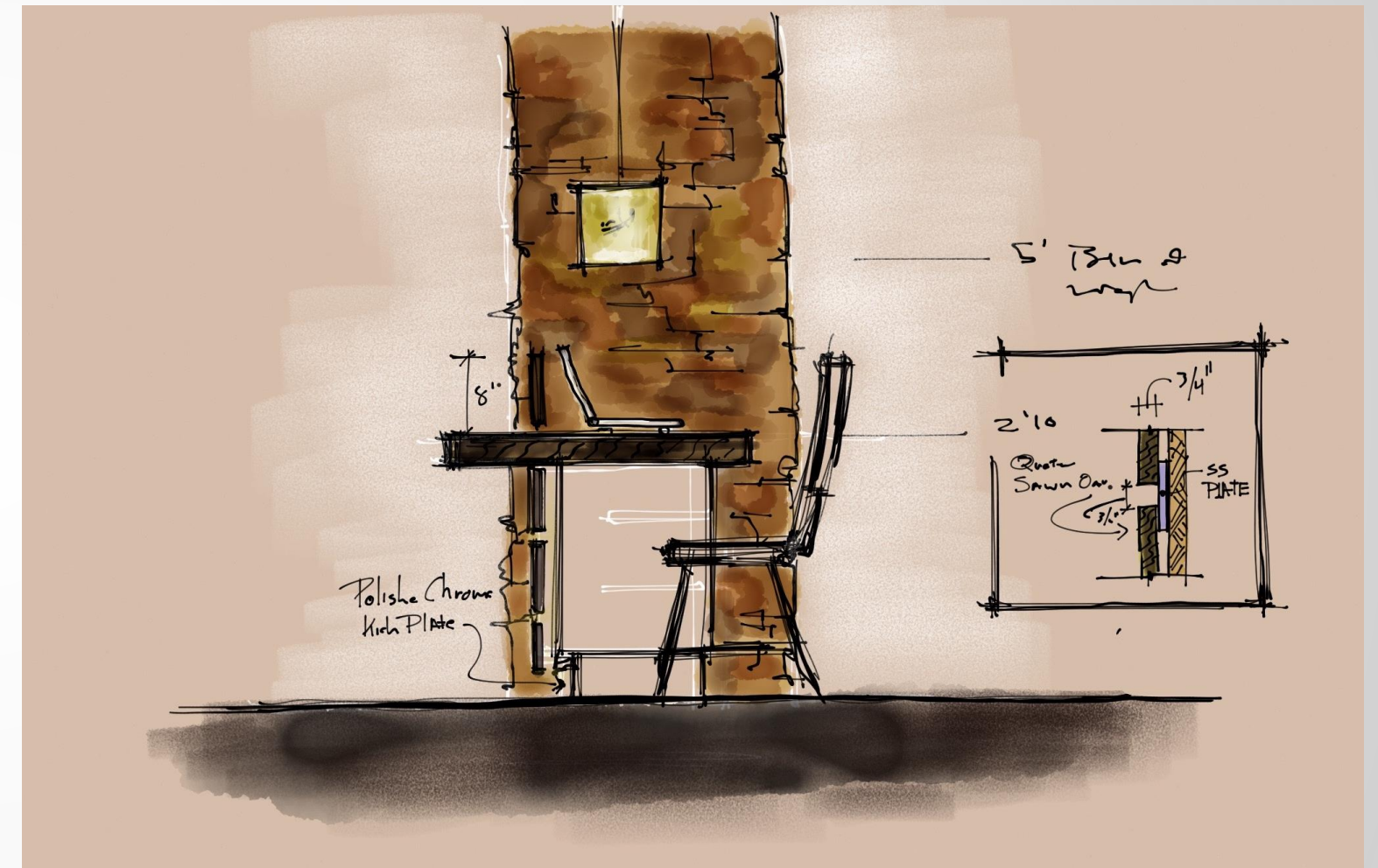
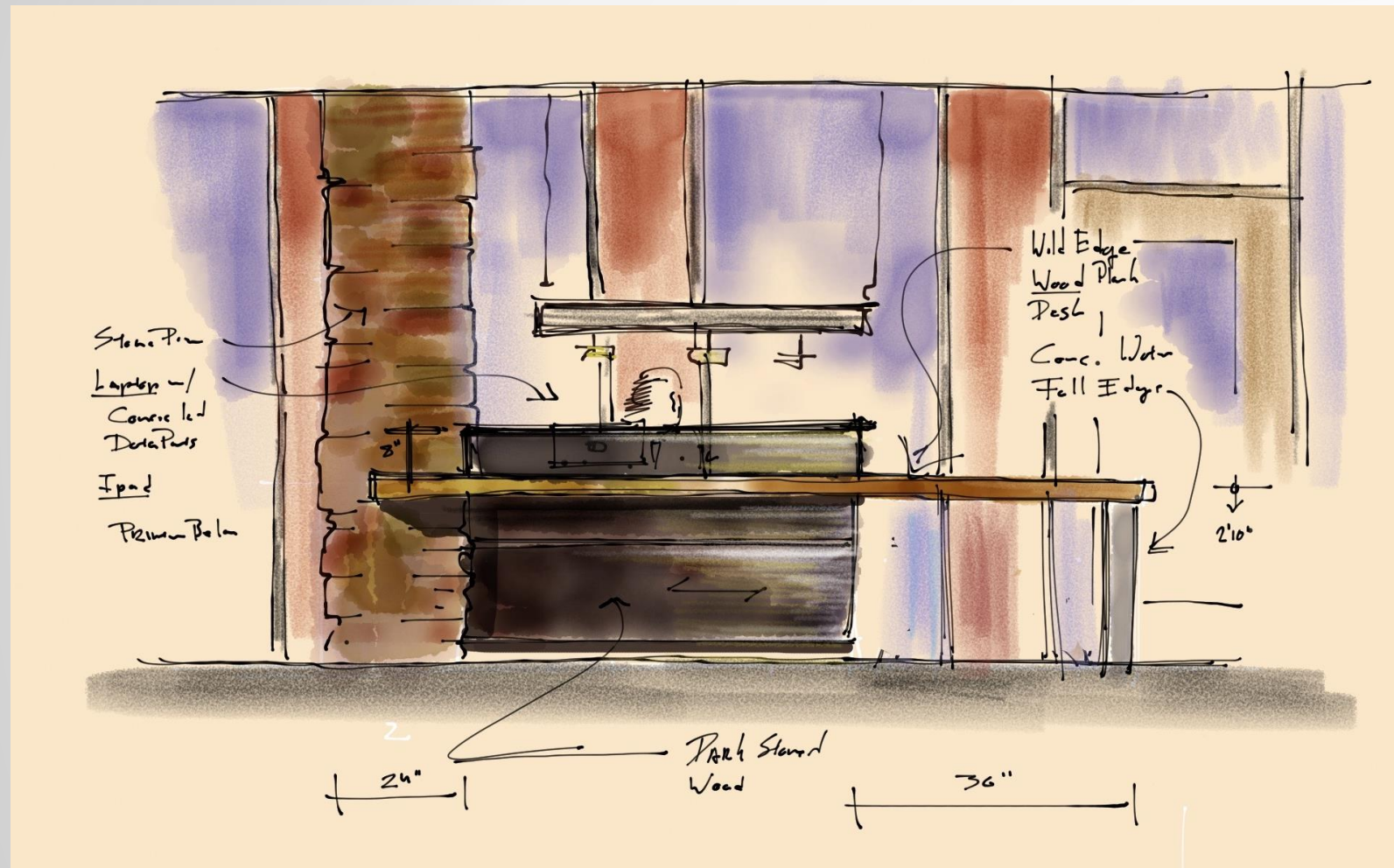
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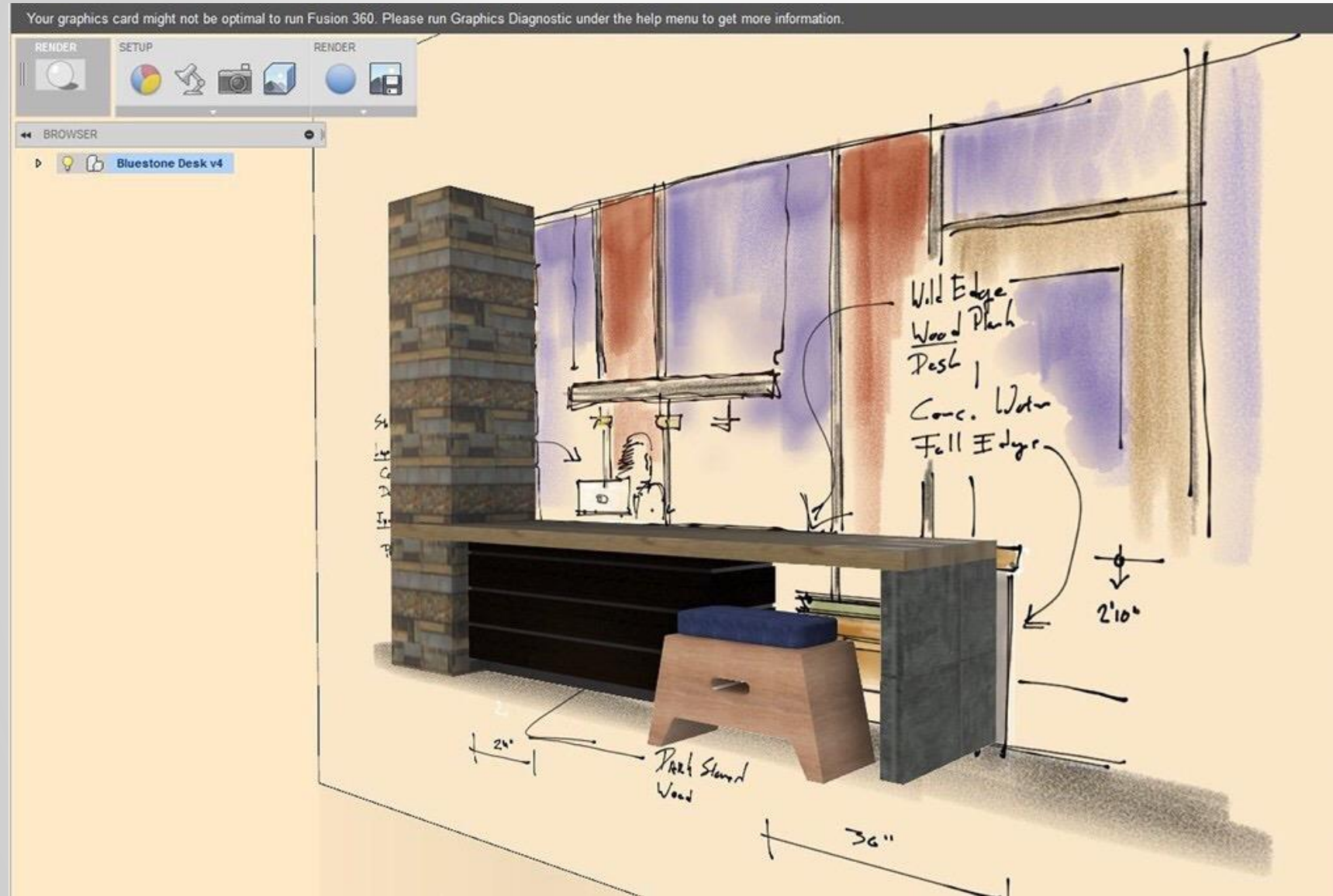
## Paper53– Fusion 360 – Revit





# Integrate - Sketch to BIM

## Paper53– Fusion 360 – Revit





# Integrate – Revit – Formit – Sketchbook Pro – Fusion 360 – Revit



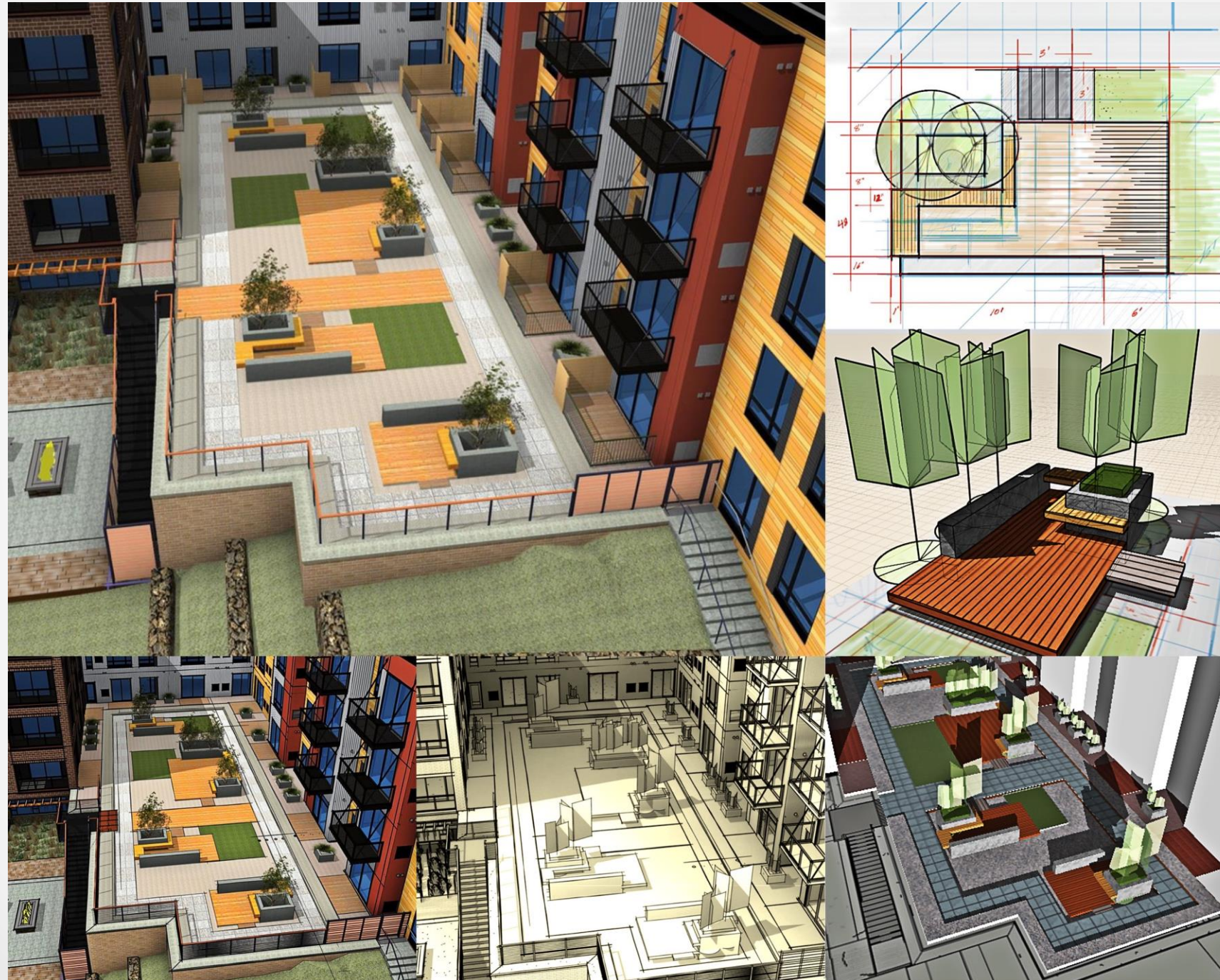


# Integrate – Revit – Formit – Sketchbook Pro – Fusion 360 – Revit





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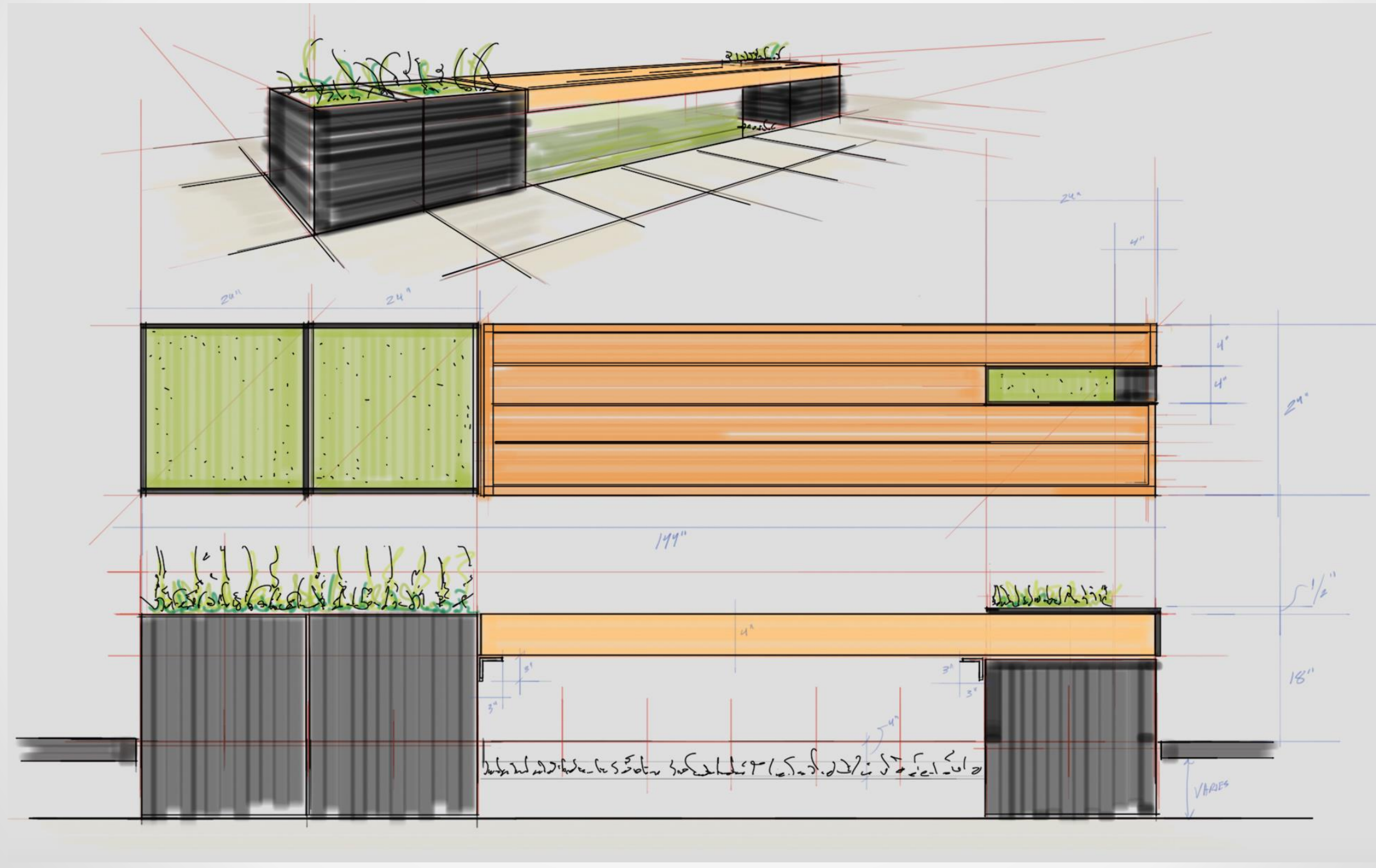


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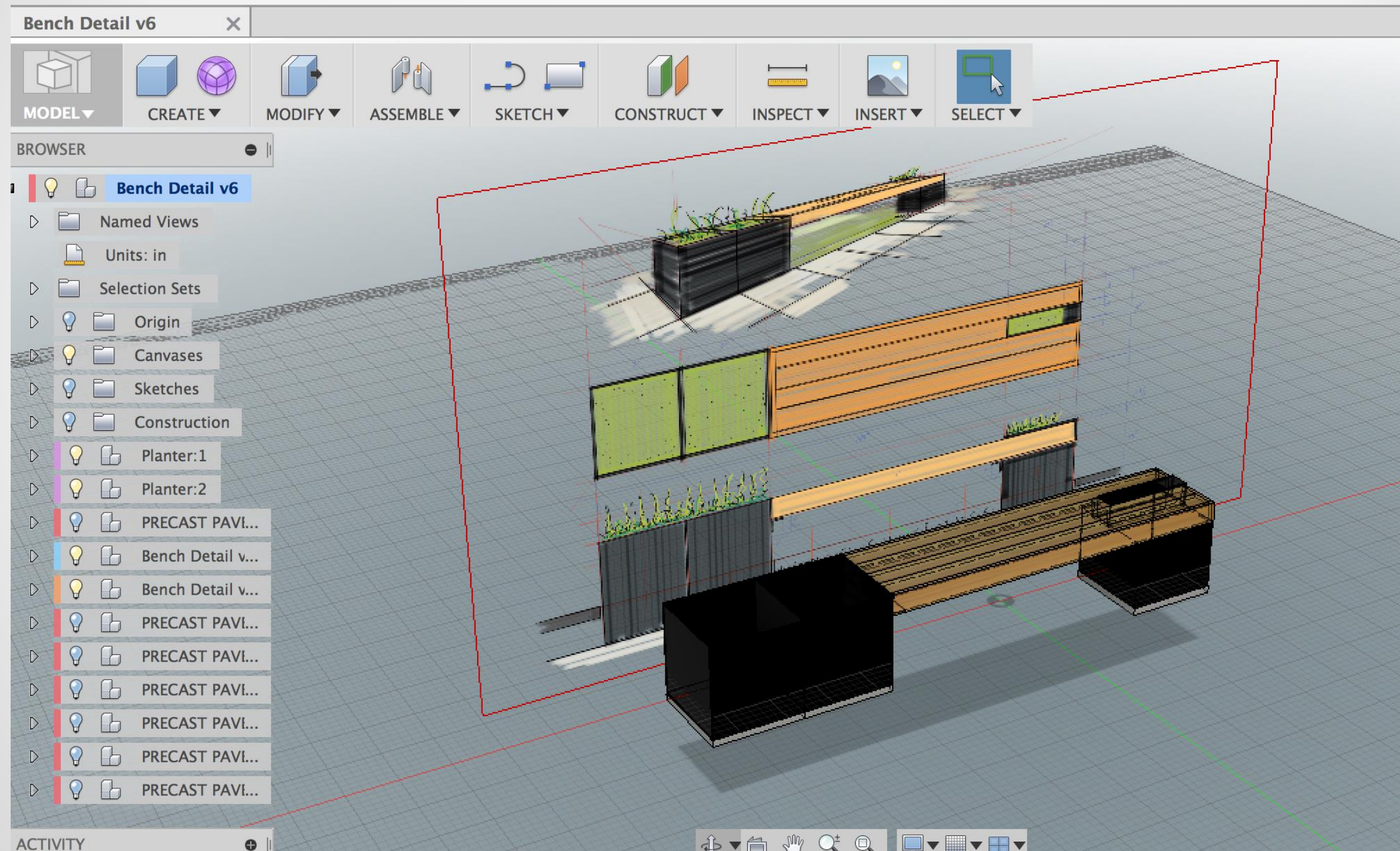


# Integrate – Revit – Formit – Sketchbook Pro – Fusion 360 – Revit



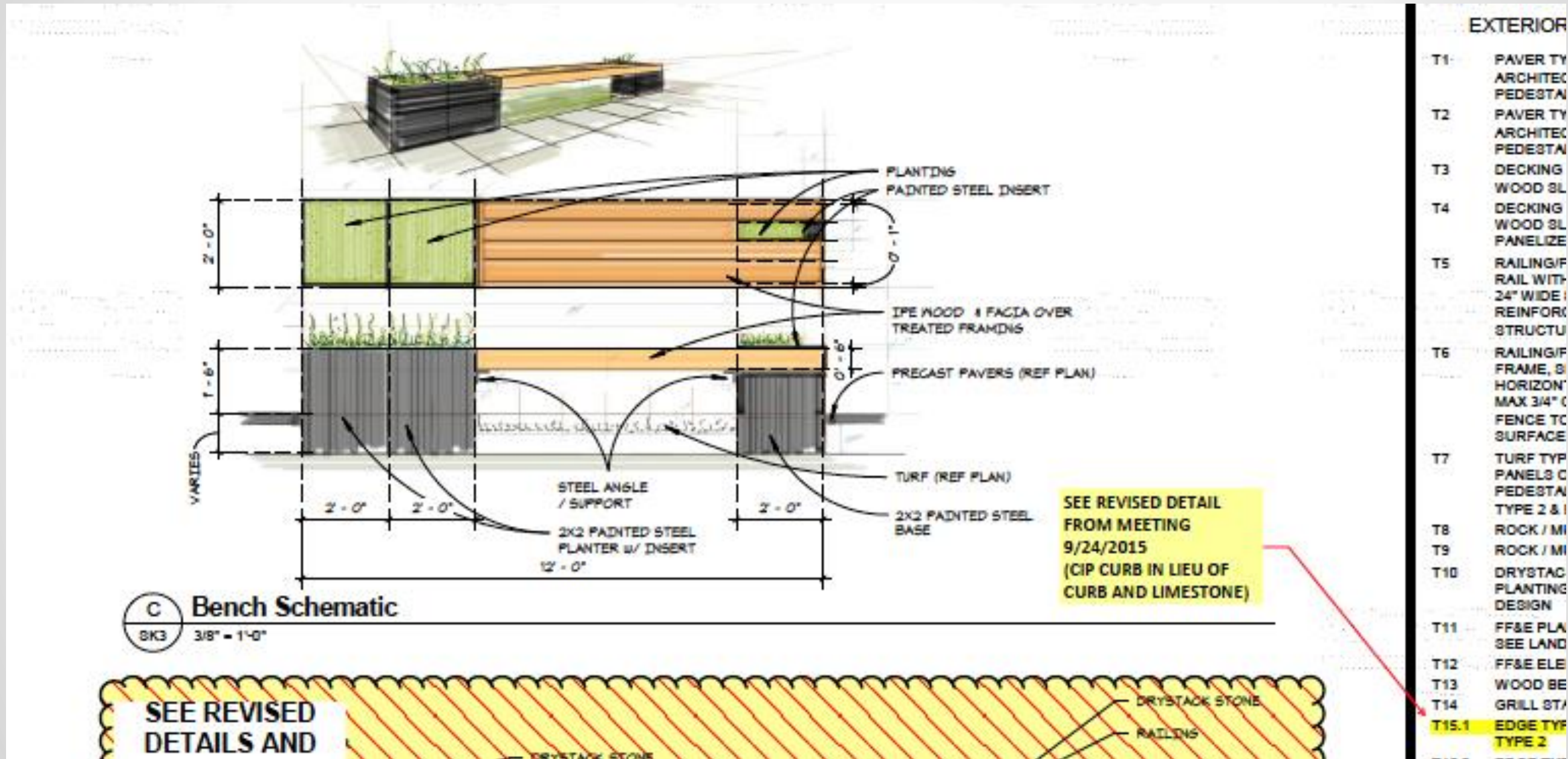


**Integrate – Revit – Formit – Sketchbook Pro – Fusion  
360 – Revit**





# Integrate – Revit – Formit – Sketchbook Pro – Fusion 360 – Revit



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**“Process”**

# Questions??



# Be heard! Provide AU session feedback.

- Via the Survey Stations, email or mobile device.
- AU 2016 passes awarded daily!
- Give your feedback after each session.
- Give instructors feedback in real-time.



# More Questions? Visit the AU Answer Bar

- Seek answers to all of your technical product questions by visiting the **Answer Bar**.
- Open daily 8am-10am and Noon-6pm and located just outside of Hall C on Level 2.
- Staffed by Autodesk developers, QA, & support engineers ready to help you through your most challenging technical questions.





