Reduce Errors by Creating Intelligent Sections and Elevations in AutoCAD Architecture - AS322407

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About the speaker

Sridhar Subramani has more than 20 years of CAD experience, working as Senior Product Owner at Autodesk, Inc. A frequent presenter at AutoCAD University for the last 6 years. A seasoned professional in software testing, he has also been actively involved in news groups of AutoCAD Mechanical software and AutoCAD Architecture software and resolved over 1500 issues reported by customers. Sridhar conducts in-house training in AutoCAD software and AutoCAD Architecture software. He has written several technical solutions that are published on the Autodesk support website.

Class Summary

So we've already created our shell and modeled our critical systems; now what? Time to add details and use sections to keep track of the minute internals that are easily overlooked. A section lets architects create vertical slices of a complex system to view through surrounding structures. This class will walk through the workflows involving section and elevation views that can be used to improve productivity and reduce errors in building design. We'll create section and elevation views, and then progress to a live preview of the modifications we make. We'll then introduce subdivisions to our sections to add visual depth or zoom out as needed. We'll use the Styles Editor to update our sections and elevations graphically based on set rules. We'll also learn how to automatically update section/elevation views automatically on drawing open. Finally, we'll add chutzpah to our drawing with materials, and see how we can automatically apply fill patterns to our designs.

Key learning objectives

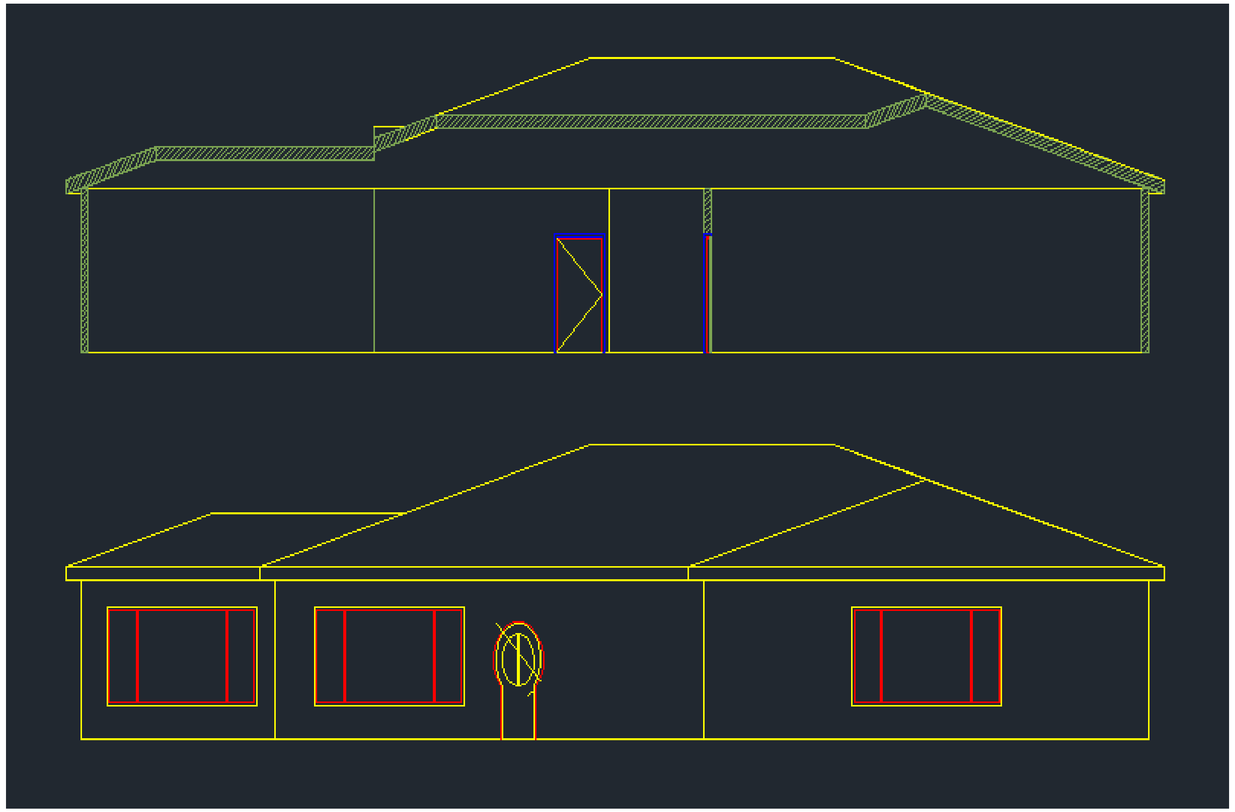
At the end of this class, you will be able to:

- Learn how to create a building section of a 3D model
- Learn how to create interior and exterior elevations
- Learn how to create subdivisions in the sections to add visual depth
- Learn how to update Section and Elevation views upon drawing open

Introduction to Sections and Elevations

A section represents a building model as if the model were cut vertically or horizontally to show interior detail.

- You can create two-dimensional (2D) or three-dimensional (3D) section objects.
- Live section view of the model.
- Control the size and shape of the section you generate.
- Assign materials to the section for an optimal visual representation of the sectioned objects.



Tip: Section objects remain linked to the building model.

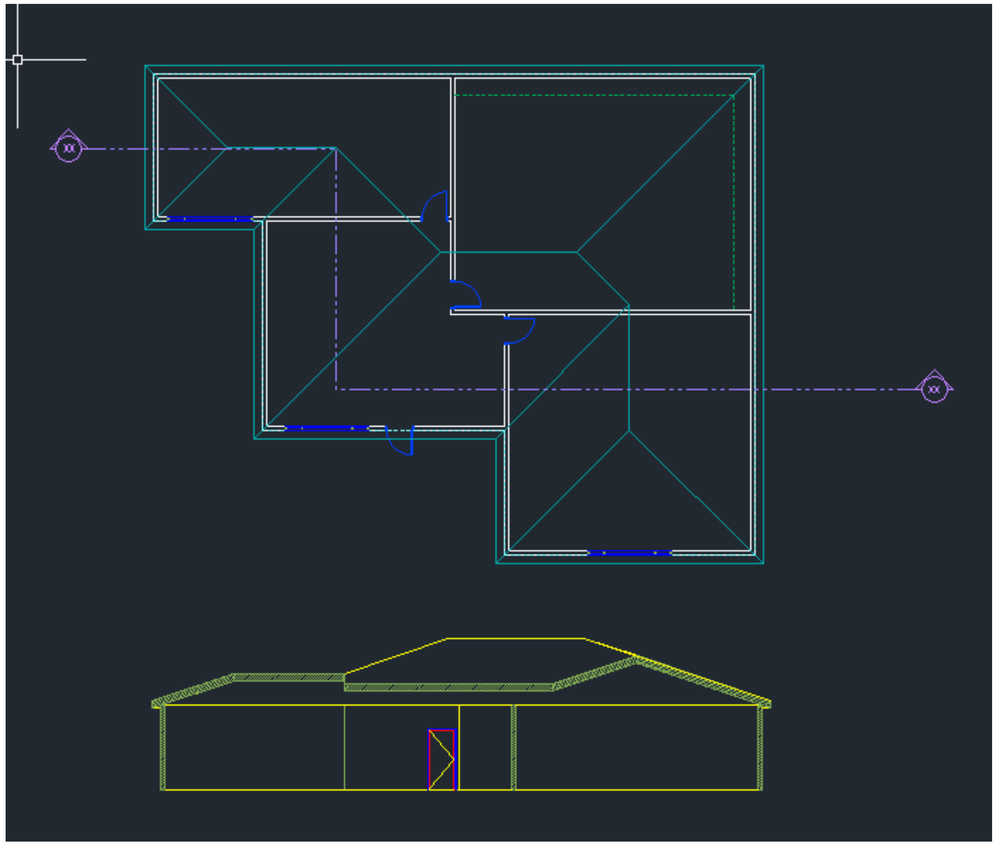
Building Sections

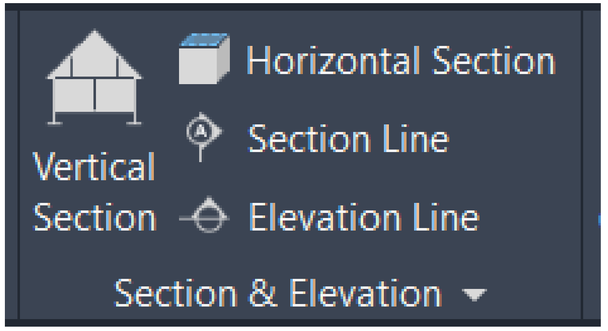
There are two places in AutoCAD Architecture to find Section tools. The first is on the Home tab, Section & Elevation panel. The other is in the Callouts palette on the Tool Palettes.

There are two commands, Vertical Section and Section Line. They produce the same results, except the Vertical Section tool does not place an Annotation Symbol.

Neither of these two tools is intended for use with Project Navigator and contract documents. For that, use the tools from the Tool Palettes, Document group, Callouts palette.

- **Create a Building Section**
- **Modify a building Section**





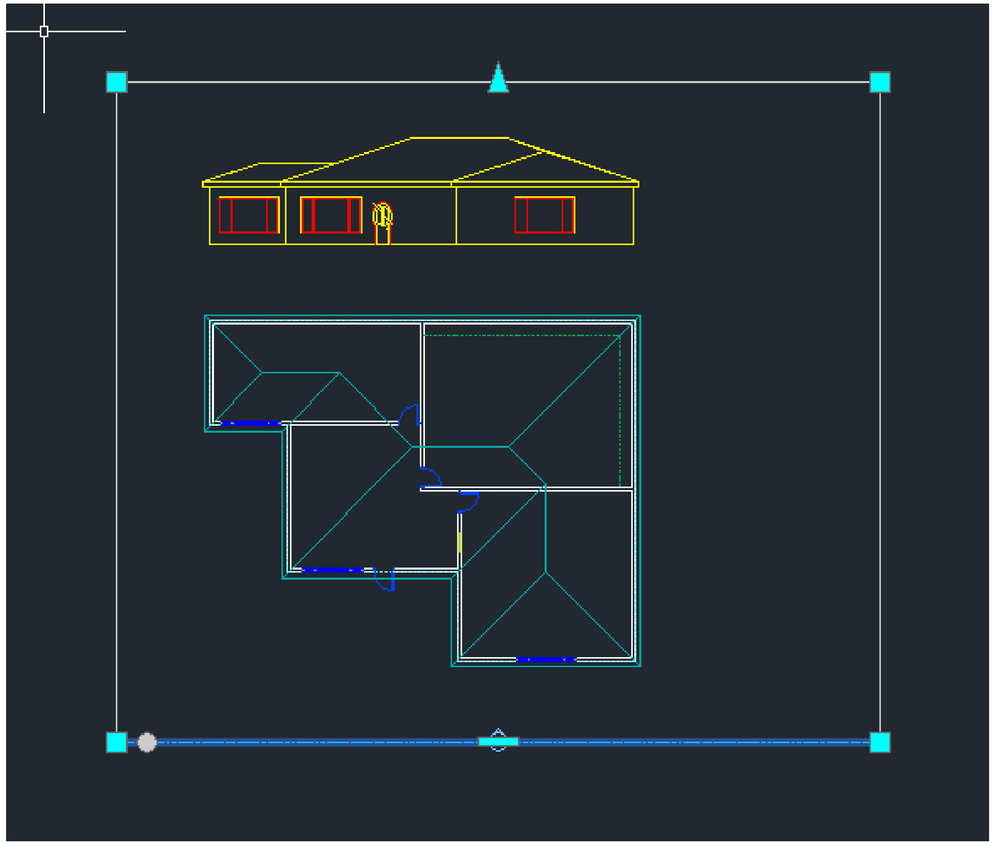
Demo

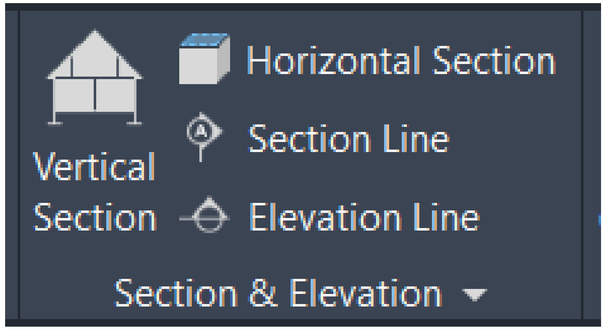
Building Elevations

There are two places in AutoCAD Architecture to find Section tools. The first is on the Home tab, Section & Elevation panel. The other is in the Callouts palette on the Tool Palettes.

The elevation line defines the extents of the elevation view of your building model. Elevation lines can be straight or jogged. You can also specify the length and the height of the area defined by the elevation line.

- **Create a Building Elevation**
- **Modify a building Elevation**

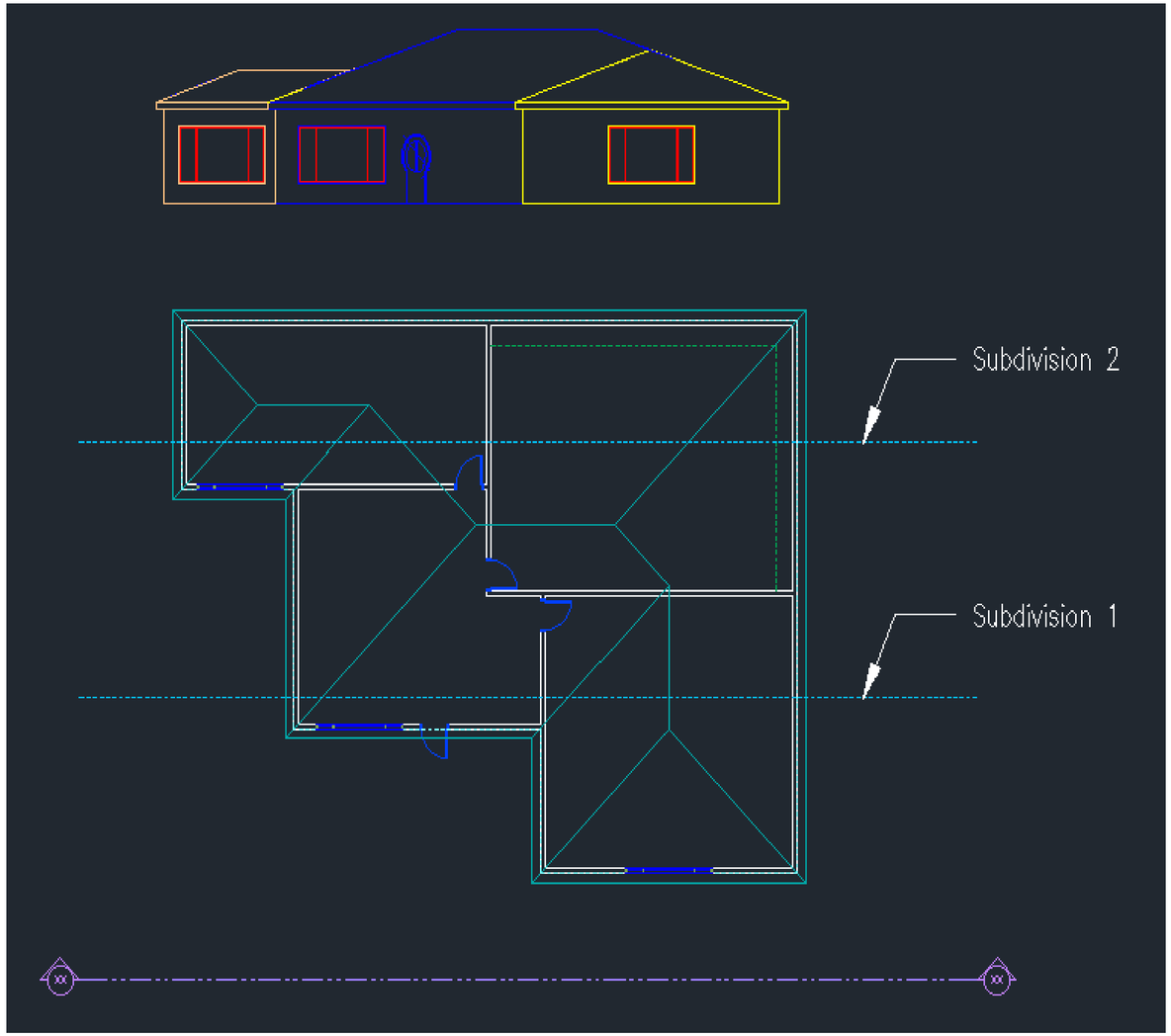




Demo

Creating Subdivision to Sections and Elevations

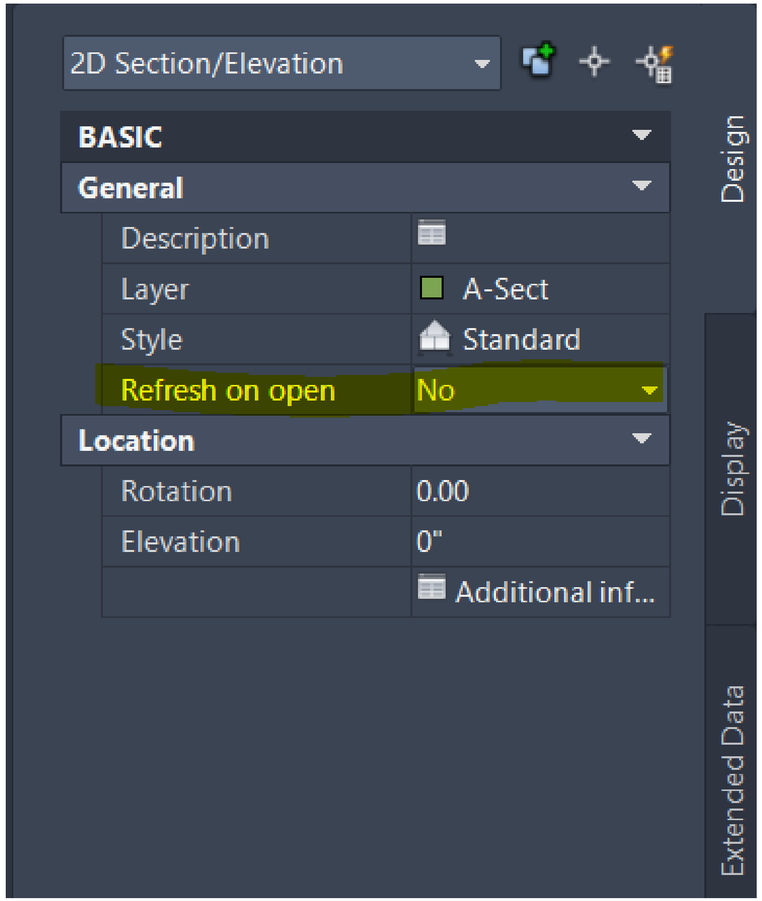
- The subdivision components partition a section object.
- Useful to create perspective effects.
- Parts closer to the viewer are drawn with darker, stronger lines and parts which are farther from the user are drawn with lighter, thinner lines.
- Subdivisions can have no individual material assignments.

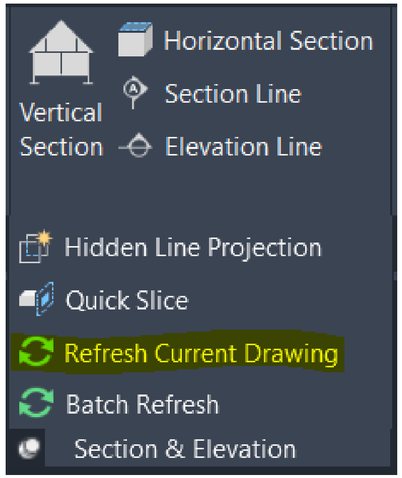


Demo

Automatically update section/elevation views

- Refresh a Section or Elevation view
- Refresh a view during Drawing open
- Refresh all views in the current drawing

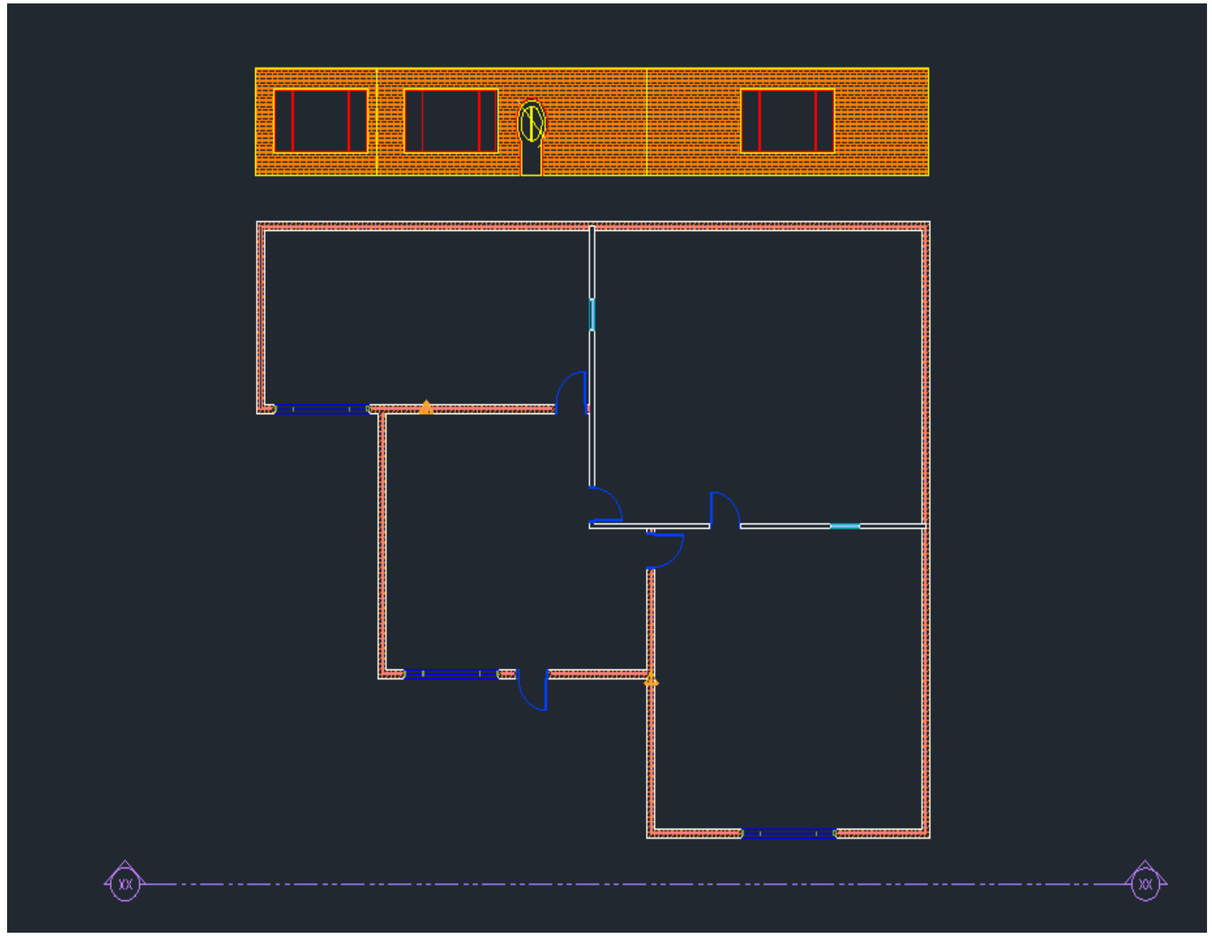




Working with Materials

- 2D and 3D section object consist of display components.
- Assign one material to each display component of an object.
  - E.g. Wood material to the frame of a window
  - Glass component to the glass of a window.
- Material assignments of the source objects are applied to the section.

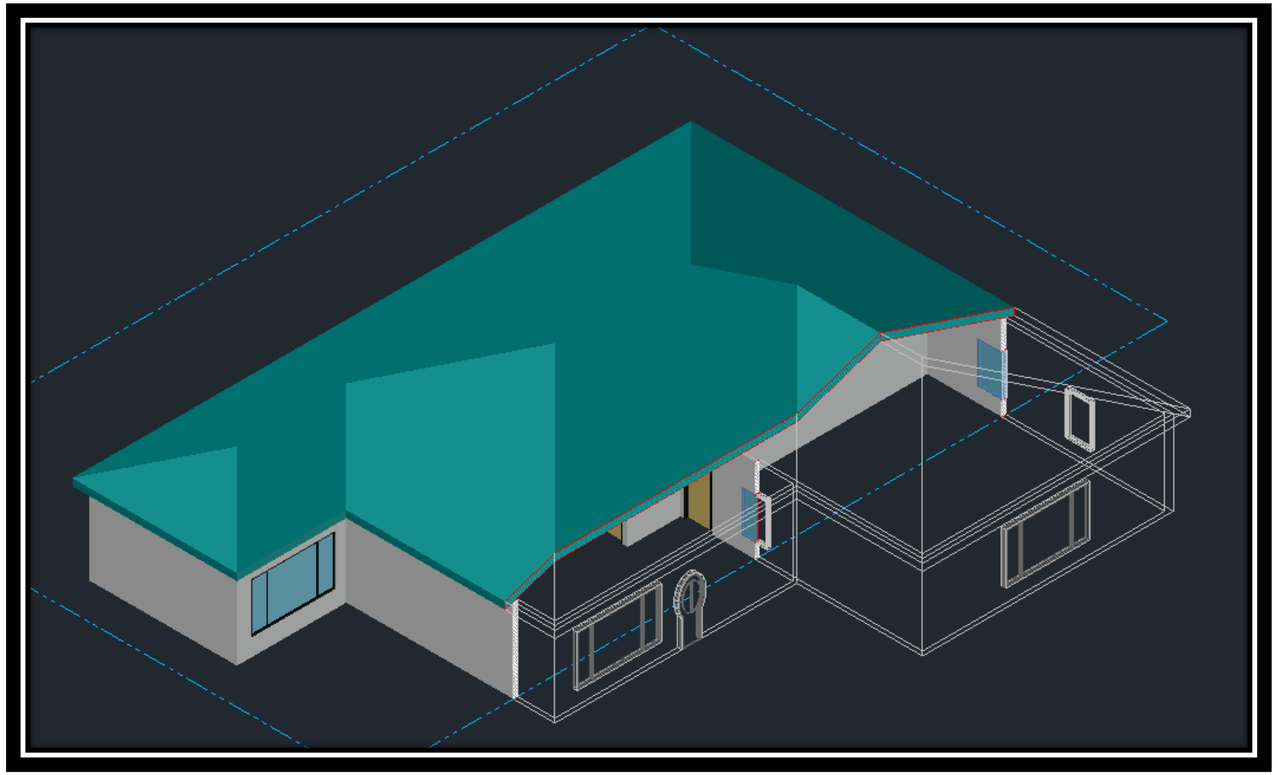
Tip: You do not assign a material directly to a 2D/3D section.



Demo

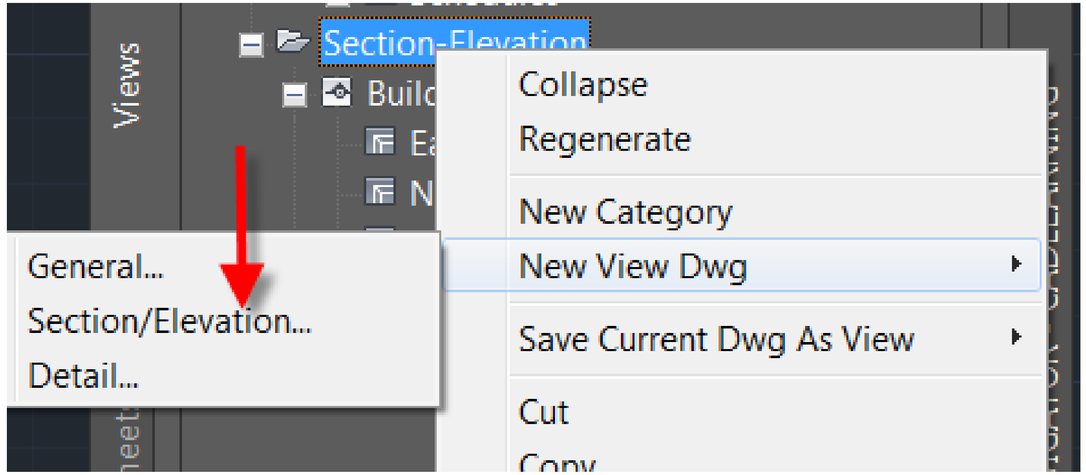
Working with Live Sections

- A live section view is a special view of a 3D model section.
- A live section view is always applied to all objects in the drawing.
- All objects are contained in the live section view.
- In a live section view, the new material is automatically used in the live section.



Sections and Elevations in Project Navigator

- Ability to coordinate all View Titles References, and Callouts
- Create different files for each Section and Elevation view.
- Insert the Section/Elevation view drawings in sheets
- Publish the entire project.



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