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ARCHITECTURAL MODELING USING REVIT

CURTAIN WALLS

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A curtain wall is a glass wall that is attached to the building structure and which does not carry the floor or roof loads of the building. In common usage, curtain walls are often defined as thin, usually aluminum-framed walls containing in-fills of glass, metal panels, or thin stone.

PROCEDURE:

1. Click on the Architecture tab then go to the Build panel, Select Wall.
2. Select a curtain wall type from the Type Selector drop-down.
3. To create a wall with automatic horizontal and vertical curtain grids, specify the Vertical and Horizontal Layout properties for the wall type.
4. Create the wall, using draw or pick tools.
5. To exit the Wall tool, press Esc twice.
6. To change a panel type, do the following:
   a. Open an elevation or a view where you can see the panels of the curtain wall.
   b. Select a panel. Move the cursor over a panel edge, and press Tab several times until the panel is selected. Watch the status bar for information, and then click to select it.
   c. Click Modify Curtain Panels tab -> Element panel, and select the appropriate panel type from the Type Selector drop-down.

ADD CURTAIN GRIDS:

If you sketched a curtain wall without automatic grids, you can add grids manually also.

1. Open a 3D view or an elevation view.
2. Click Architecture tab -> Build panel -> Curtain Grid.
3. Click Place Curtain Grid tab -> Placement panel, and select a placement type.
4. Place the cursor along wall edges; a temporary grid line displays.
5. Click to place the grid lines. Each section of the grid (design unit) is filled with a separate curtain wall panel of the selected type.
6. Click Finish Current when you are done.
7. Add additional grid lines, if necessary, or click Modify to exit the tool.

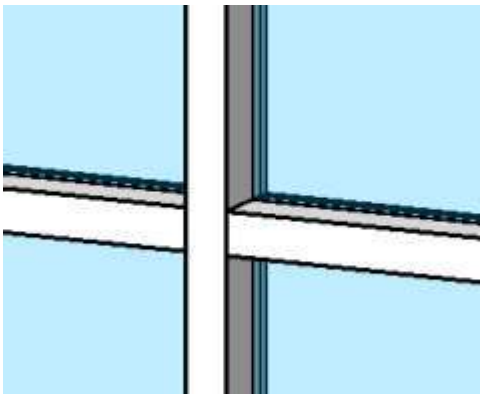
CURTAIN GRID SNAPPING:

When you place curtain grids, they snap to evenly spaced intervals on the curtain wall. For example, as you drag the cursor over a panel, it snaps to the midpoint or to the 1/3 mark of the panel.

When you place curtain grids on walls, sloped glazing, and curtain systems, the curtain grids snap to visible levels, grids, and reference planes. In addition, curtain grids snap to other curtain grids when you select a common corner edge. For example, if you place the cursor on a joined edge between 2 curtain walls, the new curtain grid snaps to an existing curtain grid.

Changing Panel Sizes by Adjusting Grids:

1. Select the existing grid line in a curtain wall.
2. On modify curtain wall grids tab -> curtain grid panel -> click on Add/Remove segments button.
3. The selected grid highlights in dotted line-type.
4. Click on the segment that you wish to remove.
5. Click on Modify.
6. To add a segment to a grid line, select the grid line.
7. Click on the Add/Remove button.
8. Click on the empty segment. This will add a grid segment to the curtain grid.
9. Click modify.



MULLIONS

When you add mullions to a grid, the mullions resize to fit the grid. If you add a mullion to an inside grid, the mullion is centered on the grid. If you add a mullion to a perimeter grid, the mullion aligns so its border is flush with the outside of the wall. After creating a curtain grid, you can place mullions on grid lines.

1. Add a curtain grid to a curtain wall or curtain system.
2. Click Home tab -> Build panel -> Mullion.
3. Click Place Mullion tab -> Element panel -> Type Selector drop-down, and select the desired mullion type.
4. On the Place Mullion tab -> Placement tab, select one of the following tools:
   - **Grid Line:** When you click a grid line in the drawing area, this tool places a mullion across the entire grid line.
   - **Grid Line Segment:** When you click a grid line in the drawing area, this tool places a mullion on the individual segment of the grid line that you click.
   - **All Grid Lines:** When you click any grid line in the drawing area, this tool places mullions on all grid lines.
5. Click in the drawing area to place mullions on grid lines as desired.
6. Click Modify.

Note: You can vary the shape of mullions by loading new mullion profiles into a project. Also, you

can create a custom profile. After you load a mullion profile in the project, follow the following procedure:

1. In the drawing area, select a mullion on the model, or click Home tab -> Build panel -> Mullion.
2. Click Modify Curtain Wall Mullions tab or Place Mullion tab -> Element panel Element Properties drop-down -> Type Properties.
3. In the Type Properties dialog, under Construction, select a profile, and click OK.

CONTROLLING MULLION JOINS:

You can control mullion joins after you place mullions on a curtain grid.

1. In the drawing area, select a mullion.
2. Click Modify Curtain Wall Mullions tab -> Mullion panel -> Make Continuous or Break at Join.
   - Use Make Continuous to extend the ends of mullions at a join, so that they display as one continuous mullion.
   - Use Break at Join to trim the ends of mullions at a join, so that they display as separate mullions.

INSERTING A DOOR/WINDOW IN A CURTAIN WALL:

Normal Doors & Windows are not designed for a curtain wall. Thus, we can't insert a door in the curtain wall with the DOOR tool. Follow the following procedure:

Procedure:

1. Load the family of Curtain Doors in the project.
2. Select the curtain panel by going near to the curtain panel in the curtain wall and pressing TAB till the panel is selected.
3. Go to the TYPE selector > Choose the name of the curtain door you just loaded.

Note: The Curtain panel is now converted into the curtain door. The height & the width of the curtain door will depend on the size of the curtain panel. Thus, carefully size the panel first and then convert it into a door by the above process.