VIEW RANGE CONTROL VIA SECTION BOX IN REVIT

Current Situation in Revit

Currently, the **view range** in Revit is controlled by specifying numeric values for the following:

- **Top**: The upper boundary of the view.
- **Cut Plane**: The level at which elements are cut and displayed.
- **Bottom**: The lower boundary of the view.
- **View Depth**: Extends the view range beyond the bottom plane.

Each of these settings must be adjusted manually with numerical values, which can be tedious and imprecise, especially when managing complex models with varied elevations.

Proposed Feature: Adjust View Range with a Section Box

Imagine a more intuitive approach: **Adjusting the view range with a section box**. This tool could provide a graphical and interactive way to modify view range, allowing users to "see" the range adjustments in real-time and fine-tune it as needed.

1. **Section Box for View Range**:
    - The **section box** could display in the plan view or 3D view, allowing users to visually define where they want the view to start and end.
    - Users would drag the top and bottom faces of the box to set the **Top**, **Bottom**, **Cut Plane**, and **View Depth**.
2. **Real-time Adjustments**:
    - As the user manipulates the section box boundaries, the view updates immediately, displaying only the elements within the range.
    - This approach gives a clearer sense of which elements fall within the range and allows for quick adjustments without going back to the view properties dialog.

3. **Precision and Flexibility**:
    - If precise numeric adjustments are still needed, users could enter exact values in a properties panel.
    - The section box feature could complement existing controls, so users would have the option to switch between graphical and value-based view range settings.

User Interface and Workflow

1. **Activate Section Box for View Range**:
    - A button to enable the "View Range Section Box" could be added within the **View Properties** panel.
    - Upon activation, the section box would appear on the plan or elevation view, like how it works in 3D views.
2. **Interactive Manipulation**:
    - Users would drag the section box boundaries up or down to adjust the view range in the same way they currently do for 3D section boxes.
    - The **cut plane** could be represented by a dashed line within the section box, which users could adjust separately if needed.

Advantages for BIM Professionals

Implementing section box-controlled view ranges offers several professional advantages:

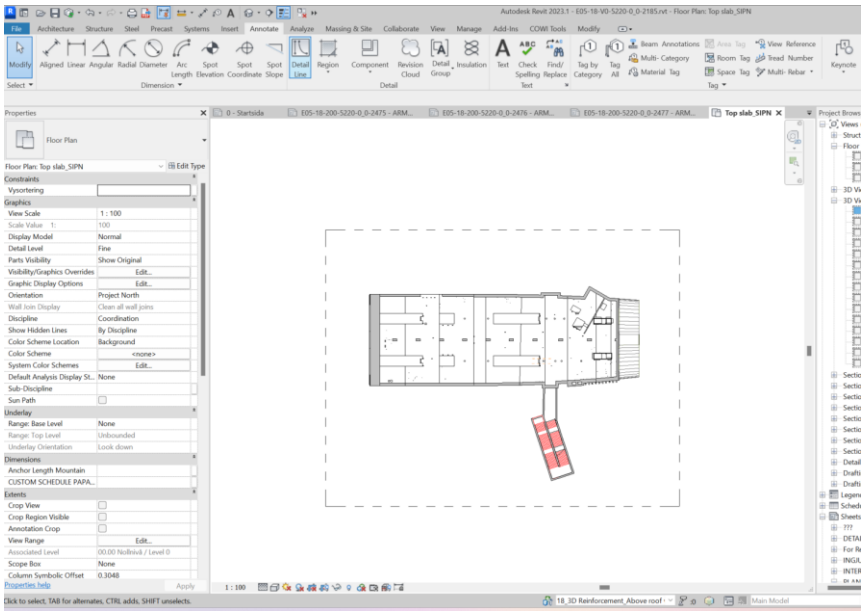
- Increased Efficiency: Reduces time spent on trial and error when adjusting views, freeing up more time for productive tasks.
- Enhanced Visualization: Provides a clear, real-time preview of what's visible in the model, allowing teams to better coordinate across disciplines and minimize errors.

- Improved Consistency: Copying and pasting section box settings would ensure consistency across similar views, which is critical for large-scale projects requiring standardized views.
- Simplified User Experience: Minimizes the learning curve for new users and makes Revit more approachable, even for those who aren't as experienced with value-based view range adjustments.

Mockup Image Suggestions

Here's how the **View Range Section Box** could look in a 2D view and a 3D view:

1. **Plan or Elevation View**: Show a rectangular outline (the section box) with draggable top and bottom boundaries, with a dashed line representing the cut plane.



2. **3D View**: