

Junctions Logic

Statement

As a **Design Engineer**, I want to automatically assign edge types to combo wall families based on their adjacent wall compositions so that I can eliminate manual edge parameter configuration, and reduce modeling errors.

DOD

1. **Automatic Junction Detection:** System successfully identifies all wall junction types ("T 3 walls", "T 2 walls", "L", "Free", "Splice") and determines each panel's role within the junction
2. **Edge Parameter Assignment:** Tool automatically populates "WL_L_Edge" and "WL_R_Edge" combo parameters with correct values (0-11) for both left and right edges of all wall panels
3. **Error Handling and Validation:** System alerts users when junction types cannot be determined, or when edge assignments conflict with design rules

Details

Junction Type Detection

When placing a combo family on a wall, scan each wall end to detect:

- Number of adjacent walls at the junction
- Geometric relationship between connecting walls
- Classification into junction types: "T 3 walls", "T 2 walls", "L", "Free", "Splice"
- Classify the role of each panel within the junction
- Analyze wall adjacencies from model geometry
- Automatically populate "WL_L_Edge" and "WL_R_Edge" combo family parameters
- Process both left and right edges of each wall independently
- Handle edge cases where junction type cannot be determined

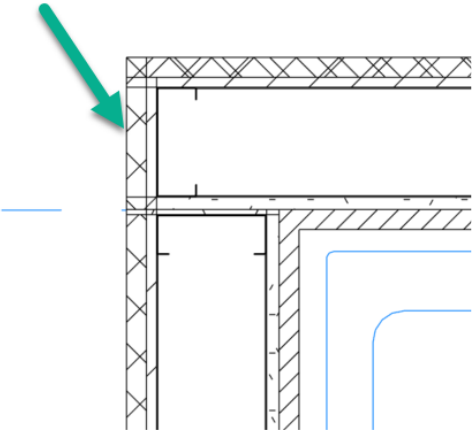
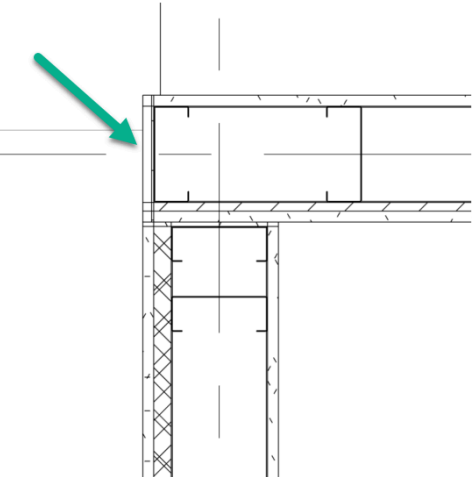
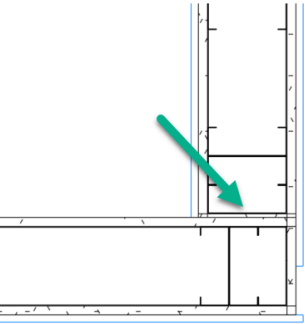
Connection Type Assignment and Parameter Mapping

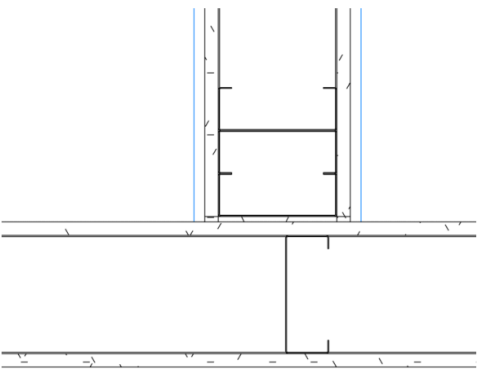
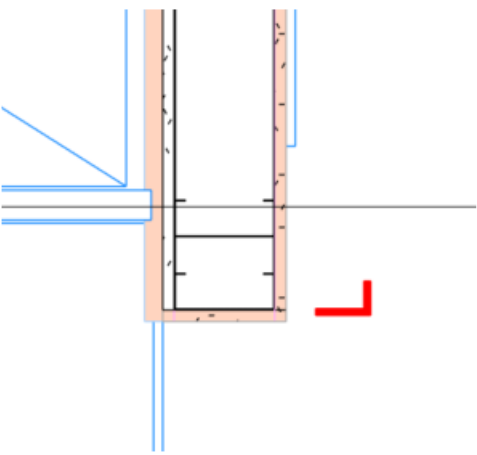
For each wall edge, determine connection type based on junction analysis and set corresponding parameter values:



Preview unavailable

Connection Type	Description	Parameter Value	Visual Example
0 - No Wrap		0	
1 - Splice	Wall continues in line	1 or 11 (W/O Setbacks)	

2 - L Wrap Ext	External corner connection	2	
3 - L Wrap Int	Internal corner connection	3	
4 - L Hidden	Hidden corner detail	4	

5 - T	Perpendicular wall intersection	5	
6 - Free Ext	Free external edge	6	Couldn't find example
7 - Free Int	Free internal edge	7	
8 - L Wrap Garage	Garage-specific corner connection	8	Happens once in the model. no need to support this