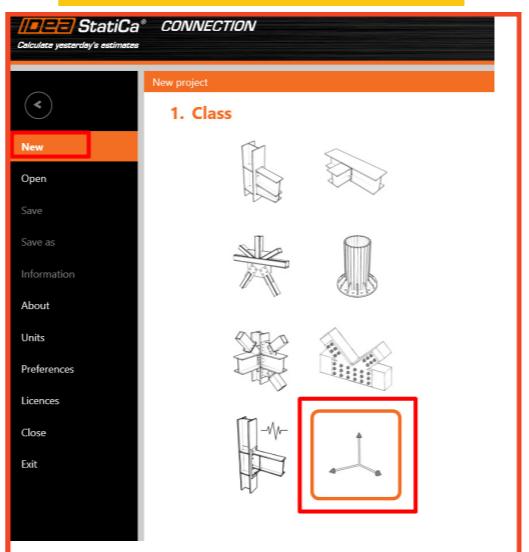


Evaluation of corner connection with wide flange brace in Ordinary Concentrically Braced Frame (OCBF) - CBFEM

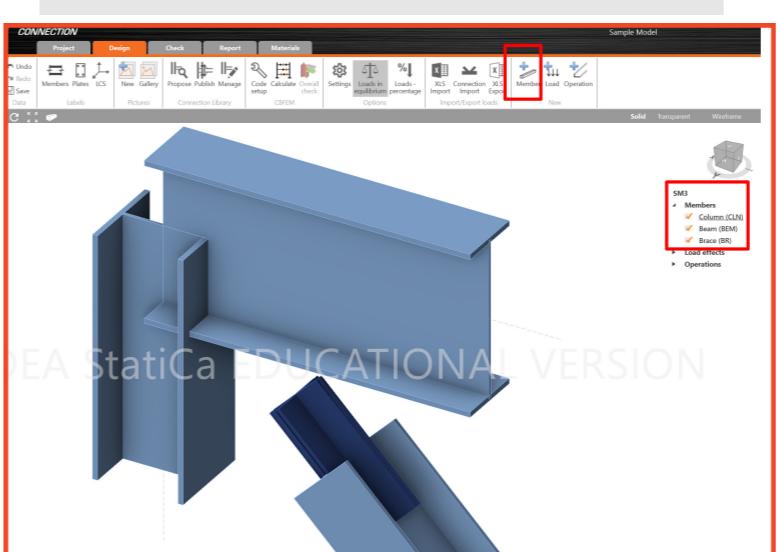
1. Open IDEA StatiCa Connection



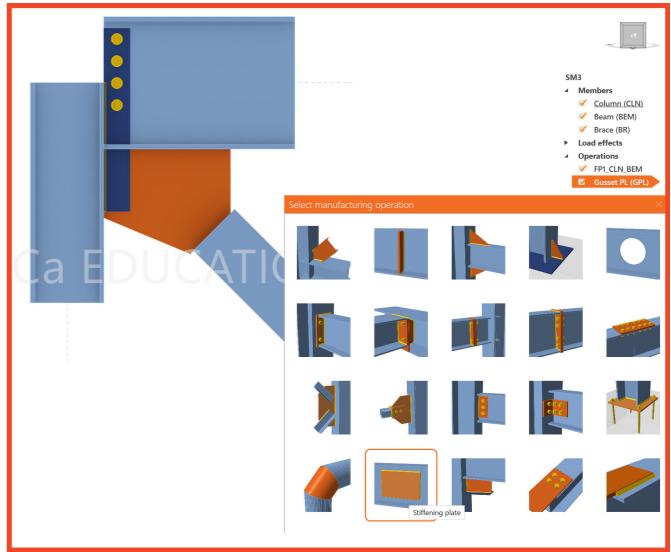
2. Select AISC 360-16 (LRFD) as design code in parameters.
Create New Model



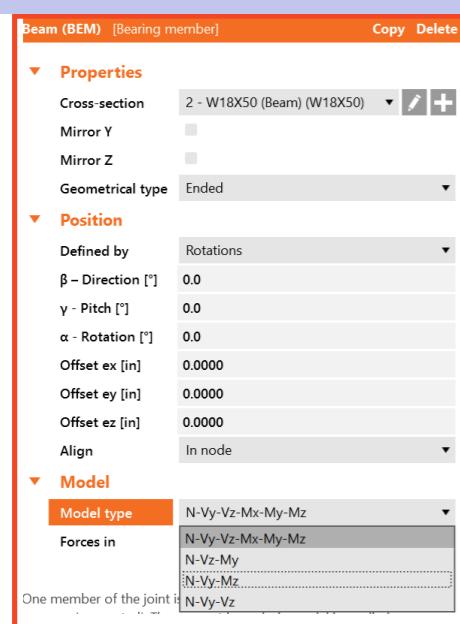
3. Define Members - Beam, Column, Brace, Double Angles (as stiffening members, in operations) for the given size and material properties as per design



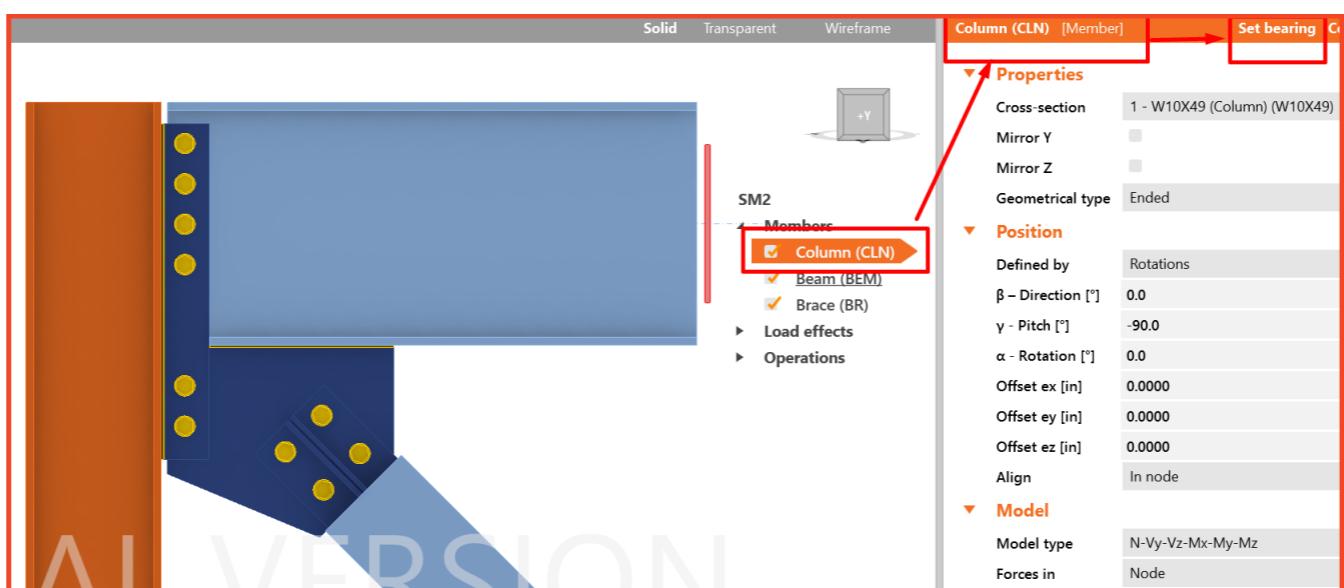
4. Define Plates - Fin Plate and Gusset Plate for given / trial thickness and material properties



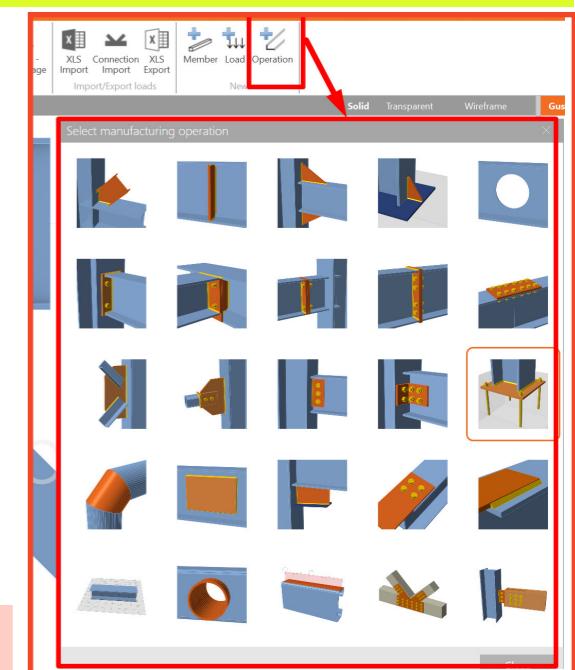
7. Assign appropriate model types to beam and brace members, such that forces are in node
[N-Vy-Vz-Mx-My-Mz to beam]
[N-Vy-Vz to brace]



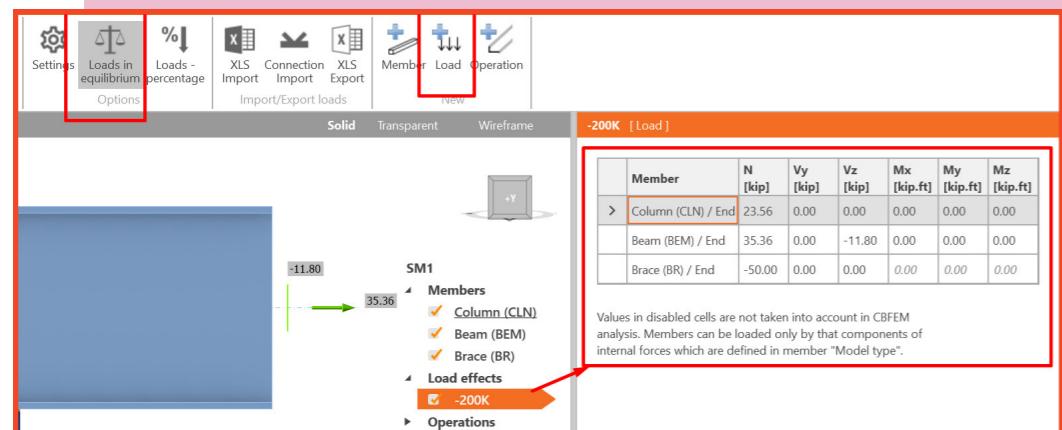
6. Assign the column as Bearing Member



5. Connect the members and plates using suitable operations in CBFEM for connection - Bolts and Welds

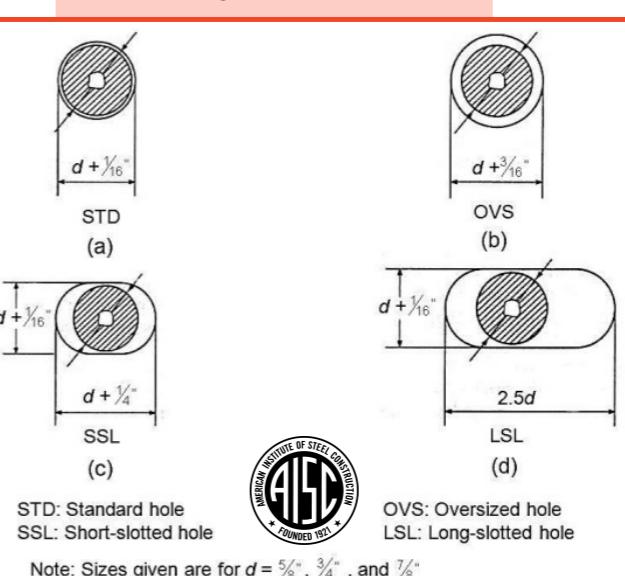


8. Assign the design loads to the members and balance the forces such that "loads in equilibrium" is followed in CBFEM
Use stress-strain method in CBFEM for OCBF



Note -The required strengths of beam and their connections are to use the
oversign strength seismic loads are as given in AISC Seismic Provision Section F1.5c

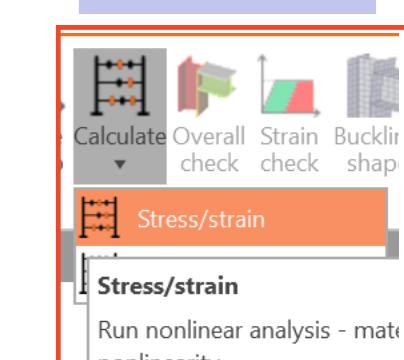
9. Change the resistance factor (LRFD) or safety factor (ASD) (if required) in code setup, based on the type of bolt hole, as given in Section J3.8 of AISC 360-16



STD: Standard hole
SSL: Short-slotted hole
OVS: Oversized hole
LSL: Long-slotted hole

Note: Sizes given are for $d = \frac{5}{8}^{\prime\prime}, \frac{3}{4}^{\prime\prime}, \text{ and } \frac{7}{8}^{\prime\prime}$

10. Run Analysis of connection in IDEA StatiCa



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