**Beam:**

Supports = [] -------- > parents

Supporting = [] ------- > children

Loads = [] -------------- > (areaID, beamID?, locationOnBeam, vector)

Calculate loads() -------> creates supports and supporting lists

Distribute Load(): ---- > calculates load from loads to apply to supports

**Area Loads:**

Big Shape: Boundary Curves

Magnitude: Weight in PSF

Orientation: Angle

Supporting Beams: which beams are supporting the area load.

CalculateLoads(): finds supporting beams, gets adjacencies

Orientation

And point in polygon

Distribute Load() : calculates load from loads to apply to supports

Get area loads. Figure out which beams directly support the area loads.

Create load to add to those members.

Get members supporting those members.

Create load to add to those members.

Get members supporting those members.

Create load to add to those members.