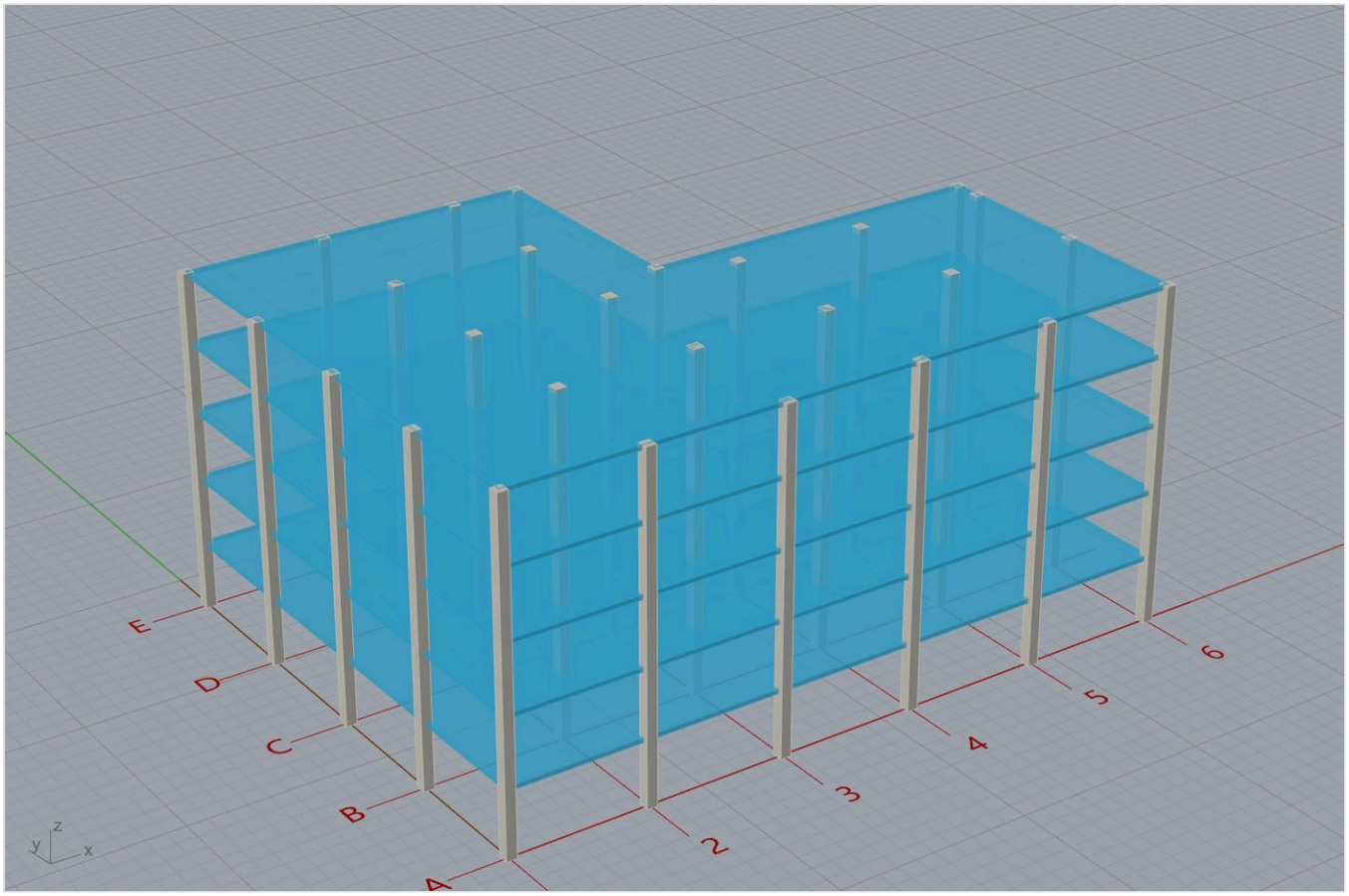
PLANNING

STRUCTURAL GRID

Column grid from a floor outline with rule-of-thumb pre-sizing



FREE | RHINO 7 · RHINO 8 | NATIVE COMPONENTS ONLY | VERSION 1.0 · NOVEMBER 2026

From any floor outline the definition finds equal bays no longer than the maximum span, places columns on the grid nodes inside the outline and on its corners, and pre-sizes slabs and columns with rules of thumb. Axes are labelled 1-2-3 and A-B-C.

Free to use in your own projects, commercial ones included. Please do not resell or re-upload the files: share the link instead.

HOW TO USE

1. Open the file: an L-shaped plan appears with its grid and columns.
2. Right-click 'Floor outline' > Set one Curve and pick your closed plan outline.
3. Set the maximum span, floors, floor-to-floor height, load and allowed column stress.
4. Read 'Pre-sizing': grid, column count, slab depth (flat slab or beams + slab) and column size.
5. Bake 'Columns', 'Slabs' and the axes.

BAKE

Columns | Slabs | Axes

GOOD TO KNOW

- Slab L/30, beams L/12 + slab L/35, square columns from load / stress: a starting point for discussion, not a structural design.

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INPUTS

PARAMETER	RANGE	DEFAULT
Max span (m)	3.00 – 15.00	7.50
Floors	1 – 30	5
Floor to floor (m)	2.70 – 6.00	3.50
Load per floor (kN/m2)	5.0 – 20.0	12.0
Column stress (MPa)	4.0 – 20.0	10.0

GEOMETRY YOU CAN REPLACE

Floor outline · Curve

RESULTS AT DEFAULT VALUES

PRE-SIZING

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Grid: 5 x 7.20 m by 4 x 6.75 m   columns: 27 per floor
Flat slab (L/30): 0.24 m   or beams (L/12) 0.60 m + slab (L/35) 0.20 m
Column: max load 2916 kN -> 0.55 x 0.55 m   GFA 3780 m2
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INSIDE THE DEFINITION

STAGES, LEFT TO RIGHT AND TOP TO BOTTOM

1 INPUT

2 GRID equal bays not longer than the max span

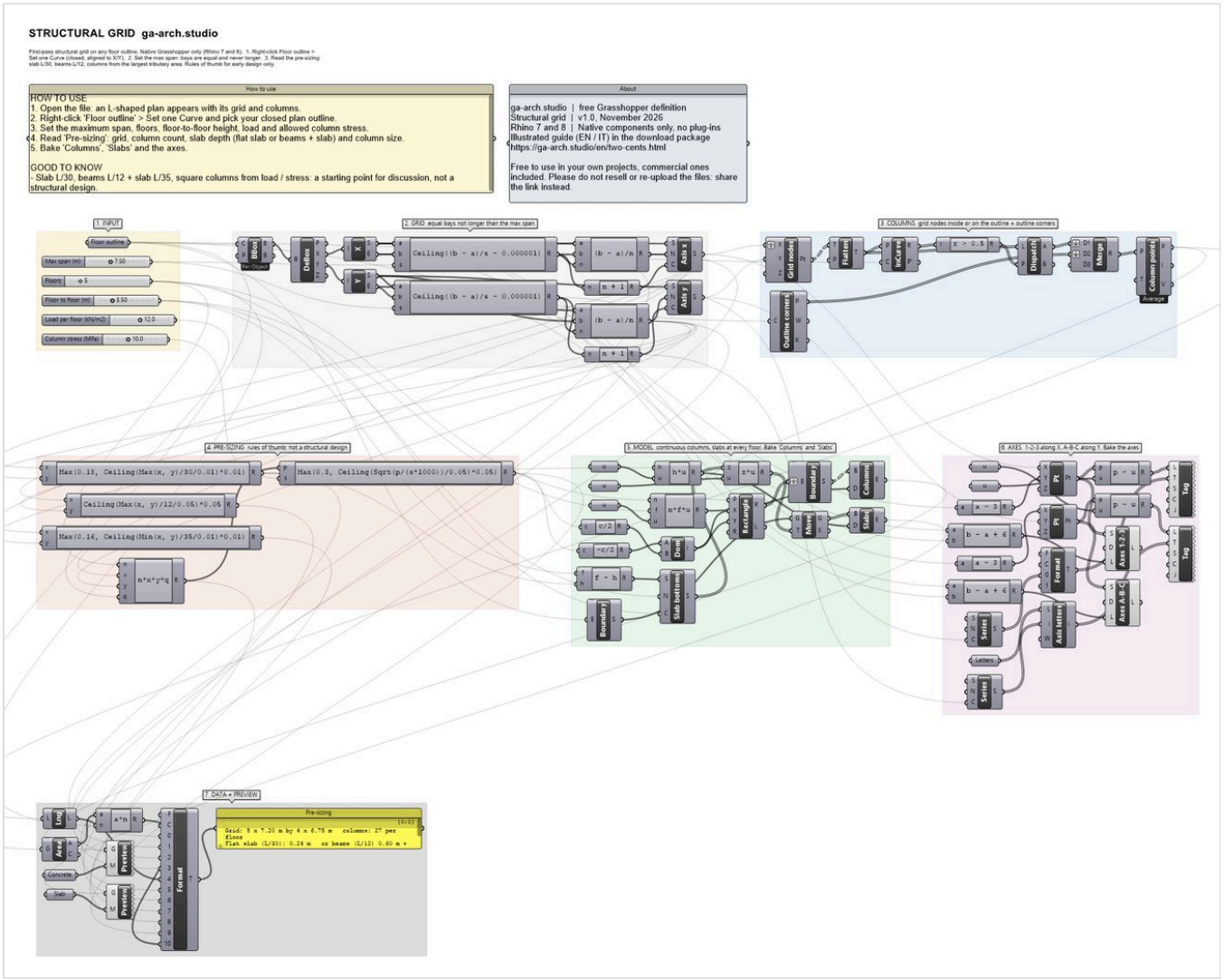
3 COLUMNS grid nodes inside or on the outline + outline corners

4 PRE-SIZING rules of thumb, not a structural design

5 MODEL continuous columns, slabs at every floor. Bake 'Columns' and 'Slabs'

6 AXES 1-2-3 along X, A-B-C along Y. Bake the axes

7 DATA + PREVIEW



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