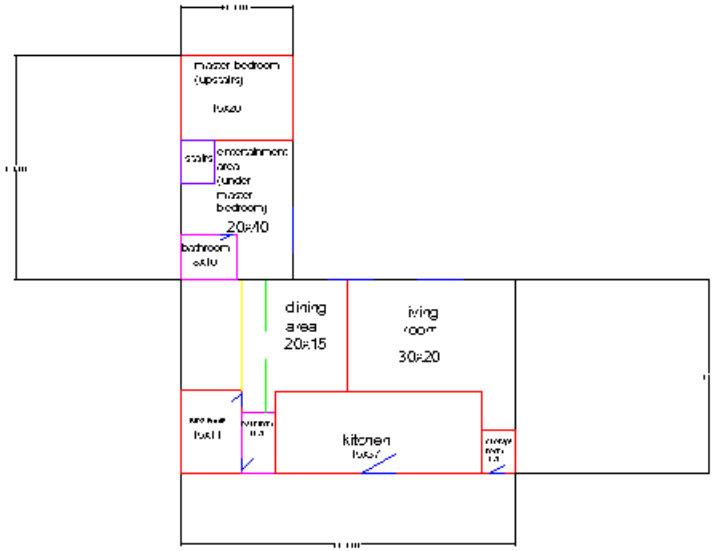
Structural presentation

By: Z.K.

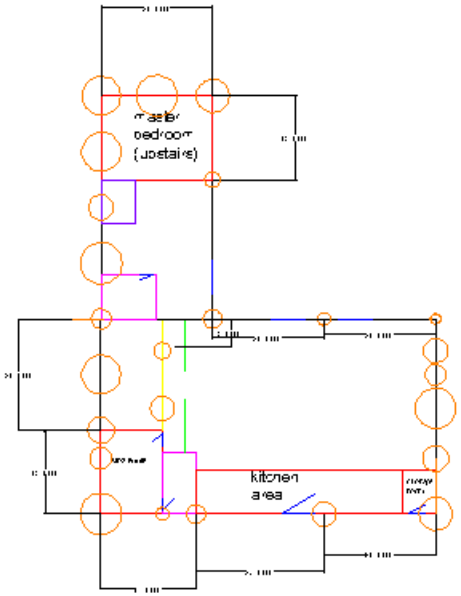
What my project was based off

- One of several houses I lived in
- Philippines (3rd world country)
- High quality house (in the Philippines)

Floor plan

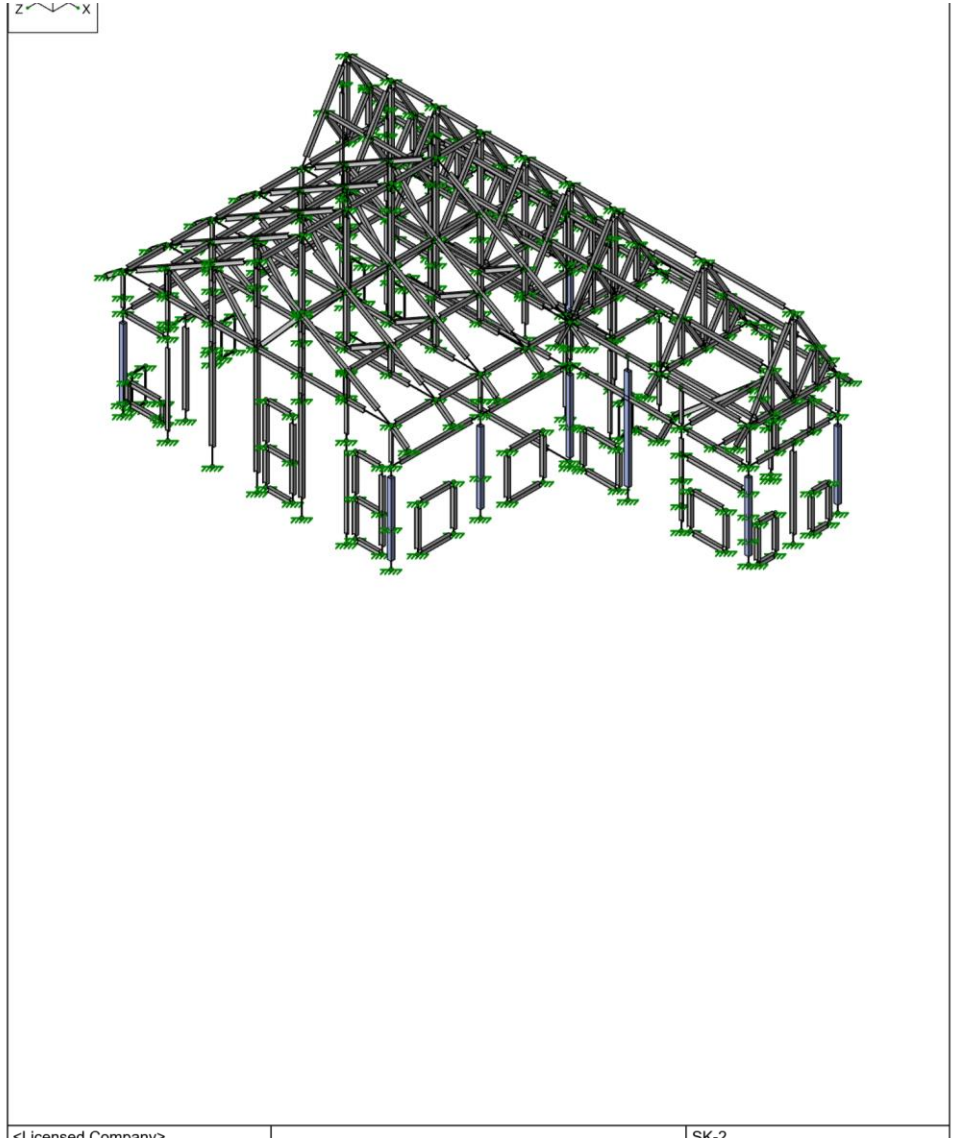


column placements

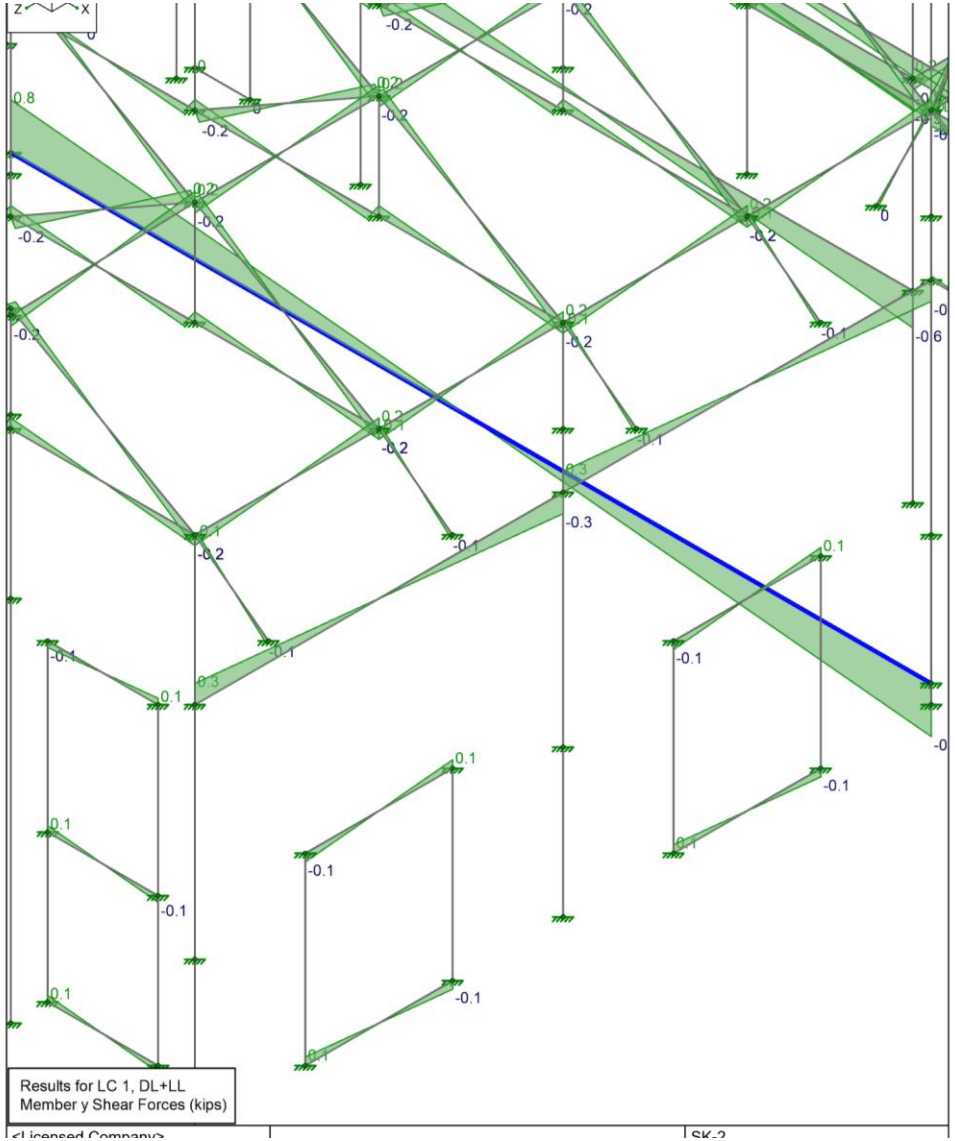


3D model (outcome)

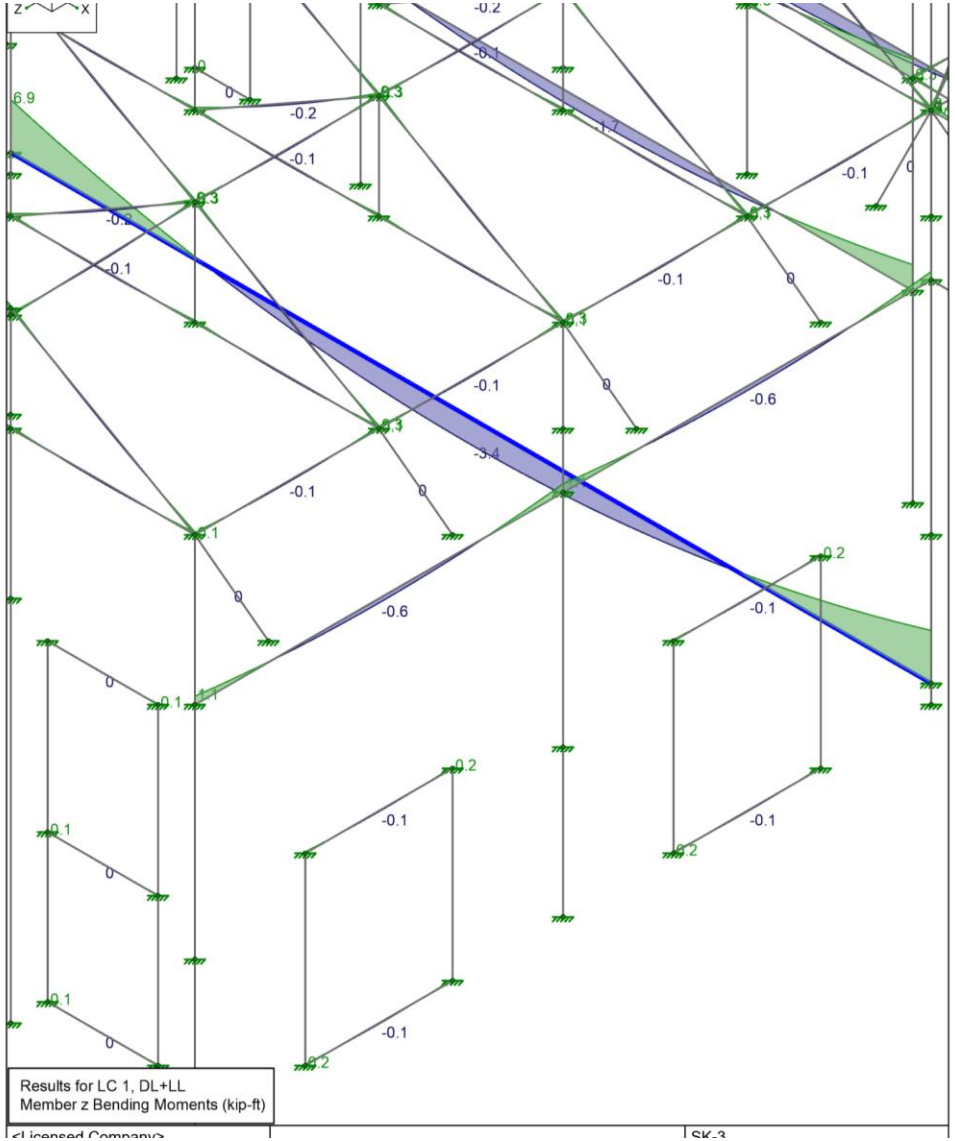
- Mainly steel (girders, columns, beams)
- Outermost columns are concrete
- Wood door frames on the inside



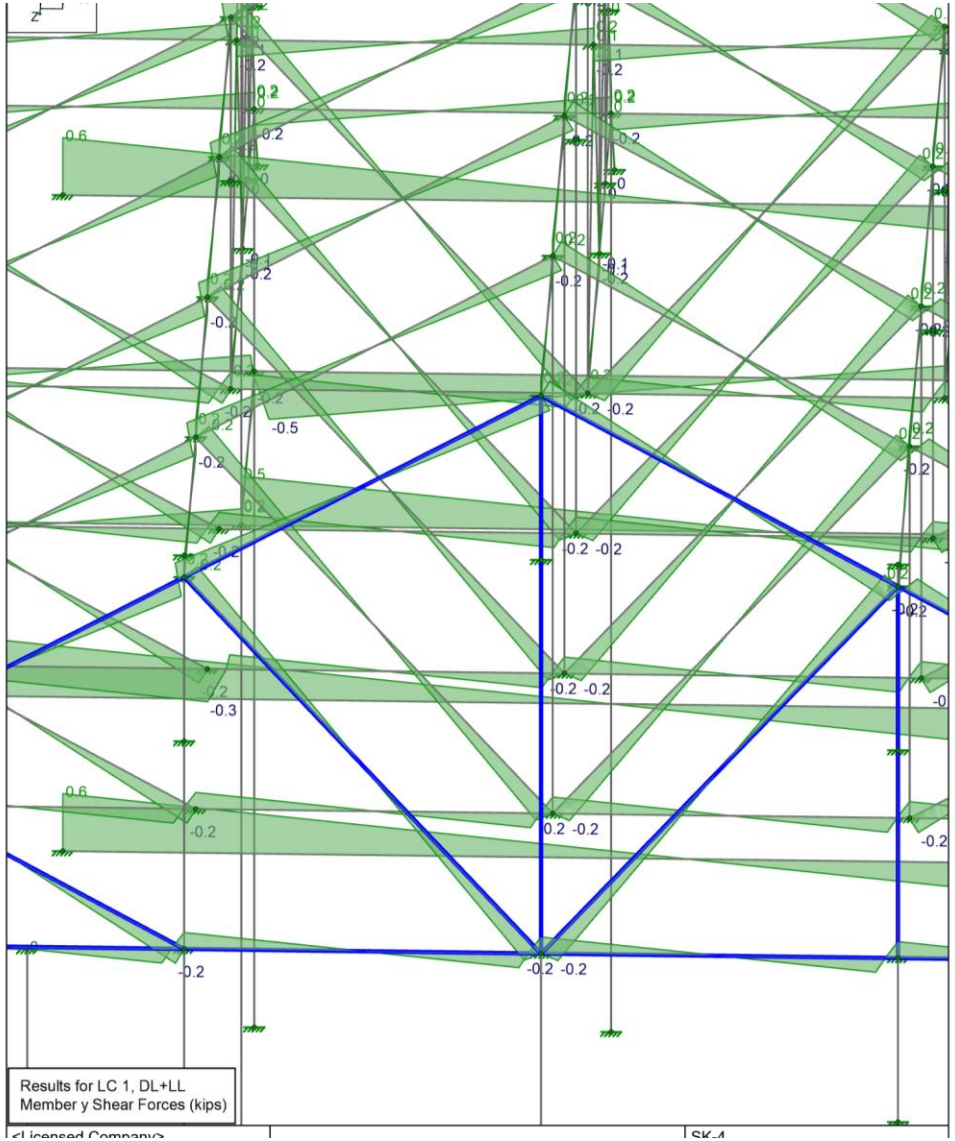
Beam (shear)



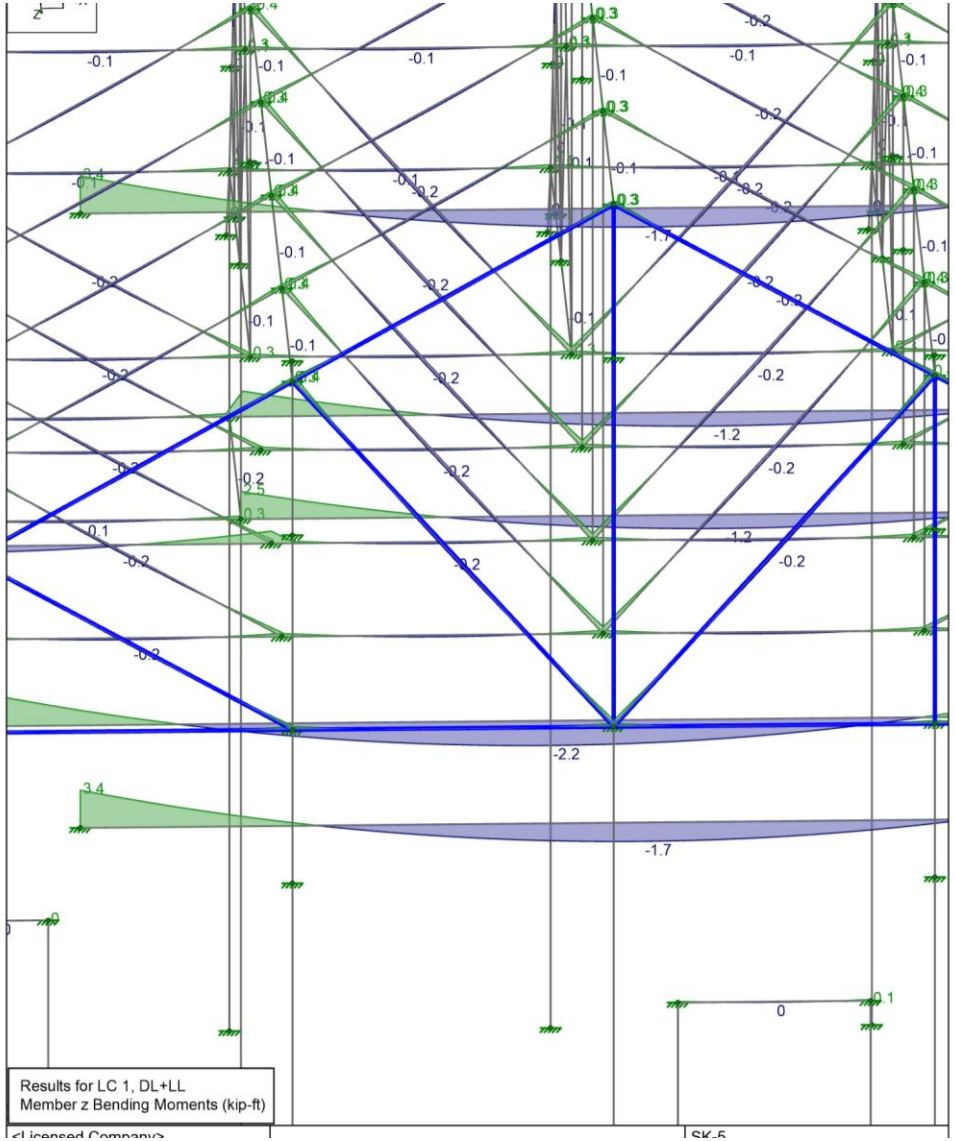
Beam (moment)



Truss (shear)



Truss (moment)



Cost analysis

- Steel is $0.40 per pound = $61,380
- The cost of wood is $9.50 per square foot = $931
- Cost of concrete is $147 per cubic yard = $720
- Total cost: $63,031

Overall

- Fairly accurate model
- Taal volcano erupted last year (2020)
- The house may no longer be standing