DESIGN REQUIREMENTS



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Problem Statement: Transporting heavy furniture up and down one flight of straight stairs is difficult and potentially dangerous.

Design Requirements:

1. Safety
   1. The system shall cause less injury and strain than an average moving job.
   2. The system shall not destructively alter the environment.
   3. The system shall not damage the furniture.
2. Function
   1. The system shall transport furniture repeatedly up or down one floor within a residential building.
   2. The system shall accommodate up to a 4-seater sofa.1
   3. The system shall accommodate up to a 5-shelf bookshelf.
   4. The system shall be reusable.
3. Interface
   1. The system shall fit within a standard stairway according to Section R311.7.1 of the 2021 International Residential Code (IRC).
   2. The system shall be transportable in the back of an average American pickup truck in addition to the transported furniture.