

## Multiple objective model datasets information

### Data required to prepare the final data sets for modeling

The following are the attributes that are required for the data preparations:

- Block id
- Arch type
- Strategy level
- Strategy cost
- Estimated households
- Number of buildings
- Year in which the buildings were built
- Median appraised value
- Percentage of black population
- Percentage of Hispanic population
- Initial functionality
- Latitude and longitude of the buildings

### Description of the final datasets

Data containing the functionality:

The following are the columns contained the dataset.

- Z – block id
- S – archetype
- K – initial strategy level
- l – direct economic loss
- $r_{ijk}$  – the “r” value associated with each building
- $Q_{t\_hat}$  – the functionality after t months from the time of disaster .
- $d_{ijk}$  – the dislocation parameter.

Data containing the strategy cost:

The following are the columns contained the dataset:

- Z – block id
- S – archetype
- K – initial strategy level
- K' – final strategy level
- Sc – Strategy cost