Background
Learn • Lead • Lift is a disaster justice pilot project lead by the City of Oakland Fire Department’s Emergency Management Services Division (EMSD). The project seeks to engage and integrate all Oakland neighborhoods in disaster planning, preparedness, and mitigation efforts regardless of social, cultural, religious, and economic status.

Through Learn • Lead • Lift, the City is focused on building effective coordination and fostering working relationships with community resources in order to increase disaster readiness.

Oakland, CA is at risk for a series of disasters, including earthquakes, floods, and fires. This vulnerability analysis focuses on the city’s present danger of a major earthquake.

The spatial questions at play in the investigation look to see how social factors interact with the built environment to produce a vulnerable zone during a natural disaster.

The maps presented demonstrate vulnerability through a series of variables including:
- Physical Vulnerability
- Vulnerability with the inclusion of resource accessibility
- Vulnerability including resource accessibility and social vulnerability

Methodology
In order to produce a map of vulnerability within Oakland, one must analyze a series of variables. As noted, the variables included within the presented maps are within three main categories of vulnerability:

Each variable has been assigned a classification from 1 – 6, with 1 standing as the least vulnerable and 6 as the most vulnerable. All variable were summed to create a comprehensive vulnerability score, with a maximum vulnerability score of 51.

Results
The maps presented show high physical vulnerability within the Oakland hills. Resource availability alleviates vulnerability within East and Downtown Oakland. However, with the addition of social variables that take into account population density and vulnerable age densities, vulnerability increases strongly in East, Southeast, and Downtown Oakland.

2010 Census Data, used to project median yearly income, reveals a high percentage of Oakland’s low-income residents inhabiting the higher vulnerability zones of the city.

These maps provide a basic outline of the City of Oakland’s vulnerability in the event of a major earthquake.

As shown in the following map, the focus neighborhoods of Learn • Lead • Lift are located within fairly vulnerable regions of the city.

These maps demonstrate the importance of the Learn • Lead • Lift’s goal of working directly with the community to prepare for disaster.

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Data Sources: City of Oakland, California Department of Conservation, USGS, Census 2010