

Urban Change Equity in the Portland Metro from 2014 to 2019

What areas have experienced the most urban change?

Looking at the Metro Region as a whole, there are different types of urban change occurring. At the west edges of the region there is heavy suburban expansion and heavy urban renewal in downtown Portland. There is moderate suburban growth throughout the west and in the southeast of the region. There is a large area with a lack of urban change in the east side of the region.

Looking at the City of Portland alone, there is heavy change in the city center and moderate change just east and south of the city center. There is a lack of change in the far east and north of the city.

How does socioeconomic risk correlate with urban change?

Throughout the region and the City of Portland, there is less urban change in areas with people who have a higher socioeconomic risk. This is especially true in the far east and north areas of the city and more moderately in the west side of the Metro Region. This disparity shows that investments are more likely to be made in areas with lower risk populations who are likely to have more wealth to spend on newer housing or higher cost businesses.

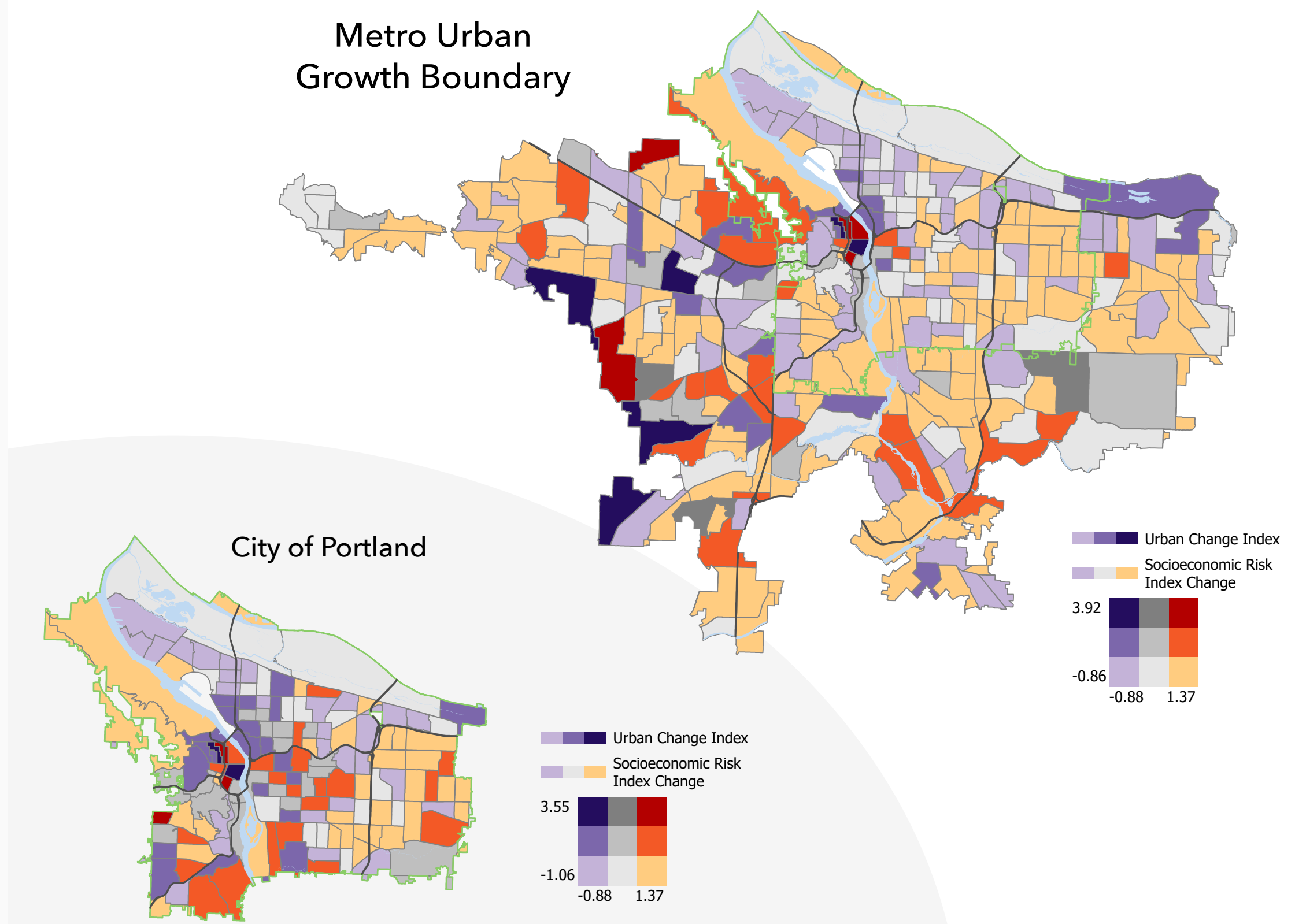
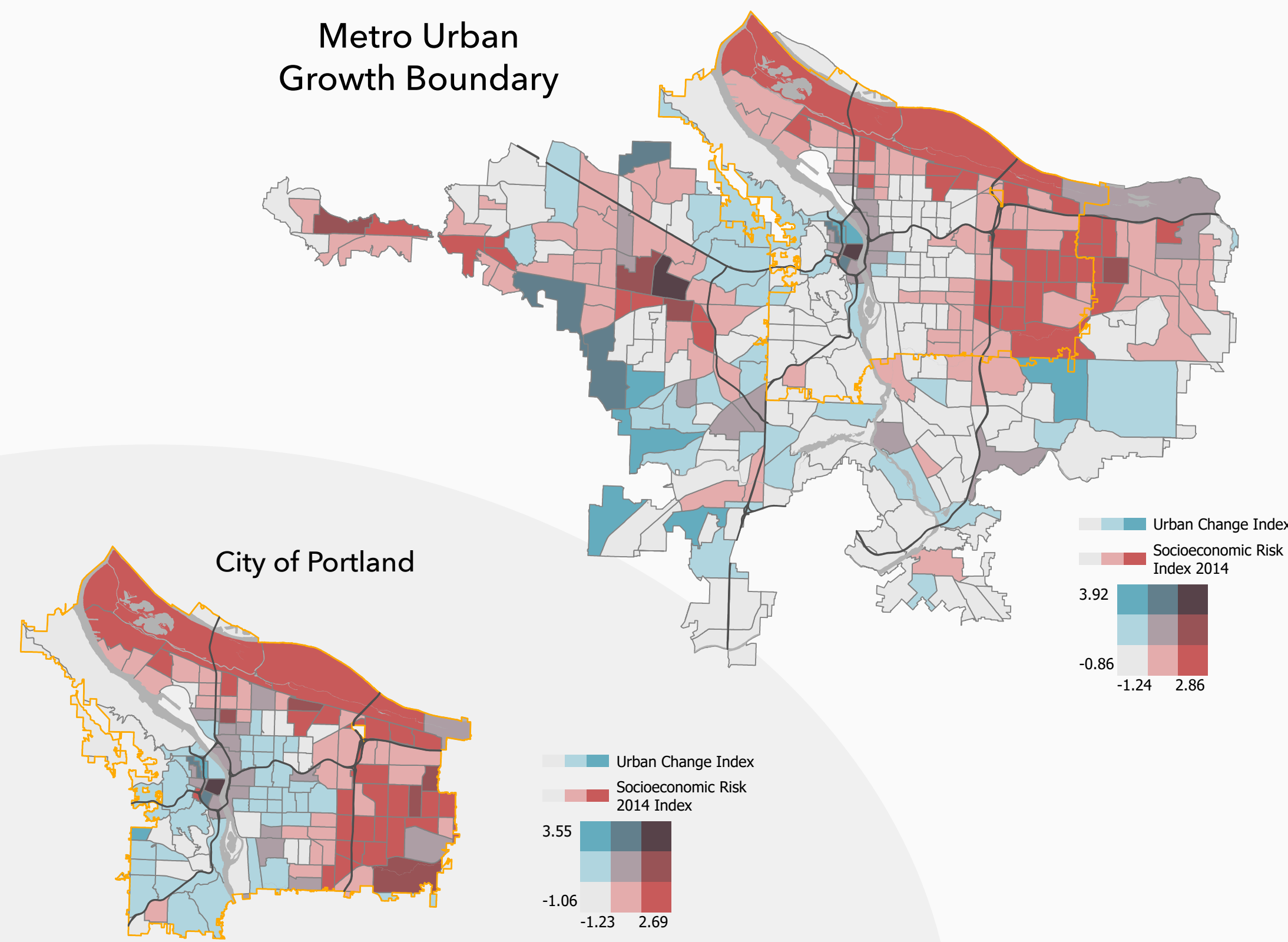
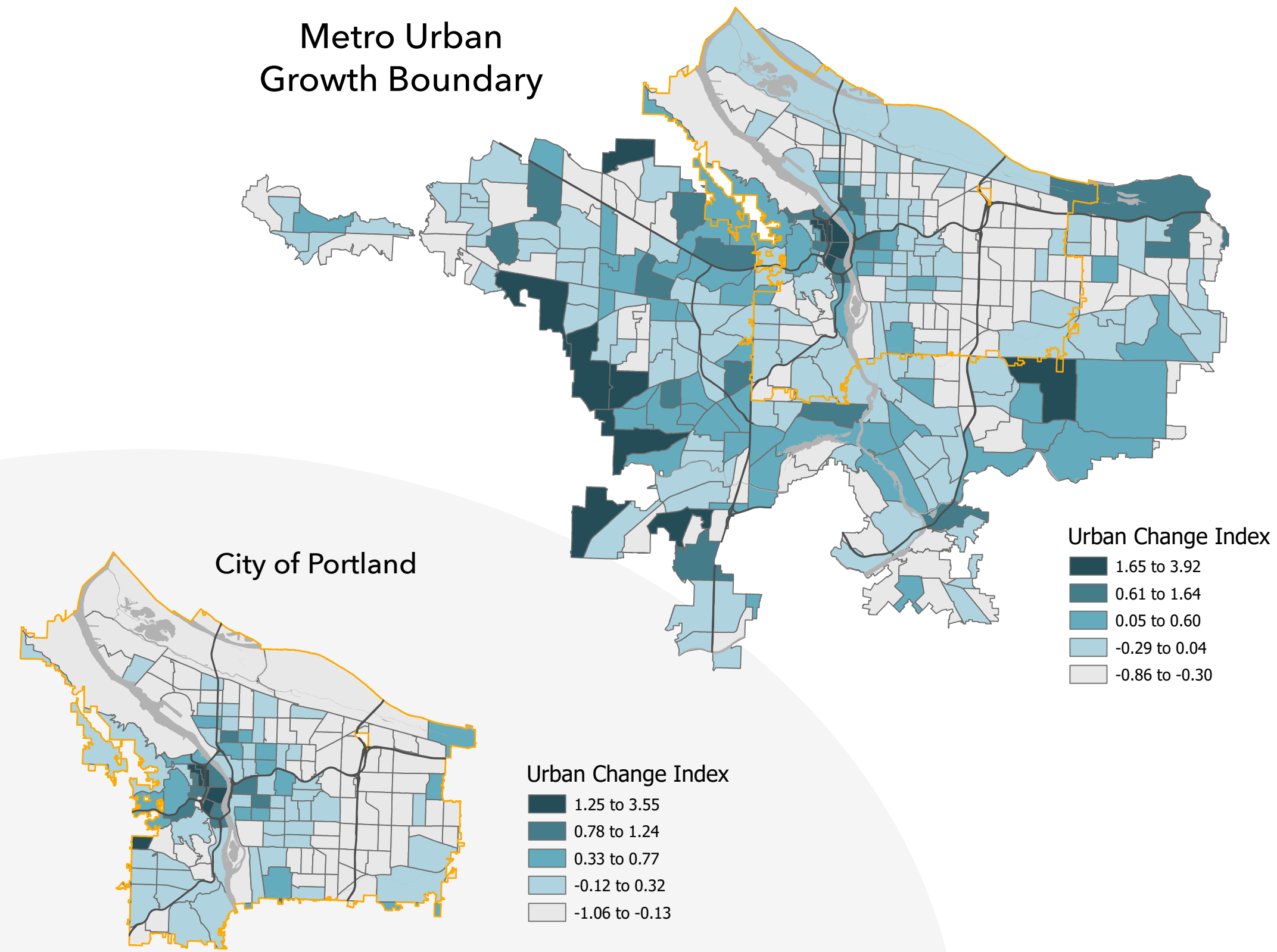
Areas of exception include the City of Portland downtown, where there is generally a high amount of change with high socioeconomic risk at the core. Also, in the west of the Metro Region near Beaverton there is an area with high change and socioeconomic risk where the Nike World Campus was undergoing a large construction project during the time.

How does urban change affect change in socioeconomic risk?

Throughout the region and the City of Portland, there is less of a correlation between the urban change and socioeconomic risk as there are areas of high change that had an increase, little change, or decrease in socioeconomic risk. Even areas where there is little urban change have a variance of socioeconomic risk change.

Looking at the City of Portland there is an increase in socioeconomic risk in the far east where risk was already high, and a general decrease in risk in areas that were lower, showing a trend in socioeconomic disparity in the area.

Without a clear correlation between the two, there are likely other factors in these areas that contribute to the change in socioeconomic risk, such as the type of housing changes.



Methods

Utilizing highest hit and bare earth raster models derived from aerially collected lidar point clouds, changes in buildings and tree canopy were calculated to determine urban change per census tract. Urban change is then compared to socioeconomic risk in these areas to explore the equity of urban change throughout the region.

To calculate absolute total building height, tree canopy was erased to isolate buildings, building change was calculated, areas of change from each year were extracted, and then added together to represent the absolute change of buildings being removed and reconstructed.

Urban Change Index
Absolute Total Building Change
Tree Canopy Loss

Socioeconomic Risk Index
Percent in Poverty
Percent with Less than High School Education
Percent People of Color

Per Census Tract 2010

