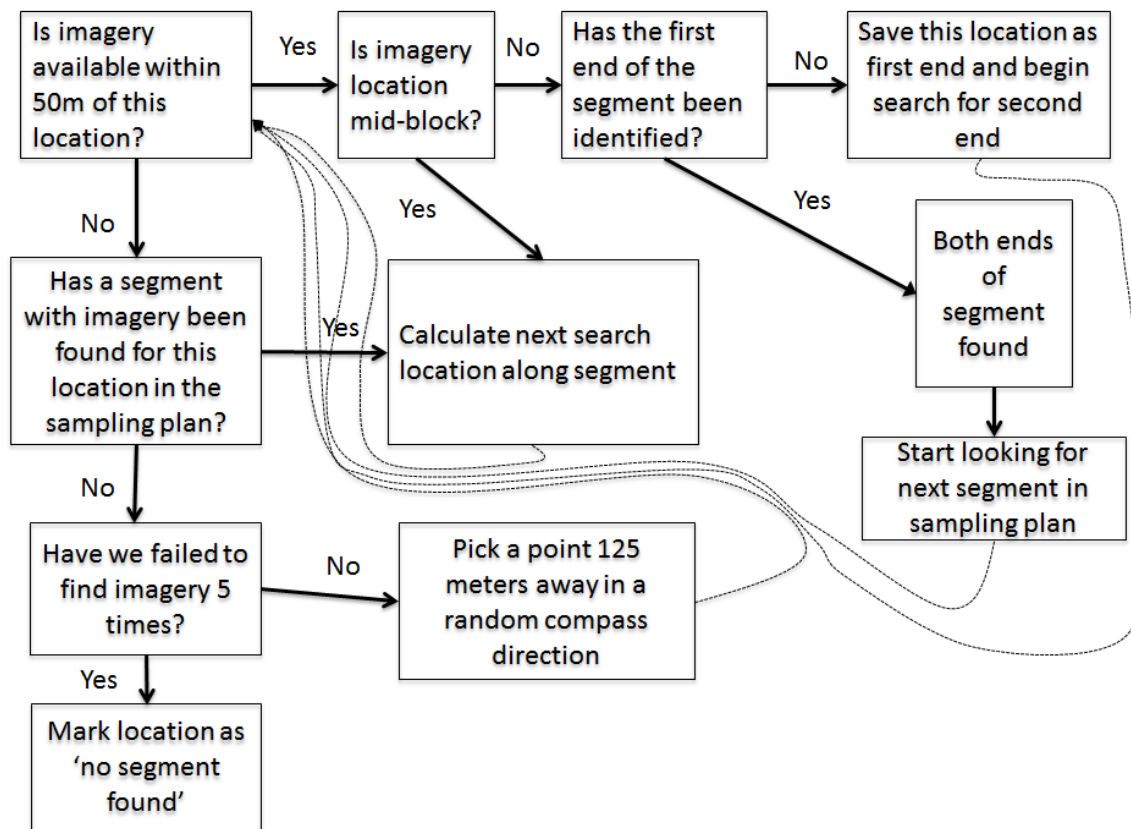
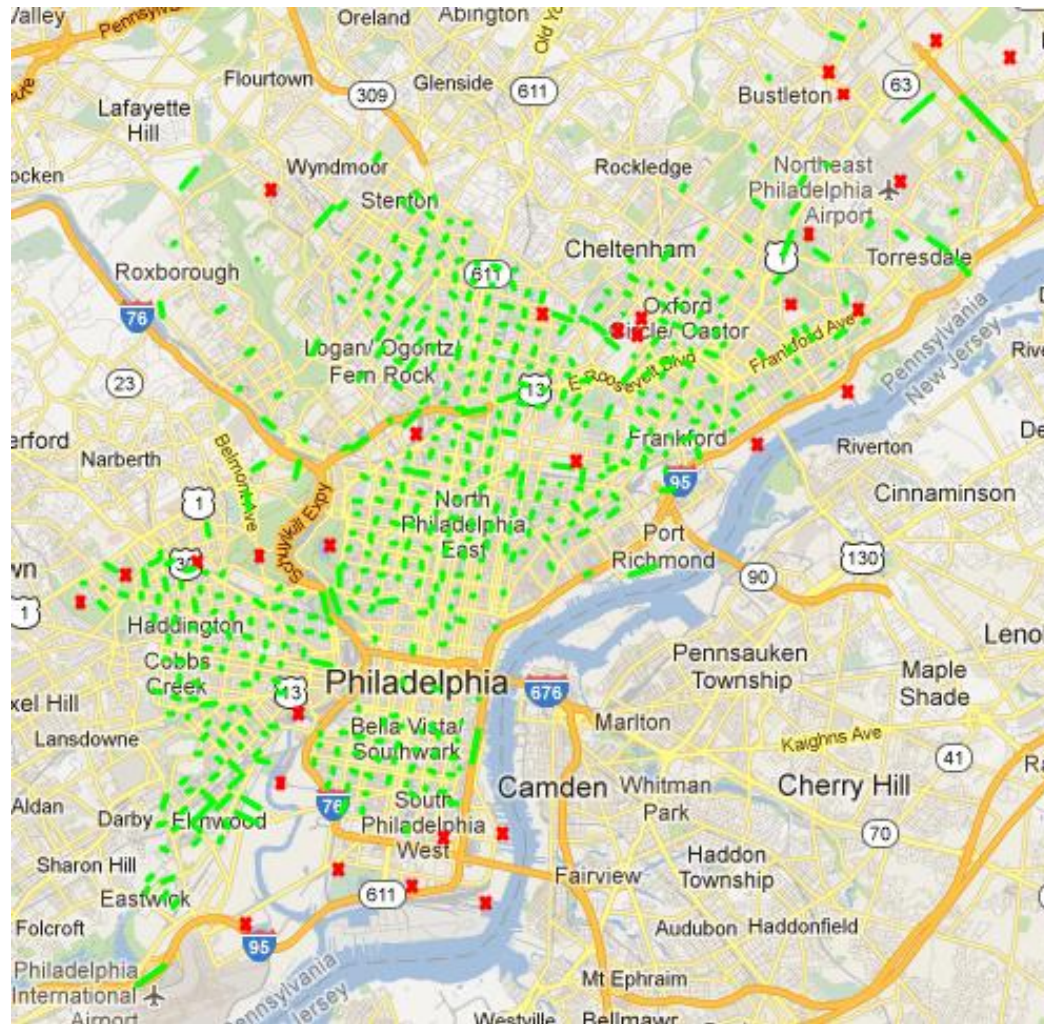


Web Figure 1: More details of the auto-sampler. The 1 km grid sample and 0.5 km grid oversample across each city resulted in 2,060 locations across the four cities selected for audit. The CANVAS “Auto-Sampler” feature was used to identify street segments within 50 meters of each sample grid point for which Google Street View imagery was available; if no imagery was available at the selected sample point, the Auto-Sampler tested up to five random locations 125 meters away for available imagery. For the first location for which imagery was found, the Auto-Sampler randomly selected a block face (i.e. one side of one street segment) and found the start and end points of the street segment by searching for intersections. If no imagery was found after testing five points, no street was selected for the sampled location. In some cases, start or end locations selected by the Auto-Sampler were mid-block; in these cases, the segment was adjusted to the end of the block manually using a Street View control embedded in the CANVAS interface. Additionally, when auditors were trained to report when imagery selected was on a limited-access highway; in such cases, a nearby segment was selected by searching manually in a random direction. Approximately 8% of segments required such manual adjustment.



Web Figure 2: Locations assessed for Google Street View coverage and block faces selected for audit for Philadelphia, PA. A red X indicates a location where no viewable block faces were found within 0.25 meters of the sampled point, and green lines indicate the block faces selected.



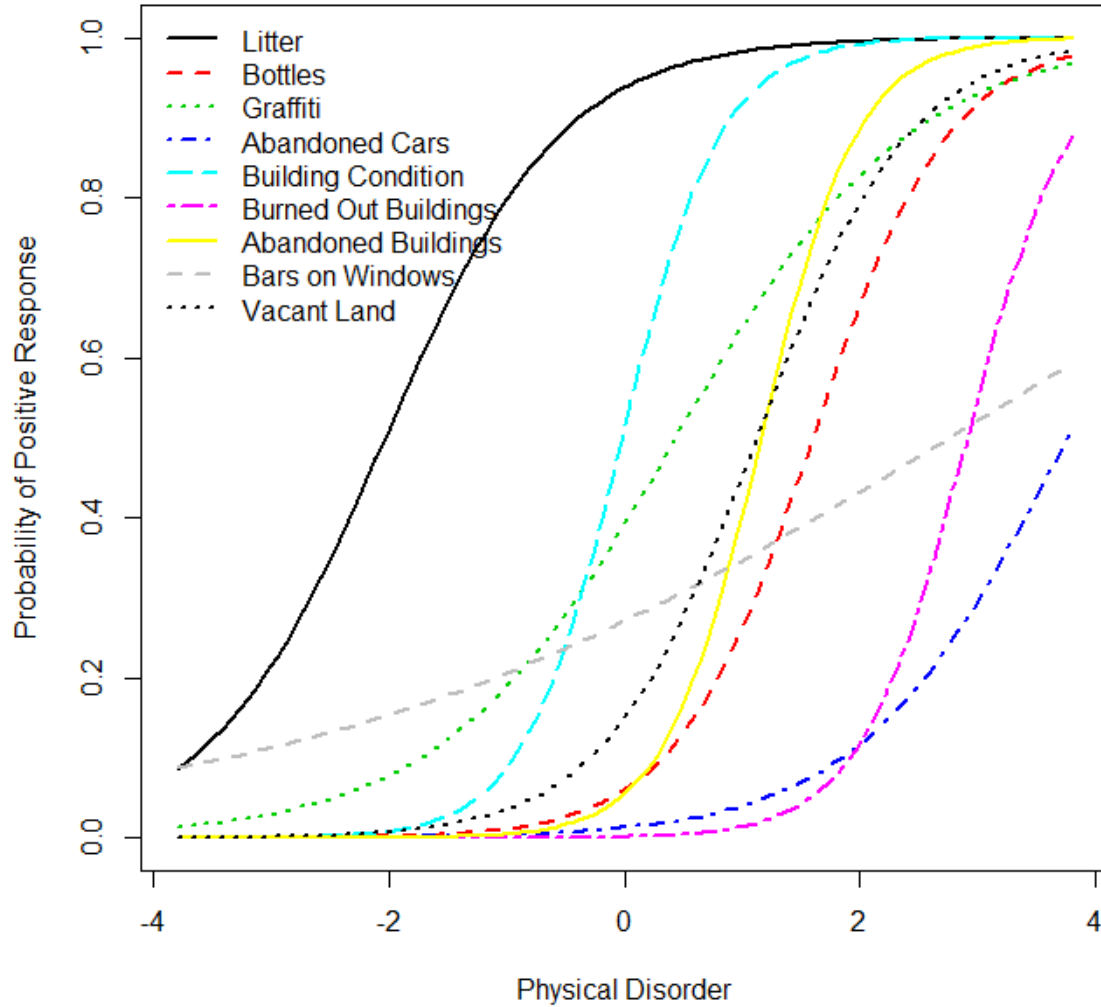
Map data copyright 2012 Google

Web Table 1: Virtual audit items inter-rater reliability scores stratified by camera imagery

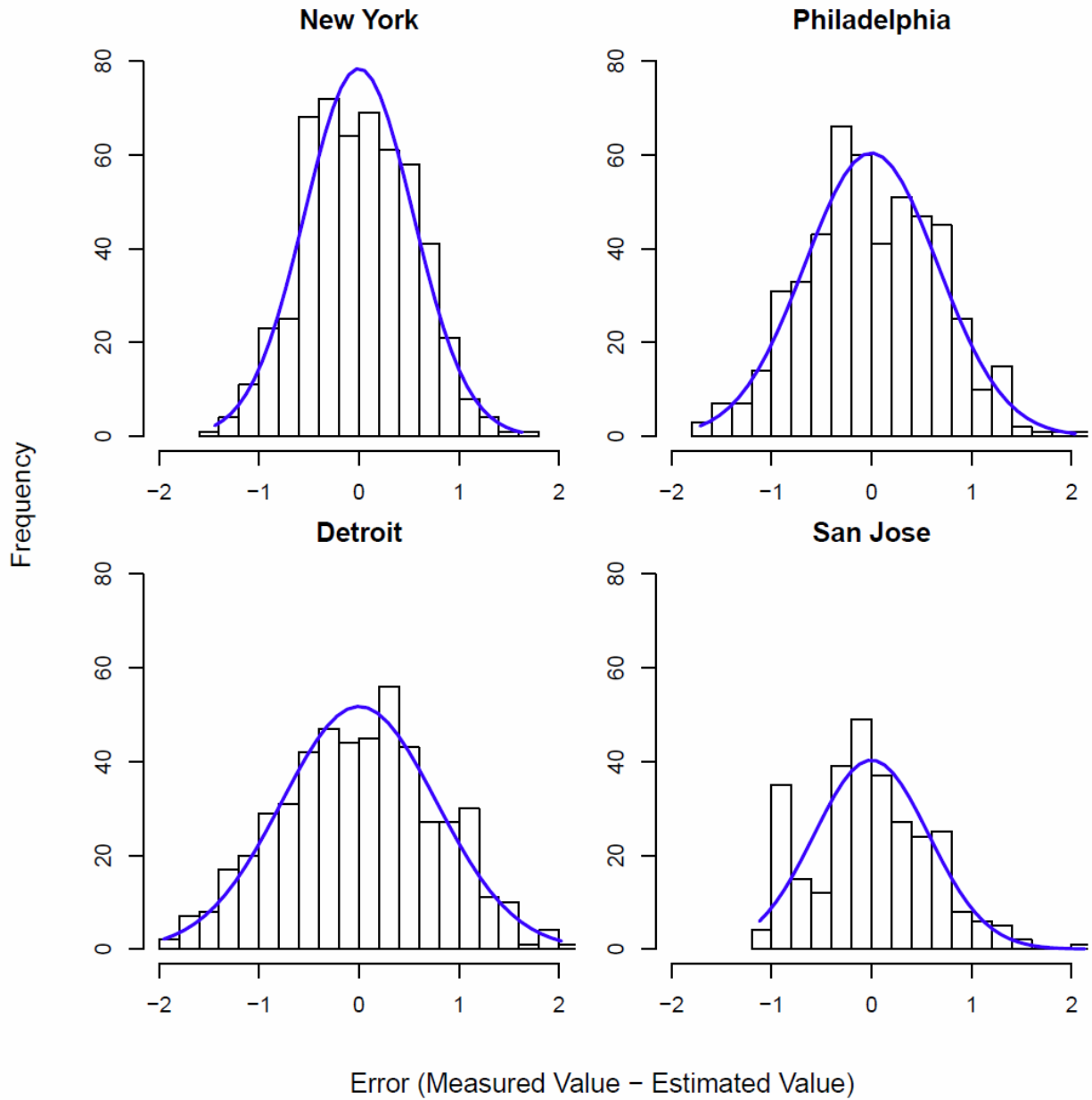
Question ID, Including Source	Average Pairwise K on Block Faces With Lower-Resolution Camera Imagery	Average Pairwise K on Block Faces With Higher- Resolution Camera Imagery	% of Pairs With Higher-Resolution Camera Imagery (N)
PHDCN.1	0.34	0.41	71.5% (378)
PHDCN.2	0.77	0.49	73.7% (356)
PHDCN.3	0.62	0.48	73.7% (379)
PHDCN.4	0.81	0.68	71.5% (384)
PHDCN.5	0.56	0.52	73.6% (384)
PHDCN.6	1.00	0.74	70.6% (368)
PHDCN.7	0.86	0.80	70.6% (368)
PEDS.1.7	0.57	0.51	73.0% (373)
IMI.130	0.67	0.53	71.5% (384)

Abbreviations: PHDCN, Project on Human Development in Chicago Neighborhoods, IMI, Irvine-Minnesota Inventory; PEDS, Pedestrian Environment Data Scan.

Web Figure 3: Item characteristic curves (ICCs) for items used to create ecometric scale. The X axis represents a latent level of physical disorder and the Y axis represents the modeled probability that virtual audit of a block face with that latent level of disorder would result in a value indicating the presence of disorder.



Web Figure 4. Histogram of error between kriged and measured values of physical disorder in leave-one-out cross-validation in the four sampled cities



Web Figure 5: Scatterplots of average level of physical disorder in a census tract in nine conditional realizations as related to US Census estimates of housing vacancy rates, Philadelphia, PA

