

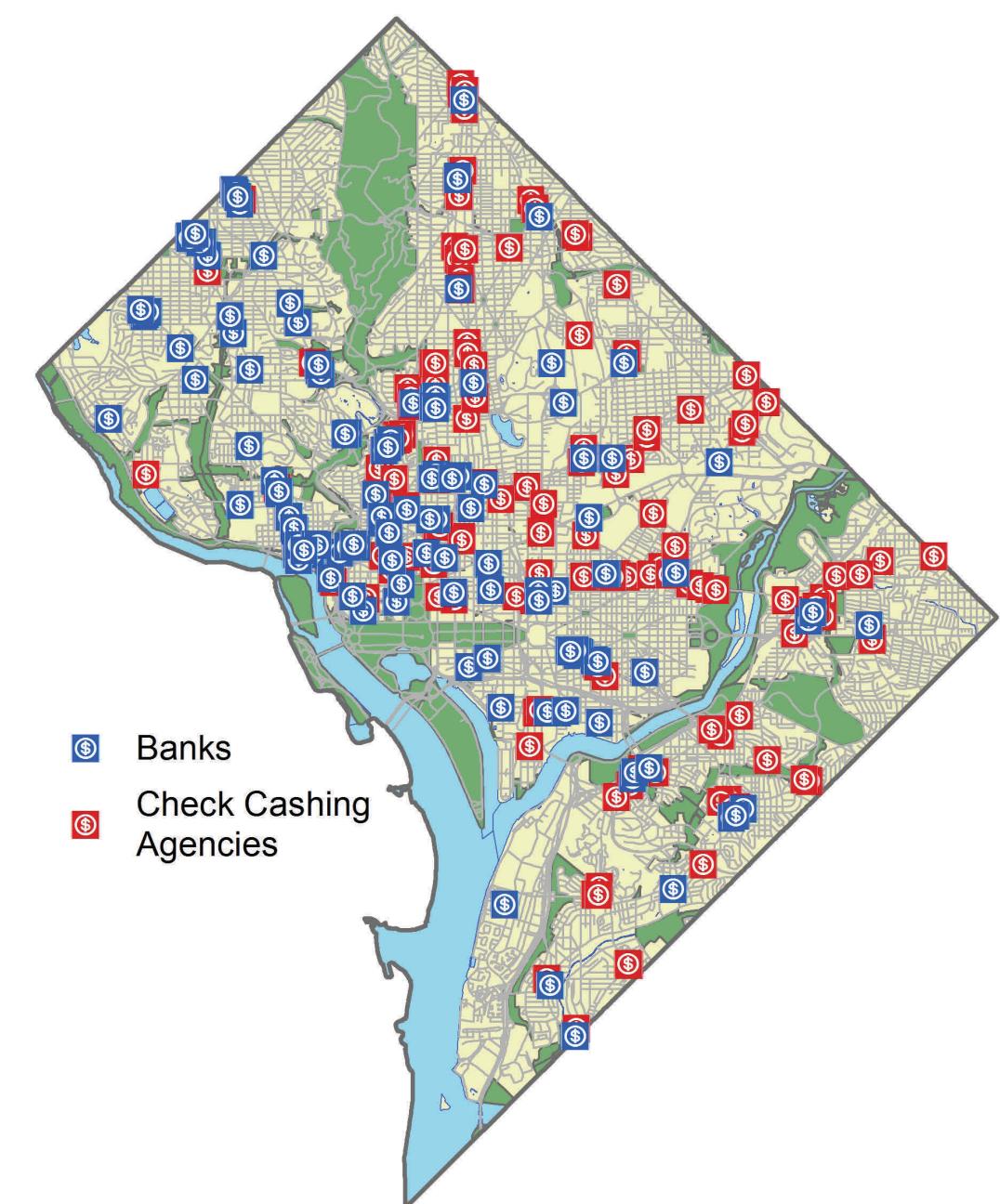
Urban Immigrant Access to Mainstream Finance

Modeling Conversions of Check Cashing Agencies to Banks in Northeast Washington, D.C.

BACKGROUND

Immigrant communities in the United States typically lack access to mainstream financial resources, most notably retail banks. Many immigrants instead rely heavily on the alternative financial sector for services such as cashing checks and sending remittances. This typically occurs in establishments such as check cashing agencies, now ubiquitous in urban lower-income communities.

Immigrants are less likely to have checking and savings accounts compared to the native-born, even with socioeconomic factors accounted for. This limited relationship immigrants have with mainstream, formal economic resources has a significant impact on their communities in that it imposes a high cost on basic transactions, creates barriers to homeownership, reduces opportunities for retirement planning, and interferes with the ability of small businesses to develop and grow.

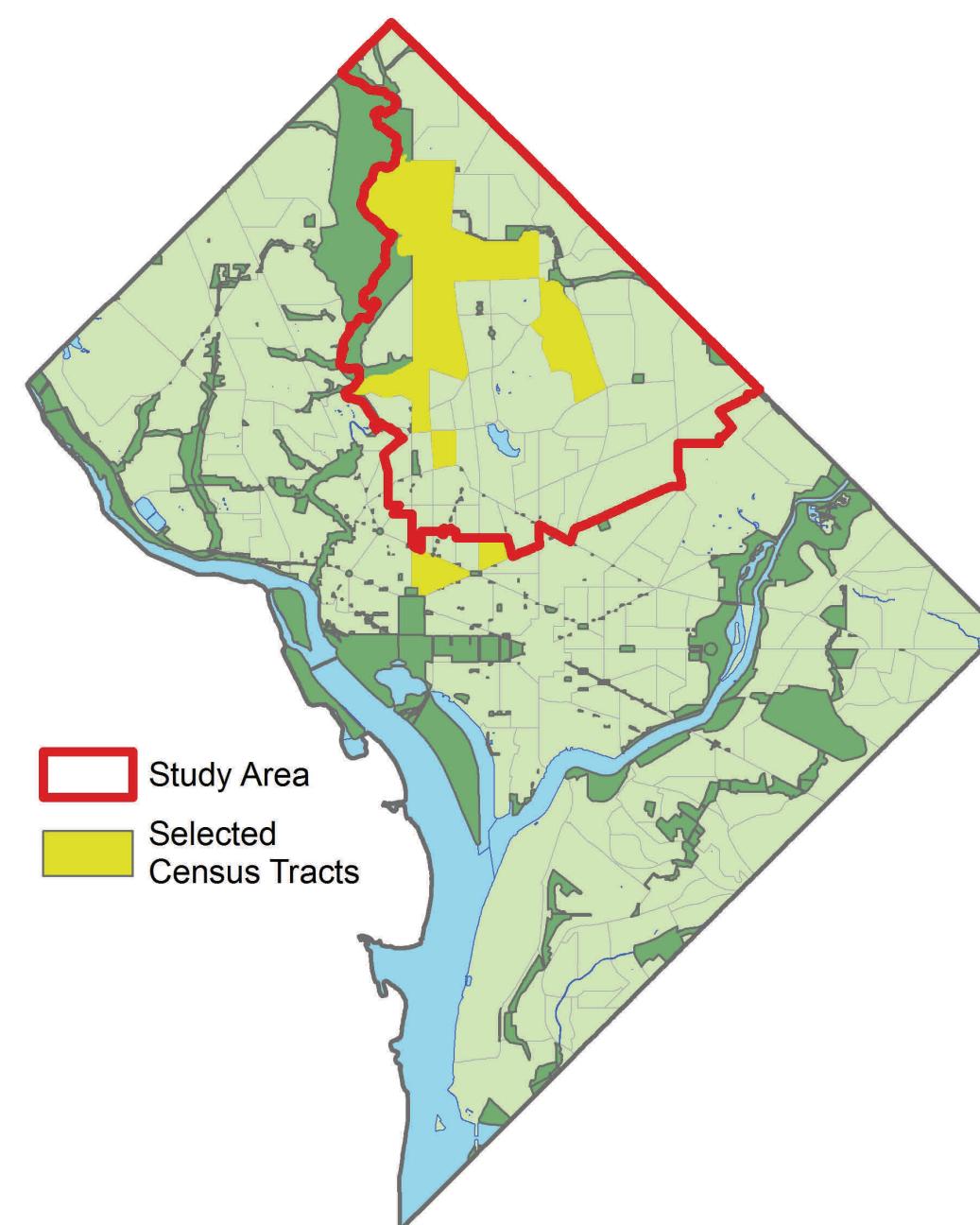


LOCATION

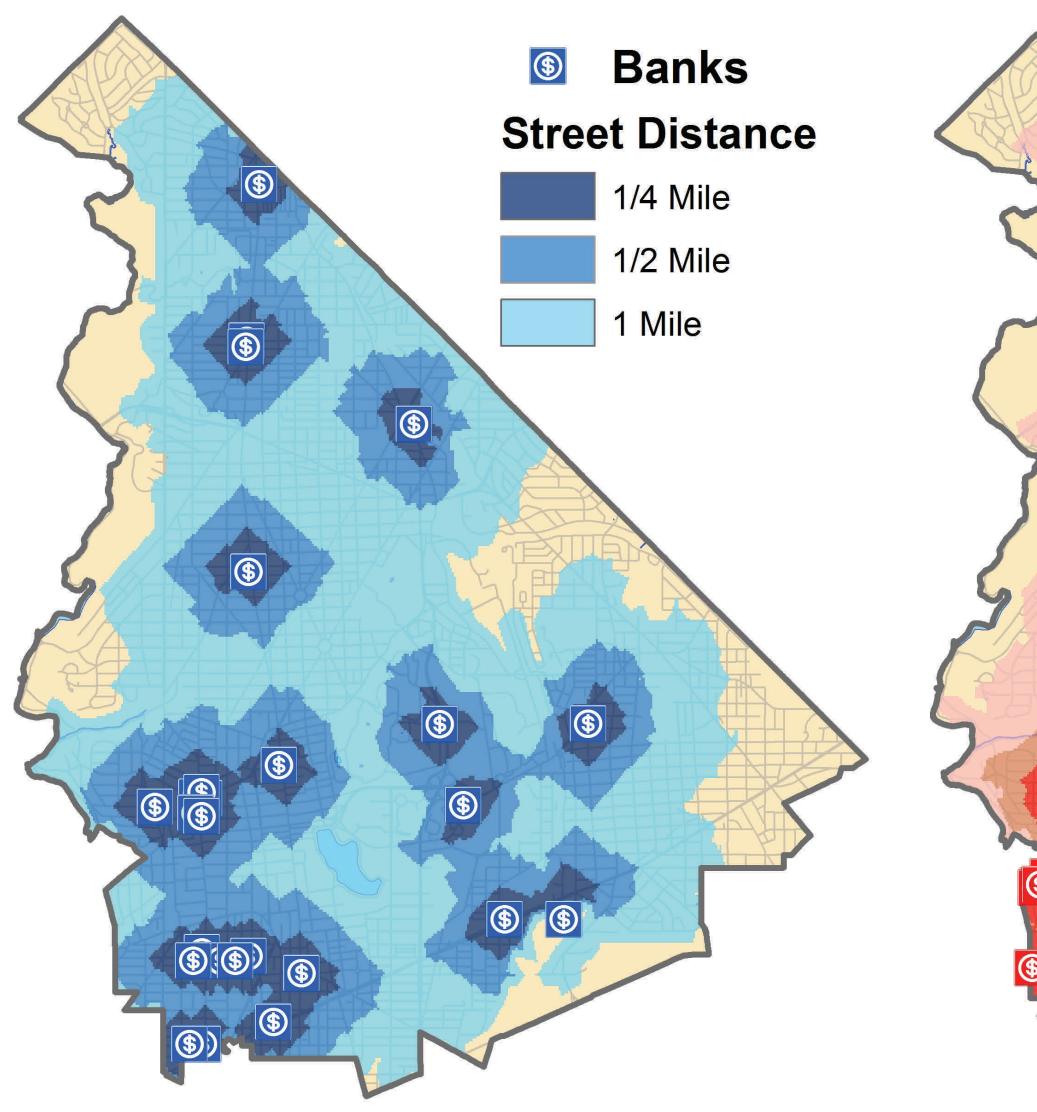
Like many urban metropolitan areas, Washington, DC is a gateway into the United States for a number of immigrant groups. In 2006, one in five people in metropolitan Washington were immigrants, and the foreign-born accounts for 18% of the district's workforce. In addition, Washington, D.C. is a city very divided along race, class, and income lines. This is evident in the difference in densities of banks and check cashing agencies on either side of the city, seen above.

SITE SELECTION

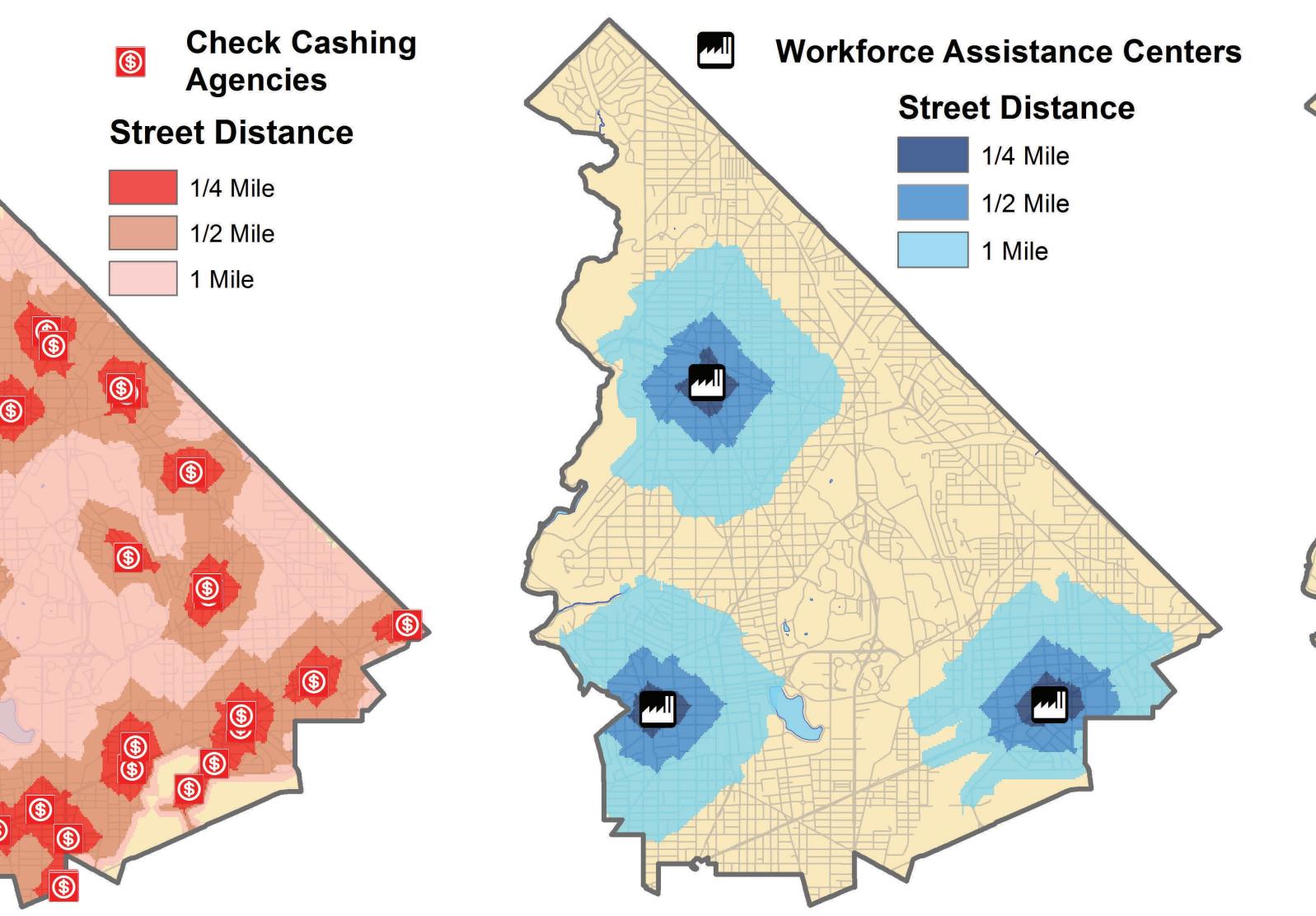
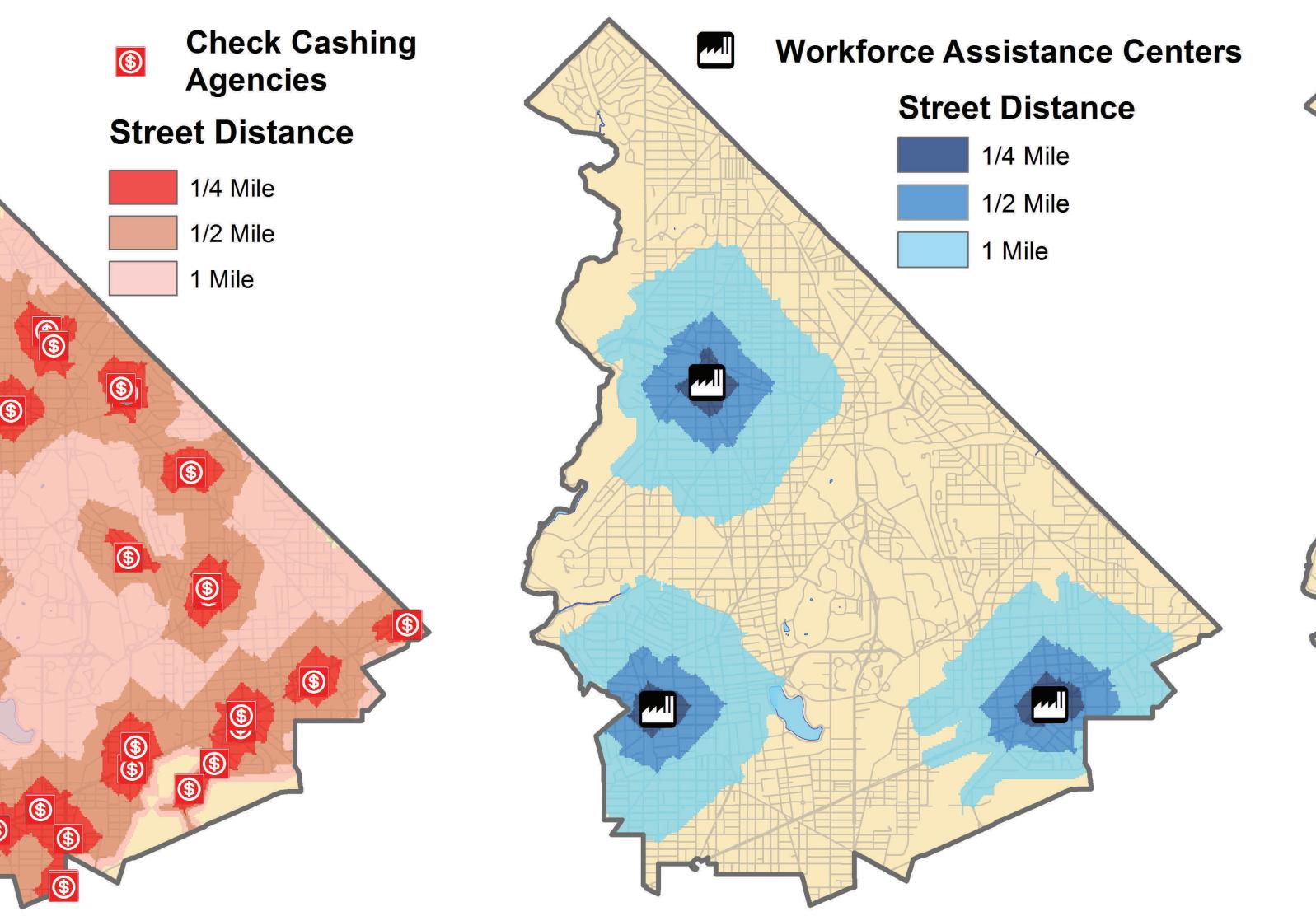
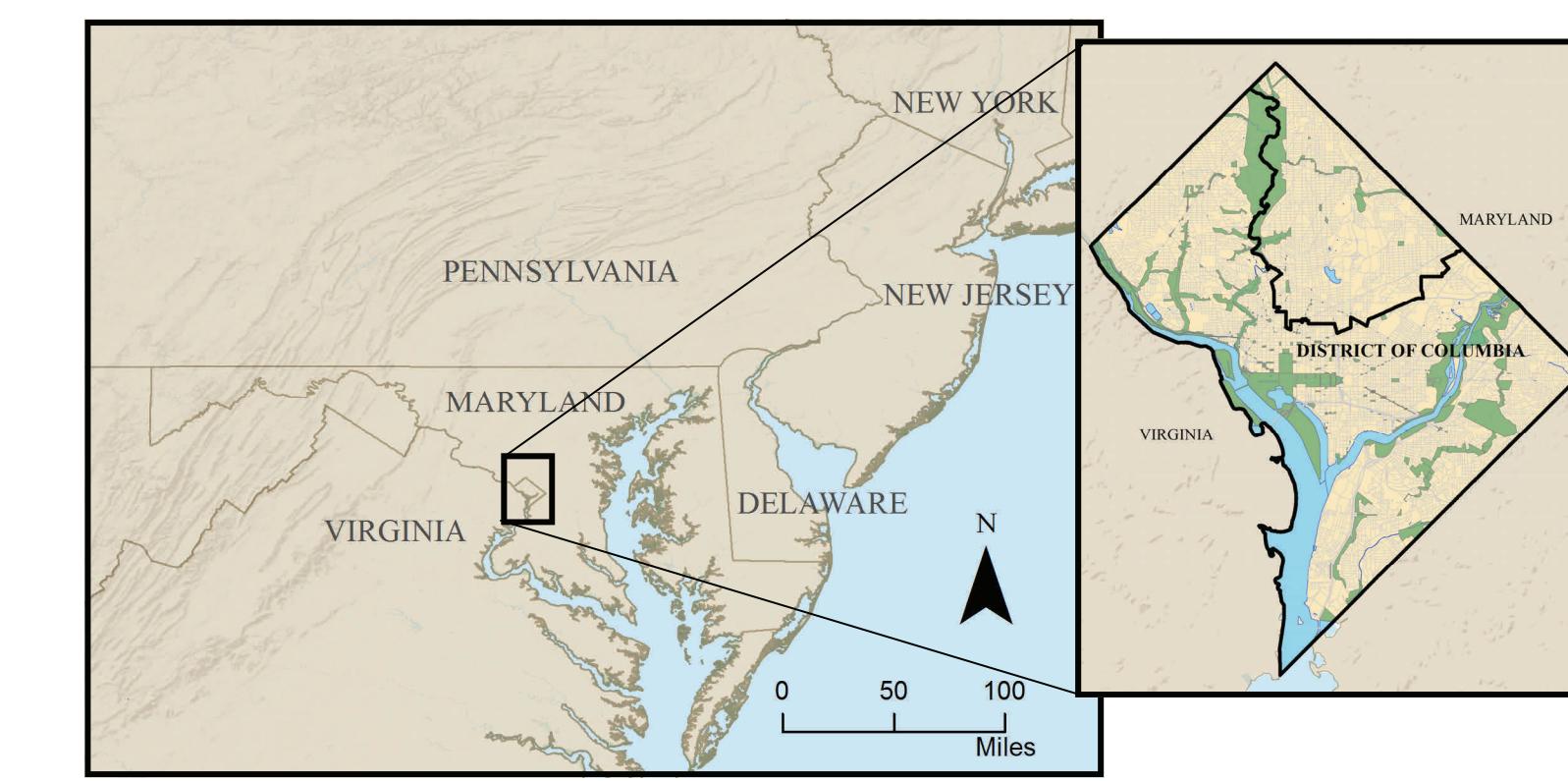
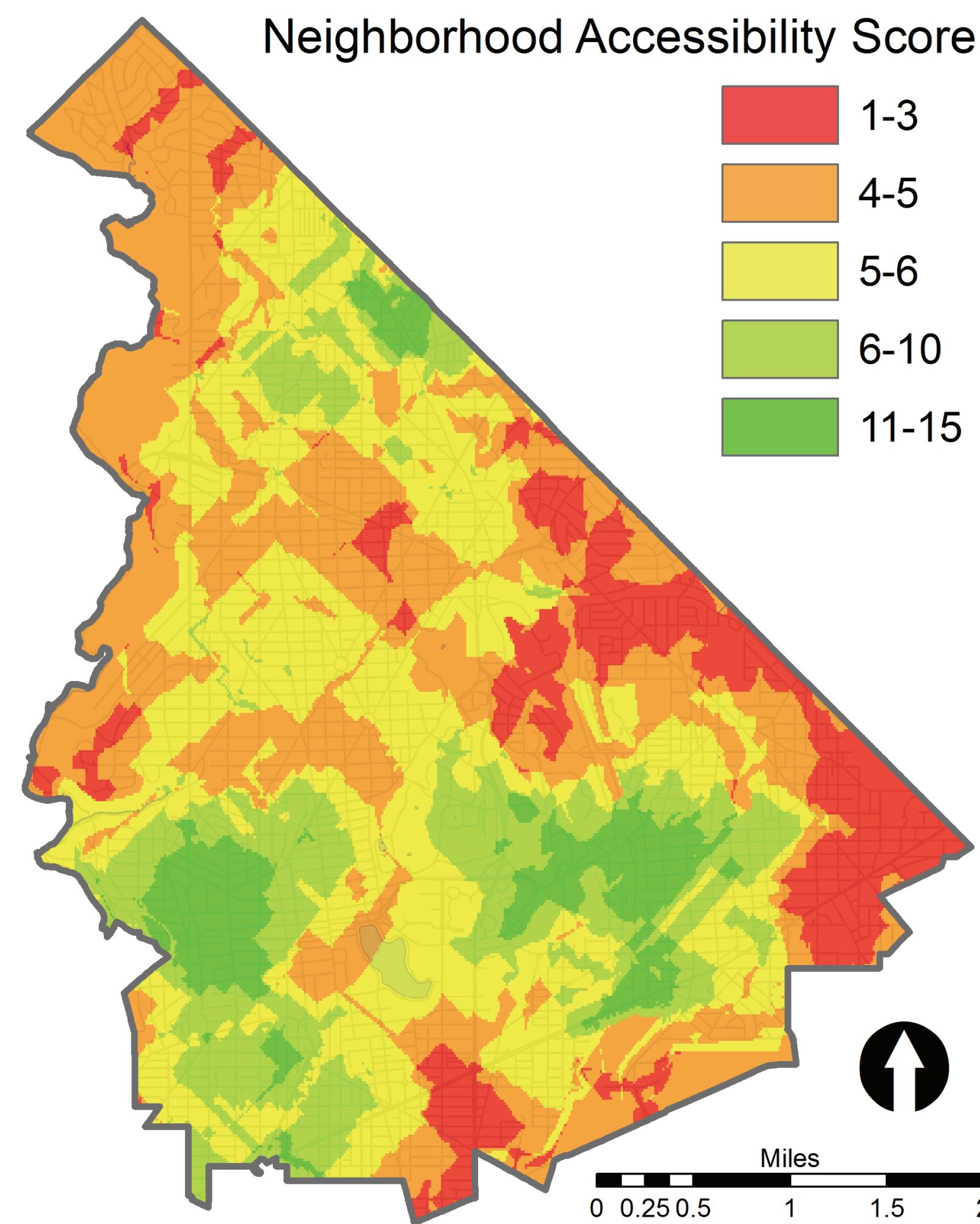
The Northeastern quadrant of the district was selected for analysis given its intersection of an immigrant population and lower incomes relative to the city. This was found by finding the intersection of two layers: one created from census tracts above the 75th percentile in immigrant population, and another created of census tracts under the 50th percentile in income. The resulting intersection is labeled in the map below as "Selected Census Tracts."



The goal of the analysis was twofold: first, to perform a raster analysis of Northeast Washington to determine the areas with the greatest and least immigrant accessibility to mainstream financial resources, and second, to highlight specific check cashing agency locations that, if converted to banks, would serve the largest proportion of the underserved population. This second part of the analysis was performed using a Network Analyst location-allocation model.

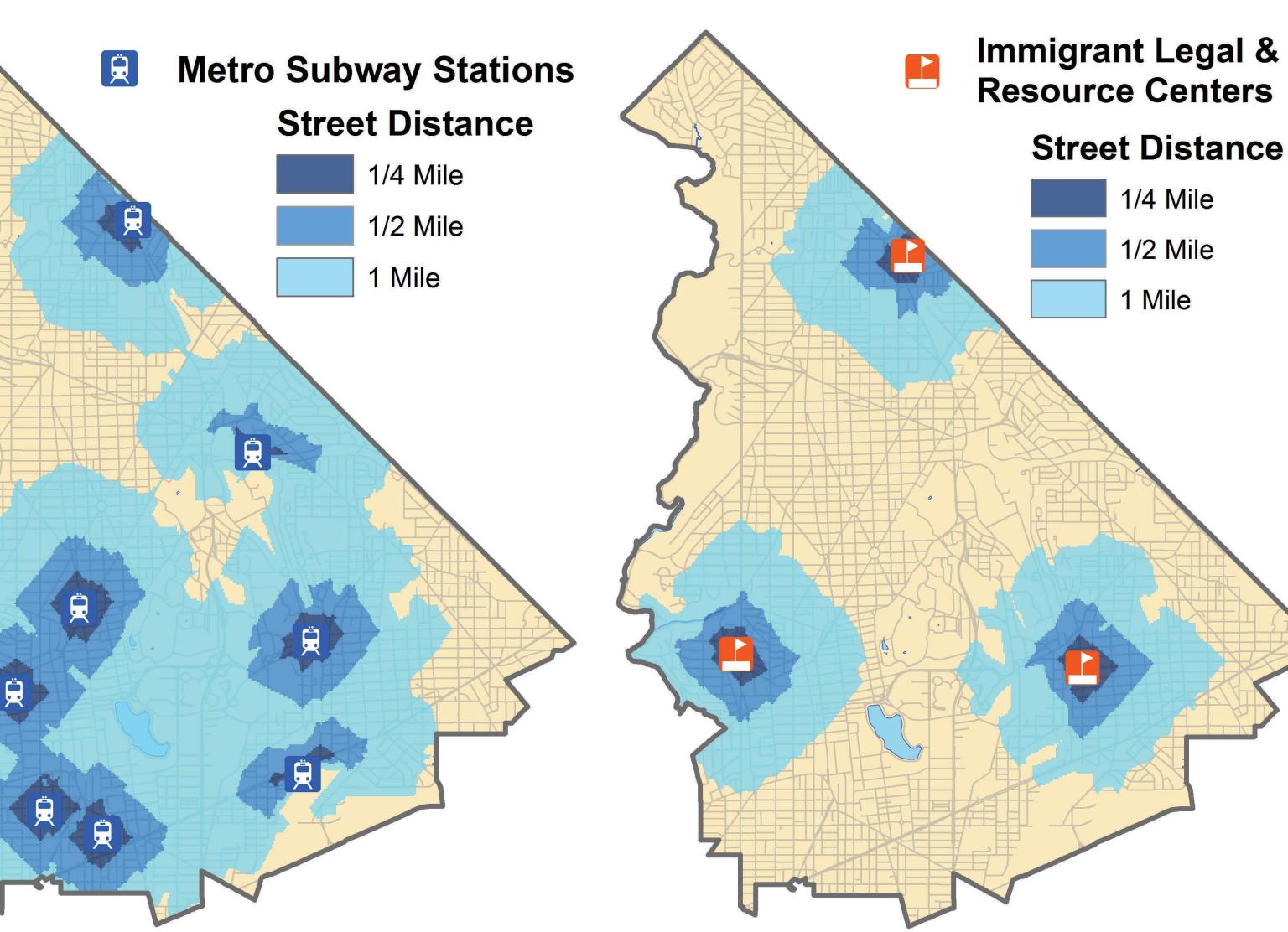
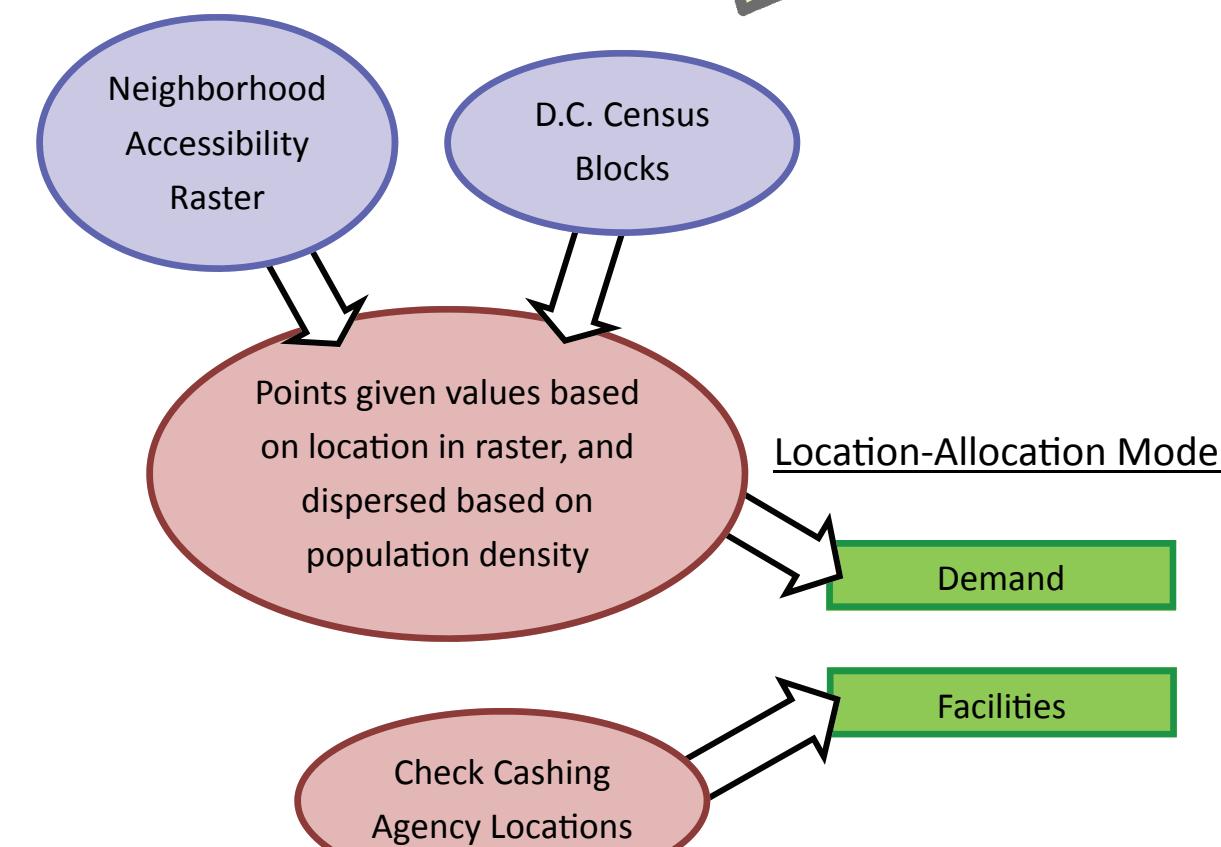
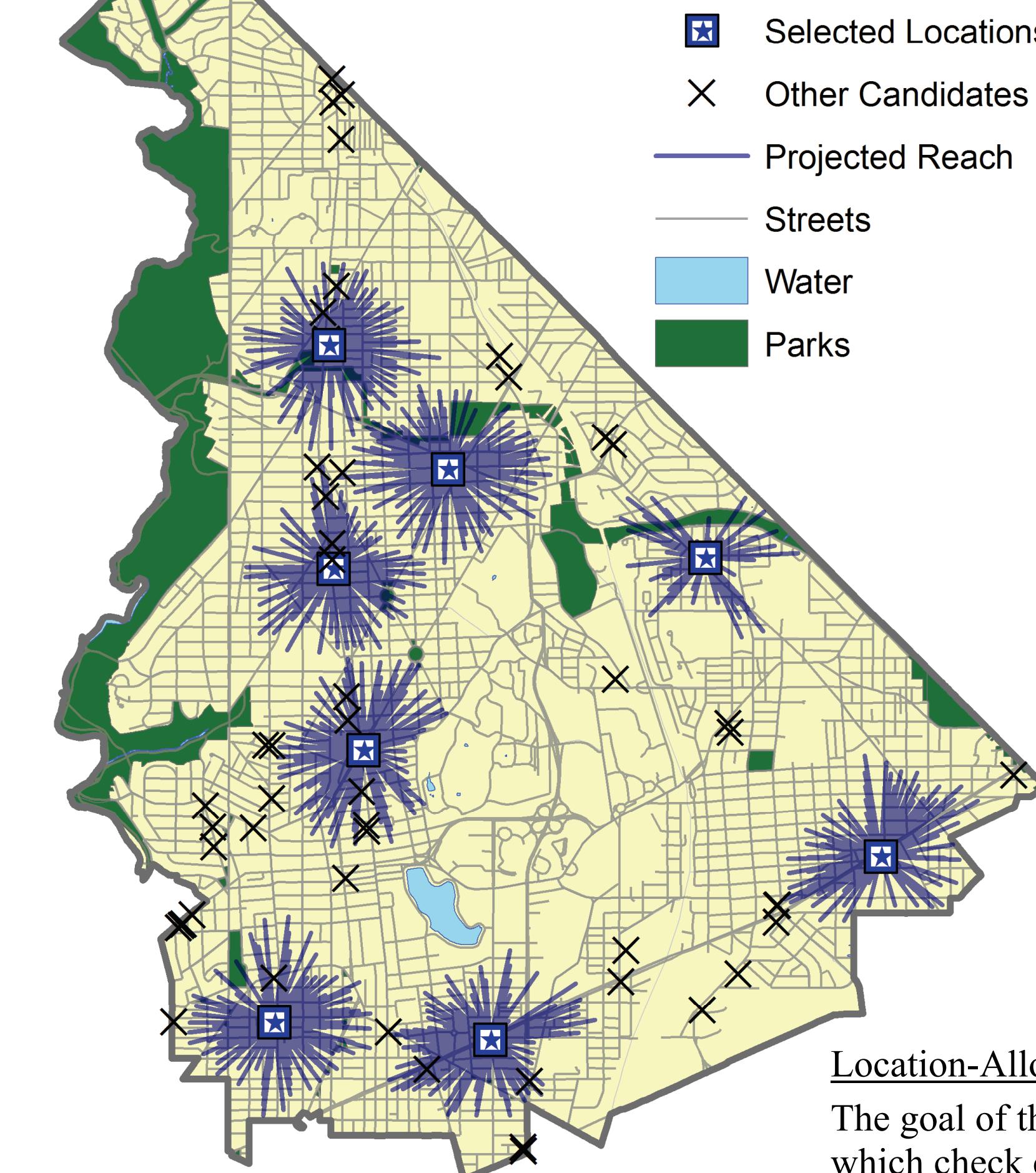


FINAL RASTER



ALLOCATION MODEL

Check Cashing Agencies to be Converted to Banks



METHODOLOGY

Raster Analysis

First, point data was acquired for factors both directly and indirectly related to immigrant accessibility to mainstream finance. The direct factors were locations of banks and locations of check cashing agencies. The indirect factors were locations of Metro subway stops, locations of workforce centers, and locations of legal and assistance centers for immigrants. As lower-income immigrants typically rely on amenities within walking distance and on public transportation networks, distance to each factor was evaluated using Network Analyst, with all roads included in the network. Three sets of distance polygons were created for each factor, displaying $\frac{1}{4}$ mile, $\frac{1}{2}$ mile, and 1 mile street distance from each. These polygons were converted to rasters, reclassified to simple integers, and combined using Raster Calculator to create the final raster with relative neighborhood accessibility scores of 1-15. Banks added the greatest value, the indirect factors added smaller value, and the check cashing agencies reduced value.

Location-Allocation Model

The goal of the Location-Allocation model was to determine which check cashing agencies, if converted to mainstream financial institutions (i.e. banks), would be most efficient based on the raster analysis and population density. Essentially, the allocation model was designed such that demand is *dispersed* by density, and *weighted* by necessity (displayed in the diagram to the left). This was accomplished by first converting the census blocks vector layer to point data, such that the points are spatially distributed based on density. Then, the **Extract Values to Points** tool was used to give the points values based on their location on the Final Raster. These points were then used as the demand points for the network analysis, while the locations of check cashing agencies were used as the facilities. The problem type selected was "Maximize Coverage," using 8 facil-

ties and an impedance cutoff of 900. The GIS highlighted the best 8 locations to convert to banks given the density and necessity of the area.

Cartographer: Benjamin Silverstein
Data Sources: D.C. GIS Data Catalog, 2006-2011;
U.S. Census, 2010
Projection: NAD_1983_StatePlane_Maryland_FIPS_1900
April 29, 2013