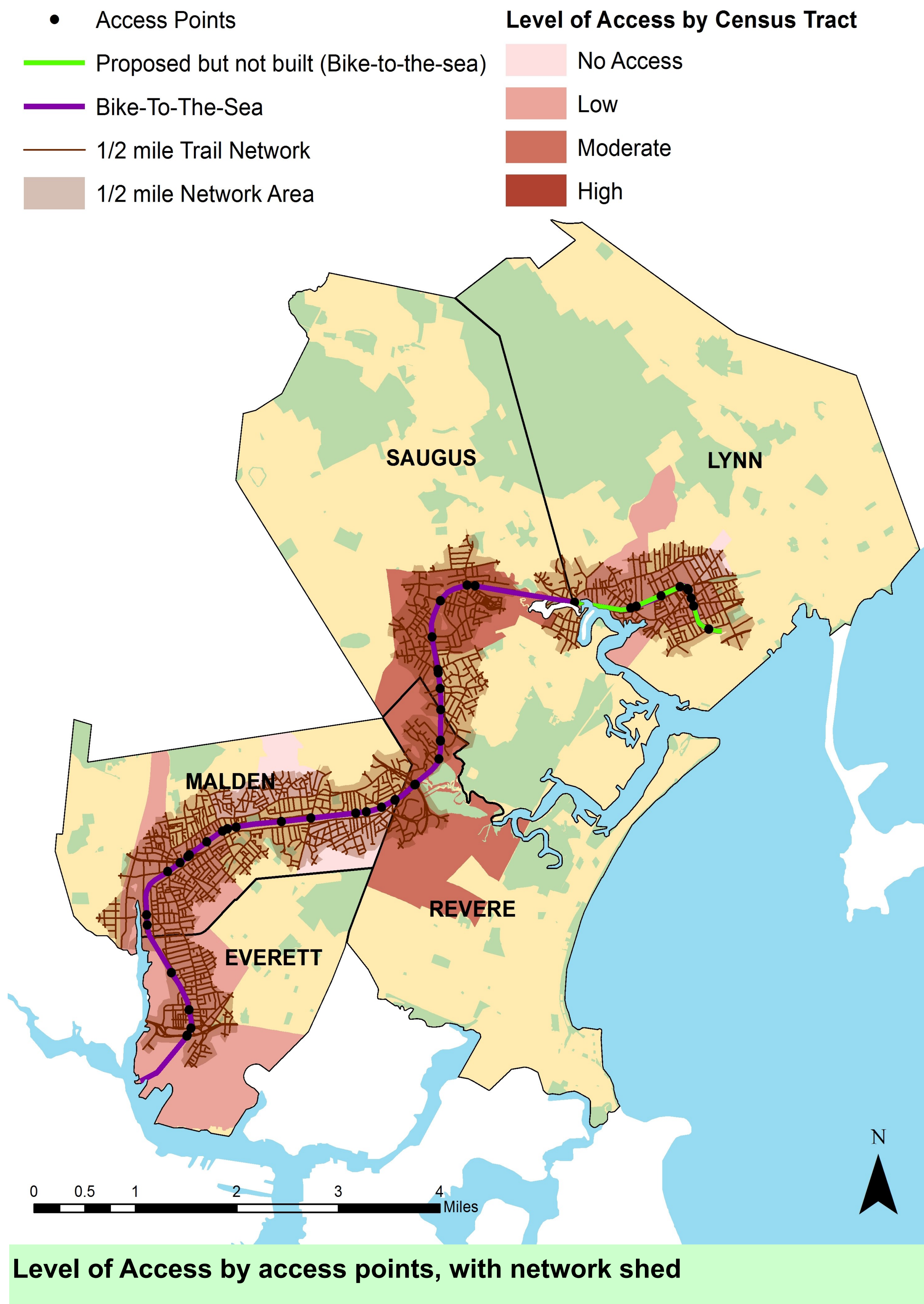


Network and Equity Analysis: Bike-to-the-sea



Level of Access by access points, with network shed

Demographic Context of City of Lynn

Population in City of Lynn is 90,329 as of the census of 2010. The racial demographics in Lynn is very diverse. White population only accounts for 57.6% of the total population while African American and other races accounts for 12.8% and 16.8 % respectively. Between 2009 and 2013, the median household income in Lynn was \$44,849. About 21% of the population was considered below the poverty line.

Residents from City of Lynn feel disconnected from downtown as most residents in the city do not have access to a personal vehicle. Specific to the context of Lynn, the Bike-to-the-sea trail not only aims to provide alternative forms of transportation in communities, but also hopes to bring a solution to poverty to Lynn.

Overview

The main purpose of this project is to investigate the network and equity of the Bike-to-the-sea car-free path in northeast Massachusetts. The trail is a part of the East Coast Greenway. It is a 10-mile bicycle path and walking trail that connects cities of Everett, Malden, Revere, Saugus and Lynn. The intention of building this trail is to provide safe and equitable travel for people from the above-mentioned communities. The completed part as of June 2016 goes from Everett through Malden, Revere and Saugus. The remaining parts will go all the way to Lynn and Nahant Beach. The current length of the trail is 7.5 miles. However, the city of Lynn is behind the construction of the trail. As the project is still in construction, this analysis will look at the accessibility for communities that are already connected to this trail as well as the potential level of access in the City of Lynn when the proposed part of the trail is built.

Methodology

This analysis is meant to advocate for the building of the proposed part of bike trail in City of Lynn, which is a part of the Bike-to-the-sea (Northern Strand Trail). This analysis will be divided into two parts. The first part of the analysis will include a network analysis calculating the access points of the whole trail. The network analysis will first determine the access points on the trail by indicating intersections along the trail. It will also indicate the total population with direct access to the trail and a comparison of level of accessibility among each city by census tract. This analysis will show how many access points and how many people will potentially have access and benefit from the proposed trail.

Next, the analysis will continue with accessing the equity of access to the trail. It will take into account the demographics of City of Everett, Malden, Saugus, Revere and Lynn to compare the level of access for population from various racial groups as well as people with various income levels. The comparison is mainly between City of Lynn and all the other four cities as to show the diverse demographics and racial make-up of City of Lynn. The analysis is done using Census 2010 data.

Last but not least, I will access the parcel land value of the City of Lynn to see if high land value account for the slow progress in construction.

Results and Recommendations

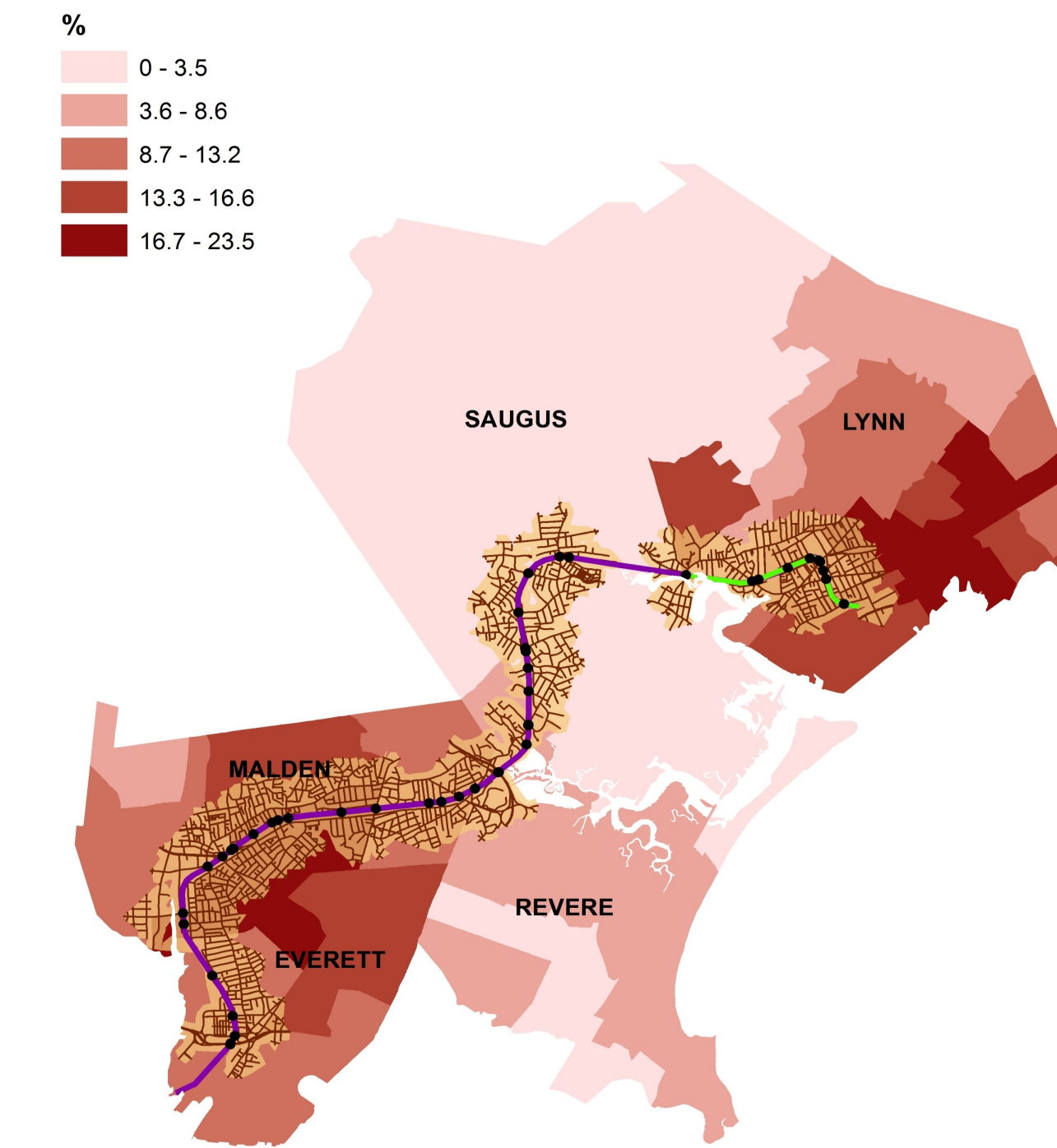
Based on the network analysis for the proposed bike trail in Lynn, in terms of access points, there is certainly potentials for City of Lynn to develop a accessible bike trail. City of Lynn is expected to have 10 access points based on the analysis, which is higher than that of City of Revere, City of Saugus and City of Everett. The increase of access could definitely provide convenience for people from City of Lynn travel back and forth through the core cities of Boston. With regard to the diverse demographics of Lynn, City of Lynn has the most diverse racial makeup compared to neighbouring cities. Besides, poverty level in City of Lynn is relatively higher in terms of comparison of median household income. Keeping the unique context of City of Lynn in mind, the construction of this bike trail in Lynn would be beneficial as it opens door for a community with high population of people of colour and people without access to personal vehicles and other means of transportation.

The Executive Director of Massachusetts Bicycle Coalition (MassBike) Richard Fries, says that bike trail does not only promote cycling, but also a gateway to end poverty. Besides, Boston is also one of the city with large population using alternative methods of transportation, such as walking and biking.

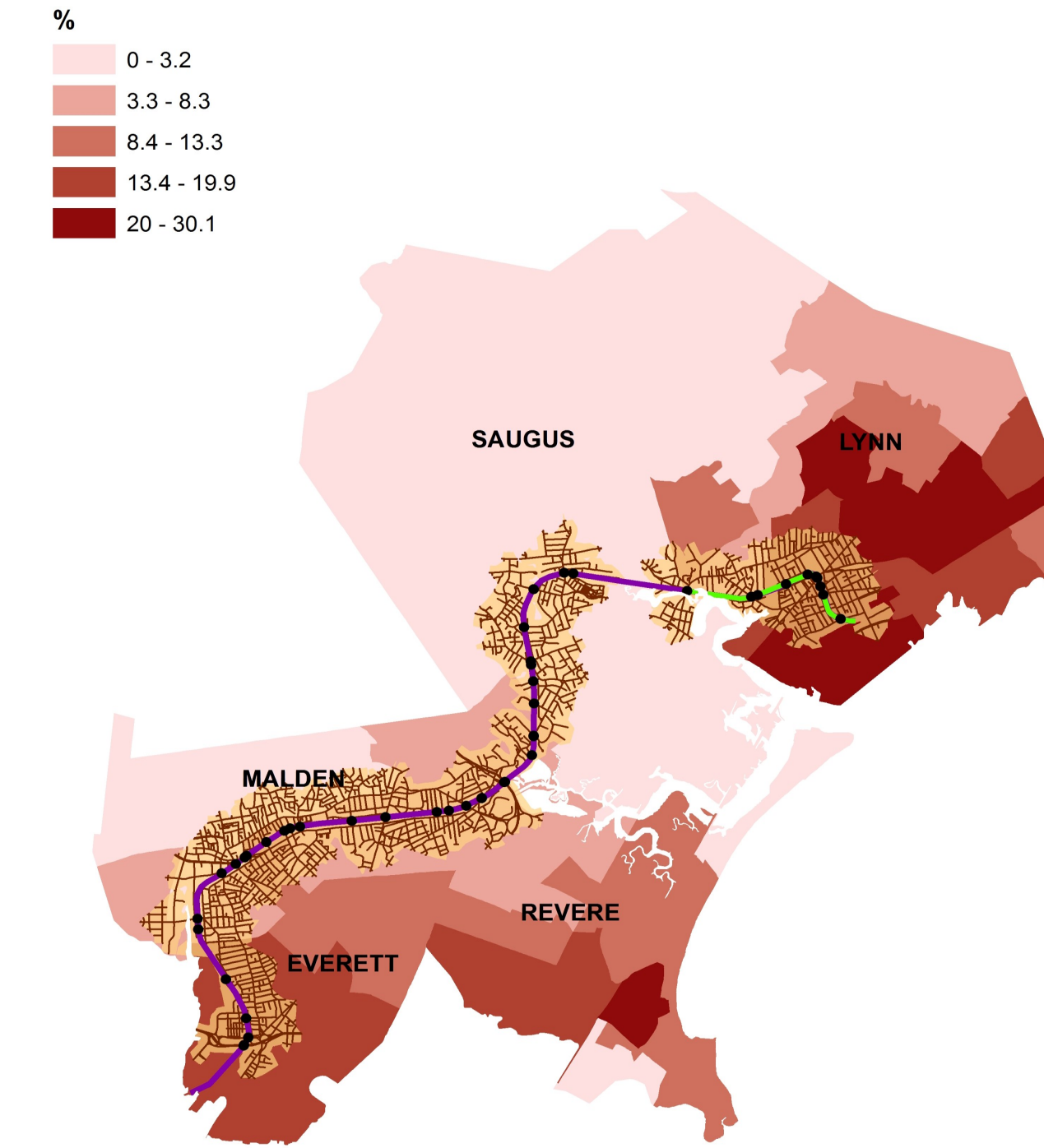
City of Lynn should do further research on the construction barriers for the proposed bike trail. Also, they should investigate what kind of barriers City of Lynn is experiencing that leads to the slow process of construction. As land value in City of Lynn along the trail is not high, acquisition of land might not be a major barrier for the construction. Besides, further research regarding developing other potential access points or bike trails should also be done in order to explore possible ways to improve the connections of the trail to the community.

Equity Analysis: Comparison among Everett, Malden, Revere, Saugus and Lynn

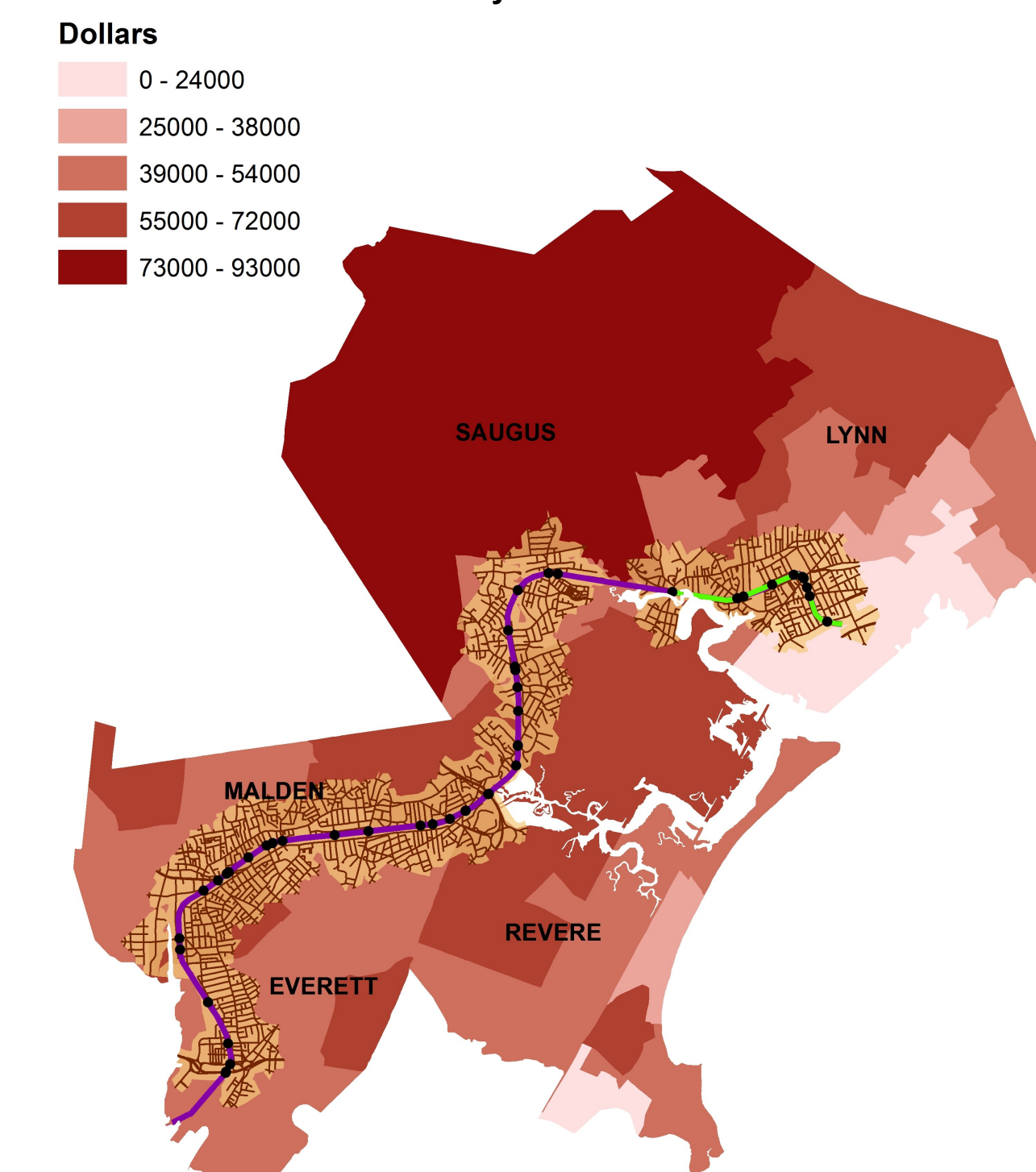
African-American Population by Census Tract



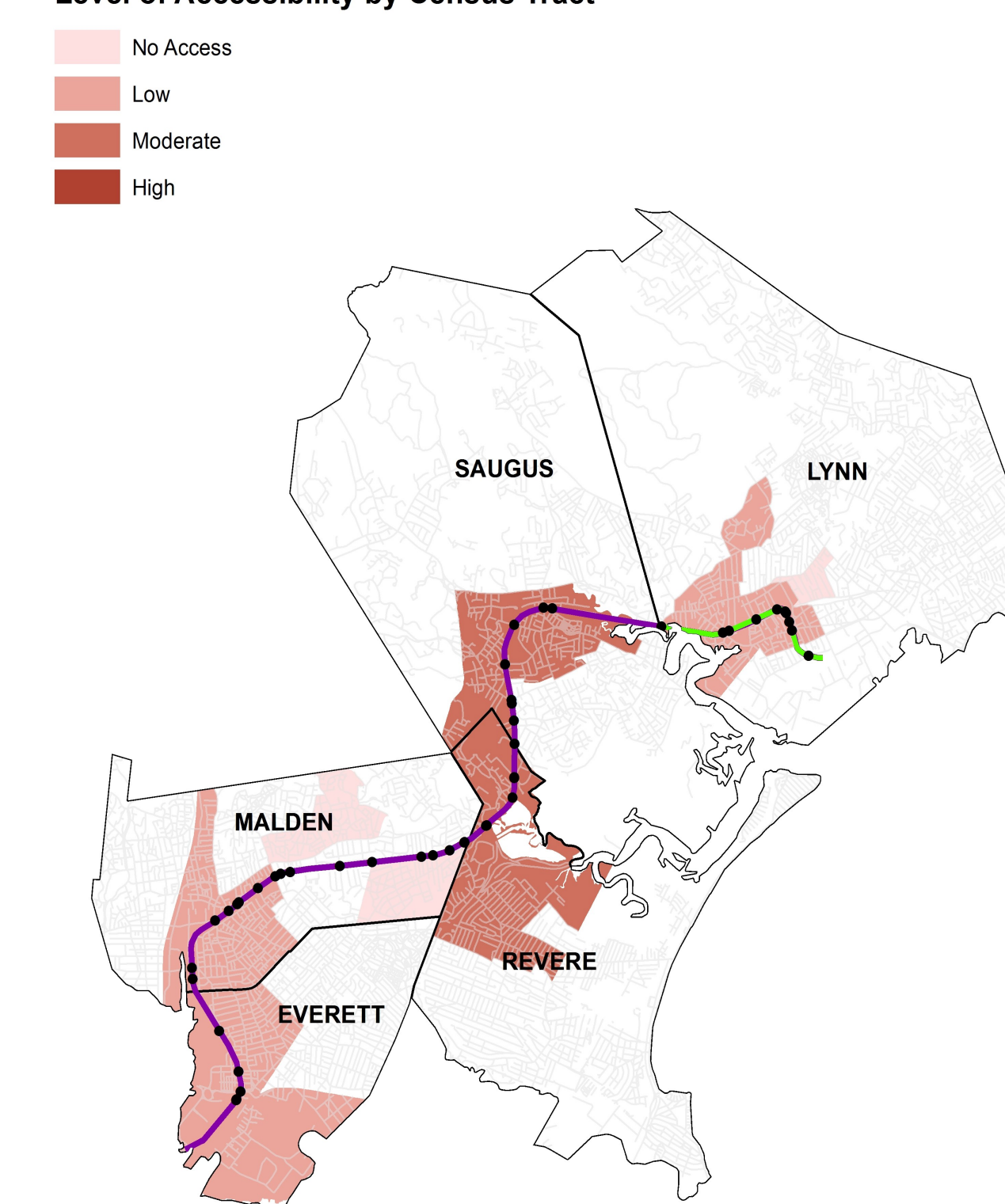
Other Race by Census Tract



Median Household Income by Census Tract



Level of Accessibility by Census Tract



Challenges for Lynn?

Land Value of City of Lynn

