

# FOOD DESERTS IN THE DUDLEY VILLAGE CAMPUS

## Introduction

The Dudley Village Campus (DVC) is the catchment area in Roxbury and North Dorchester, Massachusetts where the Dudley Neighborhood Initiative, a grassroots community organization, is located. The area is composed of the Dudley Square, Upham's Corner, Grove Hall and the New Market communities. Fifty percent of families in the Dudley Village Campus earn an annual income of \$25,000. In an urban areas of the United States with the highest cost of living, low-income residents and working families find it difficult to balance their budgets and keep their family fed with healthy, unprocessed foods.



Nonetheless, the DVC is not considered a "food desert" according to the United States Department of Agriculture (USDA). The USDA defines food dessert as "as parts of the country vapid of fresh fruit, vegetables, and other healthful whole foods, usually found in impoverished areas. This is largely due to a lack of grocery stores, farmers' markets, and healthy food providers." According to the USDA, the spatial distance for a food desert is any point 1 mile from a grocery store, farmers' market or a healthy food provider.

## Methodology

First, to demonstrate the level of wealth in the DVC, household income data had to be gathered from the 2010 Census utilizing census blocks for all of Boston, MA. Adding the DVC border demonstrate the disparities in wealth from residents the DVC in comparison to other areas in Boston.

Next, data points for the 5 grocery stores in and around the DVC had to be gathered. Unfortunately, the Reference USA data base only had information for the Stop n' Shop in New Market. Thus, the latitude and longitude coordinates had to be established for all of the other 4 grocery stores, inscribed into an Excel

file and then geocoded to place their points on the map. Once the points were gather, a 1 mile buffer was created to illustrate where a food desert could be located in the DVC. Another map with a .5mile buffer was also developed to expose if half of USDA standard created more food desert pockets in the DVC.

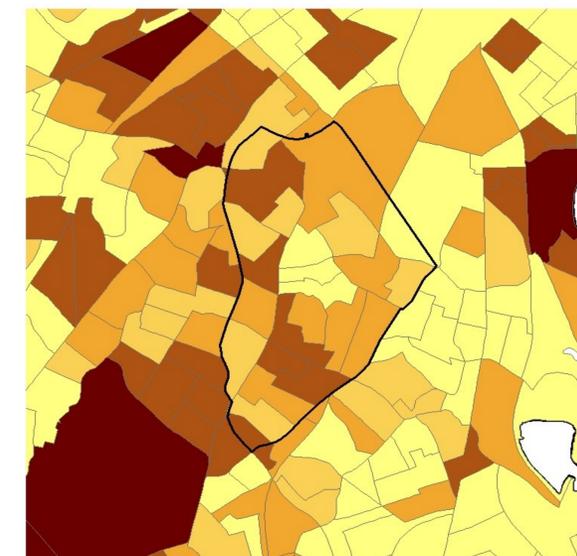
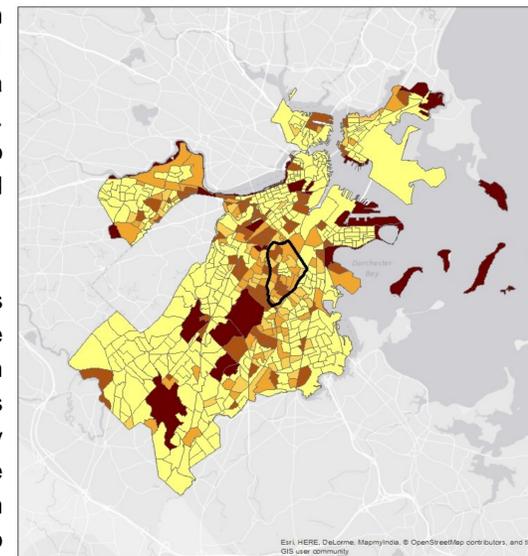
Finally, MBTA bus routes data was downloaded from MassGIS to demonstrate all the modes of public transportation available to DVC residents. (Note: only bus routes are useful, because the only high-speed train service in the DVC is the Upham's Corner Commuter Rail train station that doesn't run regularly and only connects to the Stop n' Shop in New Market)

## Transit Data

### DVC Areas 1/2 the Distance of the USDA Food Desert Standard

Street Address (Locat on Map)	Grocery Store	Affordability	Walking (Distance/Time)	Bus (Price & Time)	Car (Distance & Time)	Taxi (Price)
39 Vine Ave	Stop n' Shop (New Market)	Unaffordable	.9 miles & 17 minutes	\$2.25 & 17 minutes	1 mile & 5-10 minutes	\$7-\$8
	Stop n' Shop (Grove Hall)	Unaffordable	1.3 miles & 28 minutes	\$2.25 & 18 minutes	1.8 miles & 10-22 minutes	\$7-\$9
	Tropical Foods	Affordable	.5 miles & 11 minutes	\$2.25 & 11 minutes	.6 miles & 4-7 minutes	\$7-\$8
	Brother's Supermarket	Affordable	1 mile & 20 minutes	\$2.25 & 9 minutes	1 mile & 7-14 minutes	\$7-\$8
	Save-A-Lot	Extremely Affordable	.8 miles & 16 minutes	\$2.25 & 11 minutes	1.2 miles & 7 minutes	\$7-\$8
268 Quincy Street	Stop n' Shop (New Market)	Unaffordable	1.3 miles & 27 minutes	\$2.25 & 13 minutes	1.3 miles & 6-14 minutes	\$7-\$8
	Stop n' Shop (Grove Hall)	Unaffordable	.8 miles & 18 minutes	\$2.25 & 14 minutes	1 mile & 4-8 minutes	\$7-\$8
	Tropical Foods	Affordable	1.7 miles & 35 minutes	\$2.25 & 11 minutes	1.9 miles & 9-16 minutes	\$7-\$8
	Brother's Supermarket	Affordable	.6 miles & 11 minutes	\$2.25 & 11 minutes	.6 miles & 3-7 minutes	\$7-\$8
	Save-A-Lot	Extremely Affordable	.8 miles & 17 minutes	\$2.25 & 16 minutes	.8 miles & 4-8 minutes	\$7-\$8

(Note: All data was collected via Google Maps based on a Monday at 5pm departure)  
New Market is a business district and has no households on the marked section



Cartographer: A. Bayoán Rosselló-Cornier  
Projection: NAD\_1983\_StatePlane\_Massachusetts\_Mainland\_FIPS\_2001  
Data Sources: Census 2010, MassGIS, Tufts GIS (UEP294\_Fall2016), ESRI, WGBH, September 10, 2014, American Nutrition Association, Volume 38, No. 2.2, Department of Numbers,  
Image Sources: Find & Save (Boston Area), WBUR News (online)  
Date: December 18, 2016

## Conclusion

The maps demonstrate that the majority of households in the DVC make under \$35,000, which is less half of the 2015 median household income for Boston of \$78,800. Yet, there is no "food desert" according to 1 mile USDA standard; and public transit via MBTA buses is readily accessible for Dudley residents.

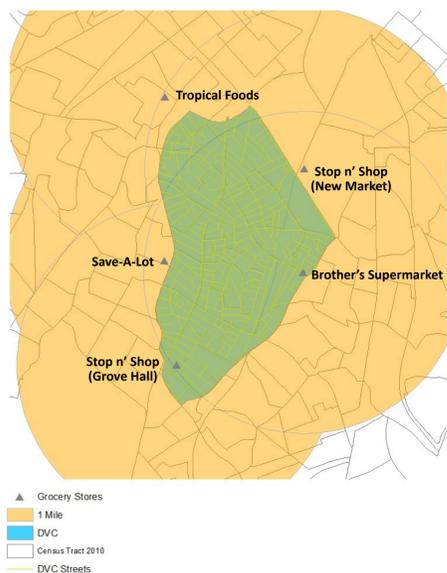
Now, if you decrease the USDA standard by half to .5 miles, then pockets of disenfranchisement begin to appear. In these areas, when measuring walking distance to the grocery stores there are in fact distance greater than 1 mile (Transit Data image). If residents don't have a vehicle, then they will have to rely on public transit or a taxi, which is an added expense to already low-come folks.

**In low-come urban communities, does distance equate to access to healthy, whole foods?**

Found on WBUR News online



## Food Deserts in the DVC (USDA Standards)



## Food Deserts in the DVC (1/2 USDA Standards)



## MBTA Bus Routes & Stops



## 1/2 USDA Food Desert & MBTA Bus Routes

