

Site Suitability for the Expansion of Boston's Food Truck Program

Introduction

Boston's Office of Food Initiatives aims to expand their public sites for the Food Truck program in 2014. Now in its third year, the program supports over 60 participating trucks. An additional 15 new businesses are expected to join the fleet this spring. With only 20 public sites zoned for Food Truck vending, the City is careful to advise new vendors to look to private partnerships to round out their schedule, as they may not be able to secure every new vendor a strong economic foothold on the public way. In order for the program to continue to grow and effectively foster this business, more locations on the public way need to be identified and rezoned to allow for Food Trucks. Through analyzing Boston's streetscape based on foot traffic to find sites best suited to support Food Truck business, this project will carry out a site suitability analysis and produce a raster map of Boston while providing a closer profile of a handful of prime locations.

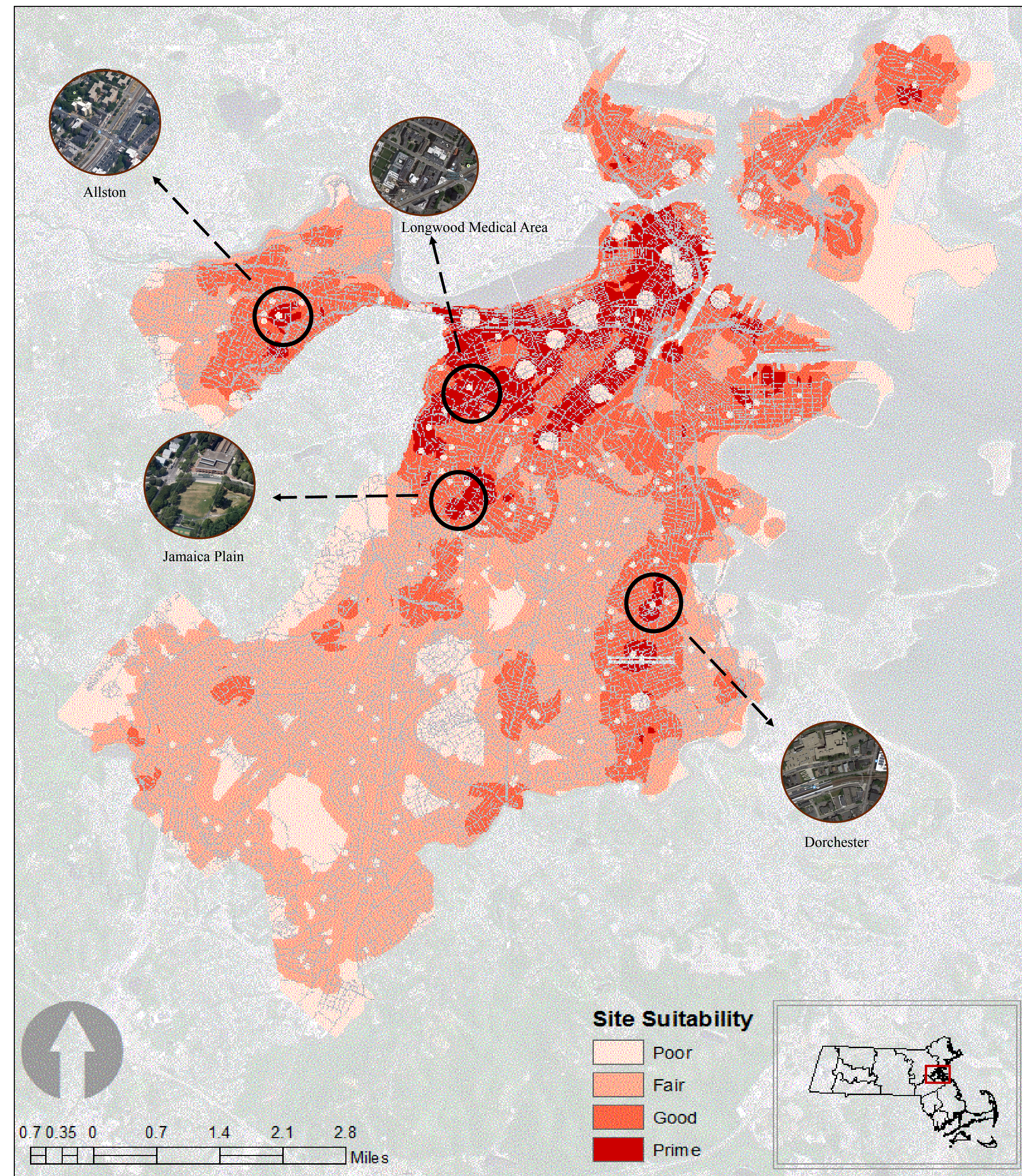
Spatial Questions

1. Where are areas of high foot traffic during Food Truck shifts?
2. Within areas of high foot traffic, are there small-scale restaurants that may be concerned by the presence of Food Trucks?
3. Are these areas away from school property and current Food Truck sites?
4. Of these areas, where are the best suited sites? Are any in Boston's neighborhoods?

Methodology

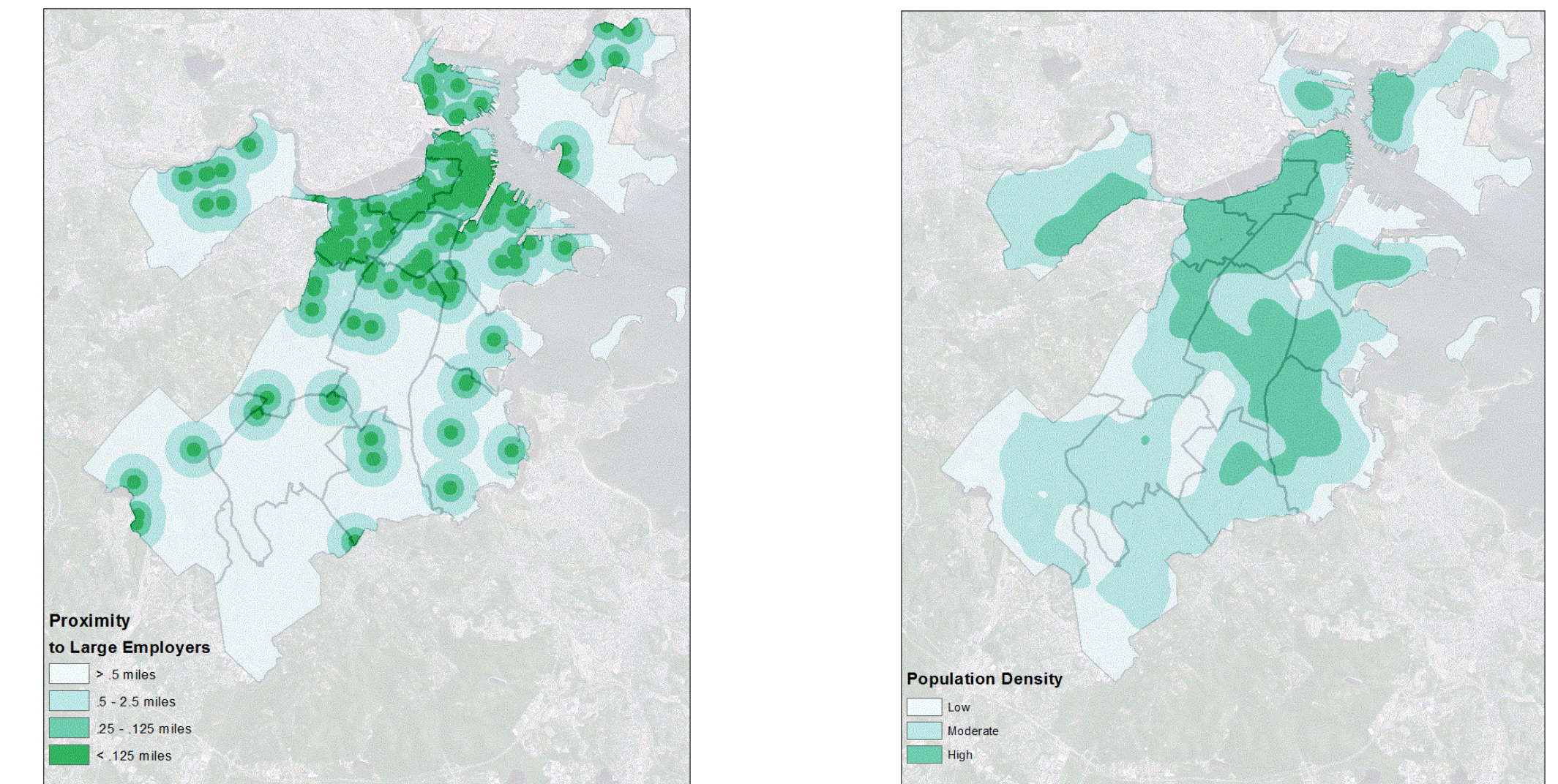
To map areas in Boston that are best suited for Food Trucks, I analyzed data on food establishments, roads, schools, 2010 U.S. Census Blocks, businesses, bus stops, train stops, and current public Food Truck sites. These layers were chosen to show where areas of high foot traffic would be, so that vendors could rely on a customer base. I outlined a ranking system used to create six raster maps of this data, which were then overlaid to show a comprehensive view of prime areas.

To begin, layers were prepared by clipping the data to the boundary of the City of Boston and ensuring that all data represented points, rather than polygons. While the only clear restriction given to evaluating potential Food Truck sites is to be sure they are not within 200 feet of school property, other rankings given were based on the



idea that a Food Truck customer would not travel more than a half mile to a Food Truck site for a meal, and that future Food Truck sites likely cannot be closer than 579 feet—the closest distance between two current Food Truck sites in the Financial District.

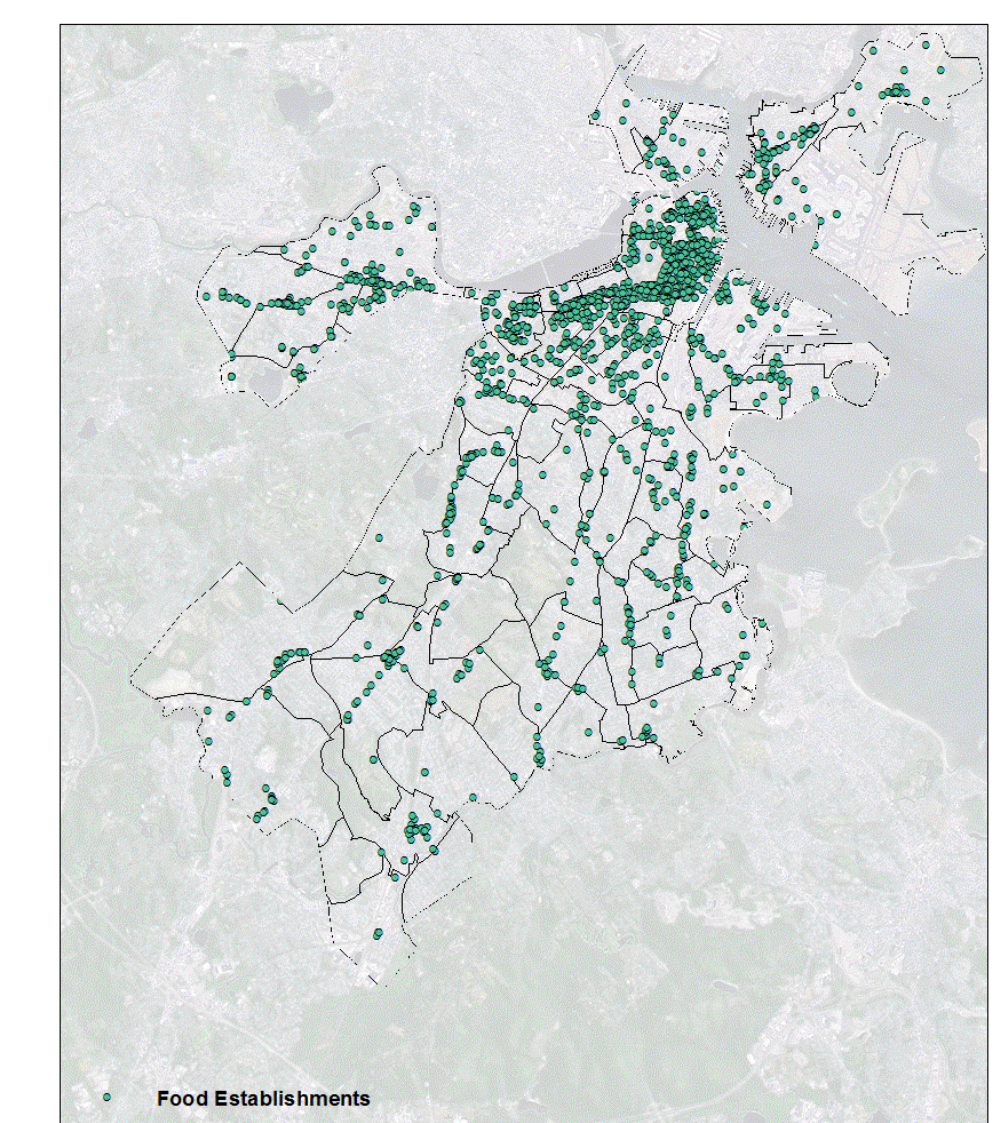
The table to the right lists the data sets used for raster analysis, and the ranking criteria used to evaluate them. For five of these data sets, the Euclidean Distance tool was used. The sixth data set, 2010 Census Blocks, used the kernel density tool to highlight the areas in Boston with the highest population density. The cell size for this analysis was set to 30 feet. The food establishments data layer, as well as the roads data layer were excluded from the raster analysis, yet considered more carefully when selecting the final four recommended future Food Truck sites.



Recommendations

My analysis shows several areas in Boston which could host Food Trucks. The four I chose to highlight are: 1) Allston, near the Washington St. MBTA stop; 2) Longwood Medical Area MBTA stop; 3) Jamaica Plain, near the Stony Brook MBTA stop; 4) Dorchester, near the Fields Corner MBTA stop. Should the Food Truck Committee choose to pursue these sites, there may be some difficulty in locating a specific parking space due to a lack of metered parking or recent parking space removal for bike lanes and temporary construction. For some sites, such as the Stony Brook Station location, the City of Boston would need to work with the land owner of the parking space, the MBTA, to allow for Food Truck vending in front of the station. Looking further into the population density and large employer raster maps, it seems as though the Allston and Fields Corner locations may be best for breakfast and dinner shifts, when commuters are near their homes, as there aren't many large employers in the area. Lastly, it is important to note that while some rankings may at first appear subjective, these are benchmarks used to find the best sites available, rather than any site.

Layer	Ranking
Current Food Truck Sites	0: ≤ 579 ft 1: > 580 ft
Schools	0: ≤ 200 ft 1: > 200 ft
Census Block Population	1: ≤ 5,433 2: 5,433.1-17,854.1 3: > 17,854.1
Large Employers	3: ≤ 660 ft 2: 660.1- 1320 ft 1: 1320.1- 2640 ft 0: > 2640 ft
MBTA Train Stations	3: ≤ 660 ft 2: 660.1- 1320 ft 1: 1320.1- 2640 ft 0: > 2640 ft
MBTA Bus Stops	3: ≤ 660 ft 2: 660.1- 1320 ft 1: 1320.1- 2640 ft 0: > 2640 ft



Cartographer: Valerie Oorthuys
Date: December 16, 2013
Class: UEP 232
Projection: NAD 1983 StatePlane Massachusetts Mainland
FIPS 2001 (feet), Lambert Conformal Conic
Data Sources: Mass GIS, City of Boston, 2010 U.S. Census,
Reference USA, ESRI base map

