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MEMORANDUM

To: Motivate
Portland Bureau of Transportation

From: Alta Planning + Design

Date: December 22, 2015

Re: Portland Bike Share Demand Analysis Methodology

Portland Bike Share will provide bicycles located strategically around the city. This demand analysis was developed to determine the concentration of where people live, work, and play in Portland. This analysis will serve as background information that will inform the optimal Service Area, to be developed in the following Task 2.

Demand Analysis

The demand analysis is *quantitative* in nature and incorporates data available from the US Census, Metro and City's GIS-based (Geographic Information Systems) data sets. The data is then used within a model developed by Alta Planning + Design to determine relative demand for bike share. The data inputs are based on:

- Residential density (where people live, including student housing)^{1, 2}
- Employment density (where people work)
- Transit demand (where people take the streetcar, bus and MAX).
- Recreation demand (where people recreate focused on job locations related to cultural destinations, restaurants and retail establishments)
- Major attractions (see following for list of attractions included in the analysis)

Areas with the highest potential demand for bike sharing are taken into consideration for deployment of bike share. These locations will generate the most users and attract the highest value sponsorships, and as a result are the most likely to be financially sustainable. High demand areas were identified through a

¹Residential density was calculated using data from the 2010 US Census to achieve the desired level of granularity (Census Block Groups). The Service Area Maps will consider areas of the city that have experienced disproportionate growth since 2010.

² It should be noted that residential density does not take into account temporary residents, i.e. those staying in the Portland in hotels, inns and motels. Hotel, inn and motel employees are included in the employment density analysis, however, and serve as a *de facto* proxy for the increased demand that hotels—especially large hotels in walkable, commercial centers—create for bike share ridership.

heat mapping exercise that allocated points based on where people live, work, take transit and recreate within Portland.

A “heat map” was developed to determine where demand for bike share exists. Colors are set at threshold levels to indicate relative demand within a 1000’ grid overlaid onto the City of Portland. The accompanying “composite” heat map indicates the overall demand for bike share throughout Portland.

List of Major Attractions

- Aerial Tram
- Convention Center
- Moda Center
- OMSI
- Oregon Zoo
- Pioneer Courthouse Square
- Portland Art Museum
- Powell’s Bookstore
- Providence Park
- Waterfront Park

