Grant Deliverables and Reporting Requirements for UTC Grants

UTC Project Information	
Project Title	Development of Framework for Identifying Mobility Desert
University	University of South Florida
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Funding Source(s) and Amounts Provided (by each agency or organization)	USDOT: $74,398 USF: $37,199
Total Project Cost	$111,597
Agency ID or Contract Number	Sponsor Source: Federal Government CFDA #: 20.701 Agreement ID: 69A3551747119
Start and End Dates	Start date: 10/01/2020 End date: 09/30/2021
Brief Description of Research Project	Transit Desert is a term stemmed from food desert and has been studied by some researchers in recent years, which is generally characterized by poor transit access and possibly poor bike, sidewalk, or road infrastructure. However, from a multimodal transportation perspective, while considering people's access to workplaces and critical services, e.g. grocery shopping, health care, childcare, and other services, we shall not only look into transit desert, but "mobility desert" encountered by many low-income households. Mobility Desert means that households face constrained mobility access. These households in general have no reliable vehicles, be far away from bus routes, and do not have enough money to afford taxi/ride-sourcing and car-sharing/bike-sharing/e-scooter sharing services. Mobility Desert extends the idea of Transit Desert to jointly account for private cars, public transit, non-motorized transportation, and emerging mobility options. It is easy to see that Mobility Desert concept can identify mobility issues than Transit Desert because for those households with medium to high income, the impact of being in a transit dessert is totally different from that of low-income

| | households. For such households, the lack of mobility access drastically affected their job opportunities and shaped a loophole in preventing them from improving their financial conditions and the quality of life.

In our study, we propose a framework for identifying Mobility Desert. We will integrate GIS tools and participatory mapping for demonstrating spatial information of the study cities. Participatory mapping is also called community-based mapping, which includes a set of approaches and techniques that combines the tools of modern cartography with participatory methods to represent the spatial knowledge of local communities. We will also collect automobile ownership, transit accessibility, and other emerging transportation mode data. Together with the spatial information, we will apply statistical tools and GIS functions to define and identify Mobility Dessert.

Identifying Mobility Desert is key to the development of regulations and policies for improving the mobility of the disadvantaged population. We will demonstrate our framework by applying that to a couple of case studies. |
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| Describe Implementation of Research Outcomes (or why not implemented)

Place Any Photos Here | |
| Impacts/Benefits of Implementation (actual, not anticipated) | |
| Web Links
• Reports
• Project Website | http://ctech.cee.cornell.edu/final-project-reports/ |