

Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Grant Proposal

Utah Department of Transportation - May 2018

Grant Summary:

USDOT's vision for the ATCMTD initiative is the deployment of advanced technologies and related strategies to address issues and challenges in safety, mobility, sustainability, economic vitality, and air quality that are confronted by transportation systems owners and operators. The advanced technologies are integrated into the routine functions of the location or jurisdiction, and play a critical role in helping agencies and the public address their challenges. The advanced technology solutions and the lessons learned from deployments can be used in other locations, scaled in scope and size, to increase successful deployments and provide widespread benefits to the public and agencies.

For each fiscal year from 2016 through 2020, a maximum of \$60 million is available for award. A single grant recipient may not receive more than \$12 million in one fiscal year. The DOT anticipates making not less than 5 and not more than 10 awards each fiscal year. The planned award type is a cost-reimbursable Cooperative Agreement or an allocation to a State. The estimated period of performance is between 1 and 4 years.

2018 UDOT Application:

UDOT was awarded the grant based on the 2018 Application. The projects included in the application focus on our Strategic Goals of Zero Crashes, Injuries and Fatalities and Optimize Mobility, and leverage our Core Value of Innovation and our Emphasis Area of Collaboration. The projects also support Carlos Braceras' Top Ten priorities that were launched at the 2017 UDOT annual conference.

The 2018 UDOT application, "*Utah Connected*", (submitted June 18, 2018) requested \$3 million in federal funds, with a UDOT Match of \$3 million, for a grant application total of up to \$6 million. The application built upon work we have already been doing, and focused on "Connected Systems", "Connected Vehicles", and "Connected People". Several projects were included in the application under these focus areas, some of which will need some modification since we have already started working on a few of them. The projects in the application are:

1. Connected Systems – Real-time Full Situational Awareness
 - a. A central "data ecosystem" that will bring together various transportation data elements into an analysis portal where any number of partners can manipulate and learn from the data. (This is part of our current Data Ecosystem project with Panasonic).
 - b. Fiber Sensing, also known as Distributive Acoustic Sensing (DAS). This project will leverage our existing fiber network to detect events along a roadway.
2. Connected Vehicles – Solutions for Safety and Mobility
 - a. Extend our Transit Signal Priority system, already deployed on Redwood Road and the Provo-Orem UVX route, to two additional corridors. The corridors listed in the proposal are Foothill Boulevard in Salt Lake City (UTA Route 228), and Utah County Main Street (UTA Route 850). (We will revisit the corridor selection with UTA.)
 - b. Extend our Snow Plow Pre-emption Project to three additional corridors: 10400 South, Foothill Boulevard, 9000 South. (We will revisit these corridors, since we have already built two of them).
 - c. Building a new connected vehicle application focused on curve speed warnings, and deploy this in 20 of the most crash-prone curves in the state.
 - d. Building a new connected vehicle application focused on weather impact warnings, and deploy this at 20 of the high weather-related crash sites.

3. Connected People – Autonomous Shuttle Deployment

- a. Deploy an AV Shuttle at four distinct locations to focus on serving transportation-challenged populations and work on the first-mile, last-mile challenge. (This is underway and probably won't need additional modifications.)

Summary:

UDOT is known across the country as an innovative and forward-thinking agency. UDOT has a unique ability to create and deploy innovative projects here that have great implications in other parts of the country. We have a history of successful project management.