



# City of San Antonio

## Agenda Memorandum

**File Number:**18-2142

---

**Agenda Item Number:** 4.

**Agenda Date:** 2/27/2018

**In Control:** Innovation and Technology Committee

---

**DEPARTMENT:** Transportation & Capital Improvements

**DEPARTMENT HEAD:** Mike Frisbie, P.E.

**COUNCIL DISTRICTS IMPACTED:** Citywide

### **SUBJECT:**

Briefing and possible action on the San Antonio Real-Time Traveler Information Portal (SATRIP) project, Texas Automated Vehicle Proving Ground Partnership, and Autonomous Vehicle Technology.

### **SUMMARY:**

Briefing and possible action on the San Antonio Real-Time Traveler Information Portal (SATRIP) project, Texas Automated Vehicle Proving Ground Partnership, and Autonomous Vehicle Technology.

### **BACKGROUND INFORMATION:**

#### SATRIP:

As part of the FY 2017 budget, City Council approved several Smart City projects that align with the priority areas of Sustainability, Digital Connected Living, and Transportation. The project for the area of Transportation was the San Antonio Real-Time Traveler Information Portal (SATRIP). The SATRIP project includes four main areas of focus:

- Creating two Traveler's Choice Corridors, one on Blanco Road (between Wilderness Oak and Loop 410) and another Military Drive (between Bynam and I-37)
- Integration of the High Water Detection System into the Advanced Transportation Management System
- Pedestrian Safety Enhancements at some intersections
- Developing a method of sharing data in real-time

#### Texas Automated Vehicle Proving Grounds:

In December 2016, the first ever Texas Mobility Summit was hosted by the Texas Department of Transportation (TxDOT) in Austin, Texas. The Summit brought together municipal agencies from across Texas, community partners, and transportation industry leaders. It was during the Summit that the Texas Innovation Alliance and the Texas Automated Vehicle Proving Ground Partnership were created.

- The Texas Innovation Alliance (Alliance) includes nine major Texas cities and three major research institutions.
- The vision of the Alliance is to create a platform for innovation that enables the Partners to leverage resources, co-create solutions, and share results for improving the delivery of government services to Texas communities.

In November 2016, the United States Department of Transportation (USDOT) initiated a notice soliciting proposals for a pilot program to designate automated vehicle proving grounds.

- The solicitation included broad criteria for selections including a demonstration of capable safety planning, willingness and ability to share and disseminate information, and an ability to show that all applicable laws, regulations, and policies are adhered to at all times. The solicitation also requested information on the types of facilities and research capability that are available to applicants to test automated vehicle technologies.
- The partners of the Texas Innovation Alliance formed the Texas Automated Vehicle Proving Ground Partnership to apply for the USDOT designation. In January 2017, the Partnership was selected as one of 10 designees nationally.

At this briefing staff will provide the Committee with an overview of Autonomous vehicle technology and potential alternatives for the City of San Antonio.

## **ISSUE:**

### SATRIP:

As San Antonio prepares to align itself with the future growth outlined in the SA Tomorrow Multimodal Transportation Plan (Plan), the SATRIP project may become a key component of the Plan's implementation. SATRIP will create two Traveler's Choice Corridors, one on Blanco Road (between Wilderness Oak and Loop 410) and another on Military Drive (between Bynam and I-37). The project will increase the number of advanced, emerging transportation technologies deployed in the City of San Antonio with potential benefits including the following:

- Reduce traffic-related fatalities and injuries.
- Reduce traffic congestion and improve travel time reliability.
- Reduce transportation-related emissions.
- Optimize multimodal system performance.
- Incorporate the City's flood detection system into the Advanced Transportation Management System (ATMS) to further enhance the safety of the users of the transportation network during flood events.
- Enhance pedestrian detection technology to improve safety for pedestrians in an effort to achieve the City's Vision Zero Program goal of no fatalities on our roadways.

The technologies deployed through this project will enable the collection of real-time data that can then be disseminated to the public, transit authorities, and other transportation stakeholders to allow travelers to make informed travel decisions. To date, the following work has been completed:

- Traffic monitoring cameras and radar detection has been installed at 22 intersections along Blanco Road and 26 intersections along Military Drive. The improved detection provided by the radar equipment is allowing the signals to operate more efficiently and is decreasing the travel times through the corridor.

- Radar detection units at the identified test intersections were configured to detect pedestrians in the crosswalk. Studies were performed to compare pedestrian detection with actual pedestrian presence. The results show that while it would be economically beneficial to utilize the same detection equipment to detect the pedestrians, the equipment is not providing a consistent, accurate detection of the pedestrians.

#### Texas Automated Vehicle Proving Grounds:

The Texas Automated Vehicle Proving Ground Partnership members are contributing their facilities, expertise, and talents as part of a larger Texas network of proving grounds and test-bed sites. Closed-campus proving grounds at the three research institutions and real-world environment test-bed sites across were designated to explore different challenges related to automated vehicles.

- Team San Antonio designated the urban test-bed site of Fredericksburg Road from downtown to the Medical Center, which includes VIA's Primo Bus Rapid Transit Route. As a test-bed site, the City and other transportation partners will evaluate automated vehicle technology and its ability to reduce pedestrian and vehicle conflicts. In addition, possible technology optimize VIA bus interval spacing along this high frequency route could improve the consistency and efficiency of rider service.
- Since January 2017, the Partnership has been collaborating with the nine other national proving grounds and assisting to inform national guidance around topics such as testing needs and guidelines, best practices, and safety procedures. In addition, the Partnership has been working to develop ideas to leverage the proving ground designation.

At this briefing staff will provide the Committee with an overview of Autonomous vehicle technology and potential alternatives for the City of San Antonio.

#### **ALTERNATIVES:**

This briefing is for informational purposes only.

#### **FISCAL IMPACT:**

This briefing is for informational purposes only.

#### **RECOMMENDATION:**

At this briefing staff will provide the Committee with an overview of Autonomous vehicle technology and potential alternatives for the City of San Antonio.