

ITS PCB Community College Workshop

Session 1: Tuesday June 30, 2020 | 1:00 p.m. - 3:00 p.m. ET

Andy Berthaume (U.S. DOT) introduced the ITS PCB's Community College Virtual Workshop Series.

- Goal is to describe workforce needs, identify community college resources, and build bridges between community colleges and employers.
- U.S. DOT's ITS PCB team will use action items coming out of discussion to enhance the program moving forward.

Andy Berthaume and Kara Chisholm (U.S. DOT) provided an overview of U.S. DOT's past and forthcoming efforts in this area:

- Since the last Community College Workshop, ITS PCB has hosted 2 Community College discussion forums and designed 4 case studies.
- Going forward, ITS PCB and our partners at the Transportation Workforce Centers will create 2 additional case studies and a number of project and career profiles.
- Through the Employment Pathways Workshop (EPaWs), we have learned:
 - Success of job placement depends on strength of relationship between CC instructors and employers.
 - Employers are frustrated with high turnover rates.
 - ITS graduates need training in mechatronics, computer networking, and engineering.
- ITS PCB will host additional EPaWs workshops in FY 2021.

Patrick Son (NOCO) described existing and emerging ITS workforce needs:

- ITS employers are in need of Transportation Systems Management and Operations (TSMO) paraprofessionals who support management and operations, use engineering judgment, and apply knowledge for Traffic Management Center (TMC) services and TSMO field operations. These positions are in demand today and will be in high demand going forward.

Blaine Leonard (Utah DOT) and Jonny Turner and Ralph Koeber (Narwhal Group) listed the knowledge, skills, and abilities (KSAs) that are helpful for people deploying and maintaining signal phasing and timing (SPaT) technology:

- Electrical skills, including electrical theory, traffic signal electronics, vehicle electronics, field measurements, radio and cable installation
- Information Technology skills, including networking, using the command line, cabling, real-time data handling, database management, packet capture, firmware updates, and technical writing
- Engineering/Computer Science skills, including cybersecurity, encoding/decoding, data analysis, and Geographic Information Systems (GIS)
- On-the-job skills, including learning new terms, learning new and custom applications, and the ability to work in adverse conditions

Dean Deeter (Athey Creek Consultants) described the KSAs that technicians working on connected vehicles need, that Blaine, Jonny, and Ralph did not already identify:

- Data collection skills
- KML, JSON, and XML
- Familiarity with location correction related to GPS
- Being an aggressive learner

Neil Boudreau (MassDOT) listed KSAs that technicians working on work zones should have, that Blaine, Jonny, Ralph, and Dean did not already identify:

- Using vehicle queue warning systems
- Ways for communicating between devices
- Managing and analyzing big data gathered from monitoring the work zone

The presenters noted that a single degree program would not deliver all the KSAs the SPaT deployment and maintenance employee needs. Employees will learn many of the KSAs on the job.