

# PROFESSIONAL DEVELOPMENT HOURS (PDHs) CERTIFICATE

*Presented by*  
**Society of American Military Engineers**  
**Tulsa Post**

**This certifies that**

---

attended the below described presentation at the March Monthly Luncheon, sponsored by the SAME Tulsa Post on **March 20, 2018** at the USACE Tulsa District offices located at 2488 E 81st St, Tulsa, OK 74137. This program covered technical issues relevant to the engineering profession as outlined below. Speakers may double the PDHs for their topic.

Presentation 1: Ben Redding is Continental Mapping's senior account manager for federal government clients and has managed multiple contracts for several DoD agencies, including USACE Tulsa's surveying and mapping IDIQ since 2010. His presentation covered mapping using drones and the many advantages over traditional methods but also brings with it several crucial considerations for best fit. This presentation reviewed best applications of drone technologies, including high accuracy topographic mapping, remote inspections, and high-resolution visualizations. Recent advances in supporting technologies including structure from motion, artificial intelligence, and high-definition first person viewing was reviewed to understand their impact on both drone-based workflows and traditional surveying and mapping applications.

Presentation 2: David Flood from USACE Tulsa District presented on the use of drones for USACE projects. From 2009 to 2017 he held a position in Operations Technical Support conducting Inspections on Corps Civil Works Structures in Tulsa District and is currently in Engineering and Construction (E&C) Infrastructure Section. From 2010 to present he has assisted in bridge inspections and dive inspections. Mr. Flood is the subject matter expert for Tulsa District in regards to Remote Operated Vehicles (ROV). Project examples and requirements for using drones on USACE projects were discussed in his presentation.

Presentation 3: Students from Memorial High School in Tulsa, the Circuit Chargers, presented on their 2018 robot that was sponsored in part by the SAME Tulsa Chapter. The Circuit Chargers, a.k.a. FIRST Team 932, joined the FIRST community in 2002. The Circuit Chargers compete in the FIRST Robotics Competition (RFC) each spring. FIRST (For Inspiration and recognition of Science and Technology) gives high school students around the world the opportunity to design, build and compete their robots in a high energy, two-day competition. They overviewed how the robot operates and each of their roles on the team. The team also shared information on their competition results and the format of the competition.

**Total PDHs awarded: 1.0 hour**



Wade Anderson, P.E.  
2018 1<sup>st</sup> Vice President  
SAME Tulsa Post