

AZ DOT Pavement materials and performance - the use of LCA, PCRs, and EPDs to quantify resource use, energy, emissions and inform design selection processes

Project Goals:

- (1) Explore the current PCR/EPD framework by utilizing a life cycle assessment approach.
- (2) Use and expand the role of the long-term performance prediction tools (FlexMAT, FlexPAVE, PassFlex, PassRigid, etc.) and the LCA Pave Tool.
- (3) Inform ADOT's implementation plan for reducing carbon emissions from pavements.
- (4) Advance FHWA, AZ DOT, academic, and industry awareness

Project Scope:

- Develop or refine current standards and specifications to implement quantifiable sustainable pavements approach.
- Implement FHWA LCA Pave Tool to conduct LCAs.
- Collect EPDs on projects.
- Use life cycle inventories from LCA Commons Database to conduct LCA on select projects.
- Implement pilots for techniques, strategies, and materials that reduce GHG emissions.

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