

2017 Arizona DOT Black & Green Sustainable Pavement Systems Program



Arizona DOT Sustainable Transportation Program Linkage

ADOT's pavement management contributes to sustainability by enhancing roadway safety, optimizing pavement life cycles to reduce costs, while considering the environmental impacts of construction and material usage.

Sustainable Pavement Defined

FHWA *TechBrief* on Pavement Sustainability (2014)

<http://www.fhwa.dot.gov/pavement/sustainability/hif14012.pdf>

FHWA's *Toward Sustainable Pavement Systems* (2015)

<http://www.fhwa.dot.gov/pavement/sustainability/hif15002/hif15002.pdf>

- FHWA defines a sustainable pavement as one which “achieves its specific engineering goal” (i.e., meeting accepted performance standards) while meeting “basic human needs,” using “resources effectively,” and preserving/restoring ecosystems
- Pavement sustainability is meant to involve every phase of the pavement life cycle, including **1)** materials production, **2)** pavement design, **3)** construction, **4)** use, **5)** preservation, maintenance, and rehabilitation (the main emphasis of INVEST OM-07), and **6)** end-of-life management

2017 ADOT Black & Green Program Goals

- Develop working group
- Leverage ADOT's Sustainable Transportation Plan lessons learned to date
- Identify further sustainability gains through internal, industry, and academic expertise outreach
- Begin documenting ADOT pavement applications/BMPs/LCA/LCCA of each of the six (6) lifecycle phases in a single sustainable pavement systems framework through a new grant from FHWA
- Pilot a selection of suggested sustainable practices, innovations, and applications identified through the initial BMP process through ADOT's new Every Day Counts Four (EDC-4) Pavement initiative