

Iowa DOT



Contact Information:

Todd Hanson

✉: todd.hanson@iowadot.us

☎: 515-239-1226

Use of EPDs and LCA to quantify emissions and associated impacts of material and design decisions to enhance sustainable pavement practices in Iowa

Project Goals:

- (1) Understand what is involved in requiring contractors to use EPDs and informing sustainable decision-making.
- (2) Establish strategies to collect EPDs, implement LCA, and reduce impacts of pavements through changes in materials, design, and maintenance.
- (3) Provide training/workshop to Iowa contractors and Iowa DOT staff.
- (4) Develop state-of-the-art estimates of embodied emissions, use phase emissions, end-of-service emissions, and use phase excess fuel use and costs.

Project Tasks:

- Establish what type of adjustments will be necessary to adequately capture portable plants.
- Enable Iowa DOT and Iowa paving industry to better understand the level of effort required to generate EPDs.
- Identify areas where improvements in data collection, education and training are needed to facilitate possible routine EPD generation in the future.
- Inform a benchmarking analysis of current Iowa DOT concrete paving operations.
- Enhance Iowa DOT understanding of the complete life cycle impacts (including use-phase) associated with pavement assets and inform improved decision-making in the pavement arena to lower the GHG emissions associated with Iowa's pavement assets.

