Q: Can concrete be made resilient, durable, and carbon negative?

- Confirmed concept viability in mineral carbonation in Bendable Concrete
- Proposed idea to DOE resulting in a funded project with B. Ellis focusing on precast products
- Expansion of idea to Blue Sky Initiative (led by V. Sick) focusing on cast-in-place construction
CO₂ can be utilized as a valuable resource in large scale construction projects.
Research Outcomes
- Carbonation curing of Bendable Concrete can achieve carbon sequestration about 30% by weight.

Visibility Outcomes

Research
• We will continue to work on the DoE and the BlueSky Initiative projects.
• Building a 23 faculty member team on Digital Lego-inspired Construction

Education
• Knowledge gained from this project will be introduced into CEE 574: Materials Selection for Sustainable Design

Funding
• Working with EI and CEE on industrial consortium and foundation funding
• Working with ARPA-E on $2.5M grant
• Working with City of Lansing on placement of bendable concrete deck on Aurelius Bridge in Lansing