

PROJECT OVERVIEW REPORT

1. UTC Identifying Number
69A3551847102
2. Center Identifying Number
CAIT-UTC-REG59
3. Project Title
Durability of Low Carbon Concrete Mixtures
4. Principal Investigator & Contact Information
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7. Project Description
The primary goal of this proposal is to develop a deeper understanding of the relative performance of a wide array of low-carbon concrete systems in environments where the concrete will be subjected to chlorides and other deicing salts. This goal will be met through the following objectives: 1. understand the chloride diffusion rate in low-carbon concrete mixtures; 2. understand the relative resistance of various low-carbon concrete mixtures to salt scaling and 3. develop life-cycle expectancy models for various low-carbon concrete mixtures.
8. Implementation of Research Outcomes (or why not implemented)
The intended outcome of the project is to present a systematic approach to examining the durability of a wide array of low-carbon concrete mixtures. The information gathered will be used to predict life expectancy of the concrete in regards to onset of corrosion and likelihood of significant scaling.
9. Impacts/Benefits of Implementation (actual, not anticipated)
To Be Determined

10. Dates and Budget

Start date: 5/15/2021
End date: 5/14/2022
UTC (CAIT) Dollars: \$48,550
Cost Sharing: \$53,191
Total Dollars: \$101,741

11. Keywords

Concrete, corrosion, salt scaling, low-carbon concrete, sustainability, chloride diffusion

12. Web Links (Reports and Project Website)

<https://cait.rutgers.edu/research/durability-of-low-carbon-concrete-mixtures/>