

Illinois DOT



Contact Information:

Andrew Stolba

✉: andrew.stolba@illinois.gov

☎: (217) 782-7086 (O)
(217) 685-0002 (C)

Field Demonstration of Dolomite Quarry By-products Used in Local Road Construction in Illinois

Project Goals:

- (1) Environmental impact assessment along with performance assessment of pavement sections constructed with dolomitic and limestone quarry by-products (QB).
- (2) Construct full-scale test sections with dolomitic QB to demonstrate sustainable and effective use of excess dolomitic QB sources in local road construction in Illinois. Both unsurfaced (seal coated) and thin hot-mix asphalt (HMA) surfaced pavements will be constructed as local roads to include (i) lightly cement-treated dolomitic QB, (ii) regular dense-graded dolomite base course layers, and (iii) limestone control section.

Project Scope:

- This demonstration project will provide field data to IDOT related to the long-term pavement performance and pavement life expectancy.
- Conduct a comparative Life-Cycle Assessment (LCA) study using FHWA's LCA Pave Tool of the three constructed test sections using field construction and aggregate data from the project and the State of Illinois, utilizing the life-cycle inventories from the FHWA LCA Commons Database and dolomite aggregate source from Environmental Product Declarations (EPDs) from quarries.
- A Life-Cycle Cost Analysis (LCCA) of the QB applications will also be evaluated.

