## SAFEBASE CASE HISTORY

SafeBase<sup>™</sup> Carbon Fiber Reinforcement Calvary Church, Minneapolis MN

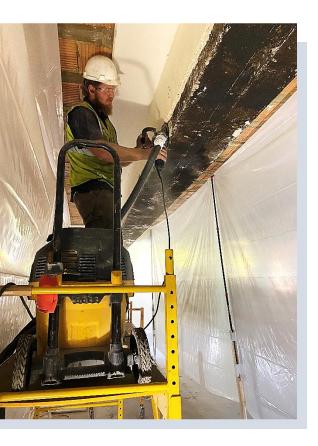


## June 2023

SafeBasements of Minnesota was sent a request from Frana Companies for strengthening the concrete beam moment capacities of three existing beams inside Calvary Church using carbon fiber reinforcement. The Church was being remodeled and the beams needed to be brought up to

code. Each beam was 28'3" long, 18" wide and 28" deep. SafeBasements completed the required calculations for the design and created plans for the carbon fiber reinforced polymer underlayment of the beams. The plans used two layers of 24" Bidirectional mesh installed on the bottoms of the beams and wrapped about 3" up the sides.







*Left: Surface Prep Above: Epoxy Application* The installation process first involved prepping the beam surfaces by grinding the concrete to expose the aggregate, cleaning/vacuuming the surface, and performing some minor patching.

Once the surface was prepped, the carbon fiber reinforcement was installed by saturating the beam surface with epoxy, saturating the strap with epoxy, then adhering the strap to the surface. All the work was performed



overhead on scaffolding. The project was completed in June 2023.

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SAFE BASEMENTS

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