

PROJECT

Cadet Chapel
West Point Military Academy
West Point, New York

CLIENT

John P. Stopen Engineering Partnership
Syracuse, New York

PROJECT DESCRIPTION

The West Point Cadet Chapel is an English Gothic Cathedral constructed primarily of load-bearing stone and brick masonry. Atkinson-Noland conducted a series of nondestructive tests to gather information about the existing condition of the chapel including construction of exterior walls, tower columns, floor slabs, and spiral concrete stair reinforcing. The work was conducted in a sensitive manner to minimize effects to the Chapel's pipe organ, which is the largest in the world.

SERVICES PROVIDED BY ATKINSON-NOLAND

- Microwave radar survey of walls, floor slabs, and spiral stair to determine wall thickness and section, bond stone location, reinforcement and ties, and the presence and location of internal voids. Radar findings were verified with borescope observations.
- In situ stress and deformability tests with flatjacks to measure vertical stresses at specific locations and compressive strength of the masonry.
- Ultrasonic pulse velocity testing including tomographic velocity reconstructions to confirm column construction and presence of voids or cracks.
- Mortar analysis to characterize material properties.



Cadet Chapel



Scanning with radar for bond stones



In situ deformability testing



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