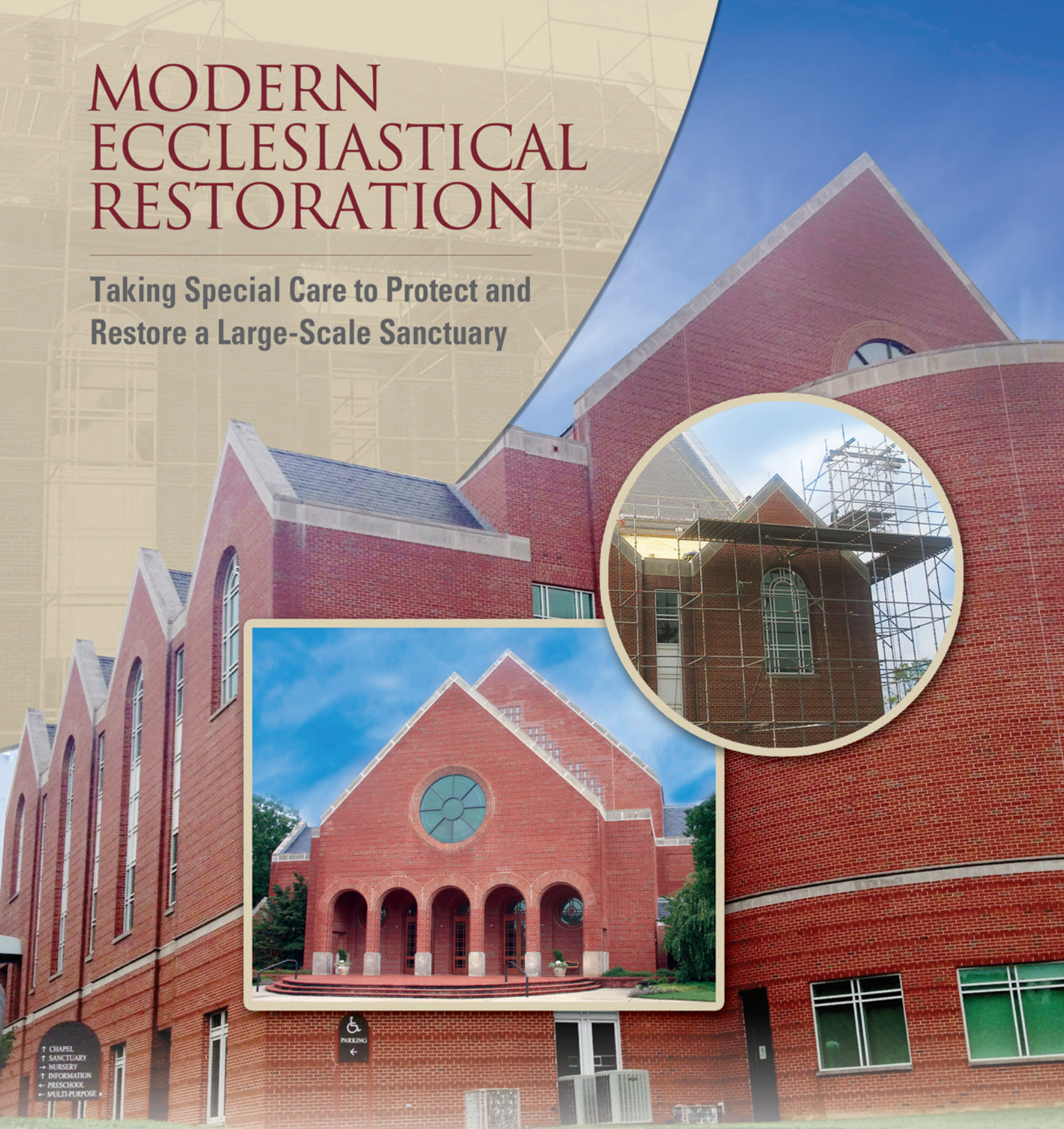


# MODERN ECCLESIASTICAL RESTORATION

Taking Special Care to Protect and  
Restore a Large-Scale Sanctuary



↑ CHAPEL  
↑ SANCTUARY  
→ NURSERY  
↑ INFORMATION  
← PRESCHOOL  
← MULTI-PURPOSE

♿  
PARKING  
←

**Arden Presbyterian Church**  
Arden, North Carolina

 **MPS**  
**MASONRY PRESERVATION SERVICES, INC.**  
TRADITION ♦ TECHNOLOGY ♦ INTEGRITY

# Rectifying Serious Structural Deficiencies While Facility Remained Open to Worshippers

## Arden Presbyterian Church

## Modern Ecclesiastical Restoration

### PROJECT BACKGROUND

- ◆ The Arden Presbyterian Church's new massive sanctuary structure suffered from extensive interior leakage as soon as it was completed
- ◆ Sutton-Kennerly and Associates (SKA) conducted a condition assessment of the structure, including its masonry walls, steep-sloped and low-sloped roofs, and windows
- ◆ Numerous design and construction flaws were identified including lack of and/or improperly installed flashing, improper roof detailing, and improper window flashing
- ◆ Investigation uncovered serious backup wall deficiencies including improperly constructed concrete masonry unit core walls and improper or missing attachment of limestone components (coping and fascia panels) installed along the gable rakes

### PROJECT CHALLENGES

- ◆ The sanctuary had to remain open and available for worship services and parish outreach activities during remediation efforts
- ◆ Special care to protect interior finishes during construction was required
- ◆ Extensive system scaffolding was required for safe work access including provisions for the lifting, handling, storage, and reinstallation of heavy limestone components
- ◆ Many CMU backup walls had to be rebuilt to accommodate anchorage and pinning of limestone copings and fascia panels, all of which were sloped along the gable
- ◆ Extensive engineering was required to secure the stone while providing integral flashing properly interfaced with new roofing

### PROJECT APPROACH

- ◆ MPS designed, erected, and maintained system scaffolding for the masonry rebuilding phase, along with accommodation of roof replacement that followed the masonry wall rebuilding
- ◆ Many of the building's window lintels required removal and reflashing, especially the glass block windows along the sanctuary's front wall
- ◆ Hundreds of heavy limestone components were removed and reinstalled with proper flashing and pinning designed to resist the steep slope of the gable rakes

*"MPS has worked with us on a number of successful projects including the Arden Presbyterian Church. This was a relatively new building with numerous defects in the waterproofing and flashing details. MPS was very professional in their approach, and knowledgeable and experienced in the execution of their work. The project was a complete success thanks to MPS's attitude and attention to detail."*

**Zebulon W. Wells, Jr., P.E.**  
Project Manager  
SKA Consulting Engineers, Inc.



Crafting a higher standard for preservation, Masonry Preservation Services is recognized throughout America for our unique approach to masonry preservation and building envelope diagnostics. MPS has been specializing in architectural maintenance and restoration since 1985.



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