



**PROJECT DATA SHEET:**  
**Cathedral-Basilica of St. Louis, King of France**

**RECROWNING THE JEWEL OF THE FRENCH QUARTER**



*Masonry Preservation  
and Enhancement Specialists*

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# Repair and enhance without changing the aesthetics.



## St. Louis Cathedral

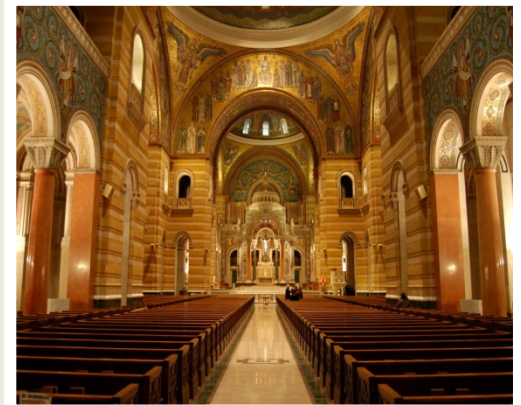
**Location:** New Orleans, LA

**Age:** Built 1793, Renovated 1851

**Key Topics:** Historic stabilization, NDE, masonry analysis, GS anchorage, CIF injection

### Project Background:

- The oldest continuously operating cathedral in the United States
- The cathedral's hallmark three spire image is ubiquitous and considered a symbol of New Orleans
- Overlooking Jackson square, It is often the backdrop for everything from live musical performances to films
- Following a major renovation in 1851, the cathedral's original 1819 bell was incorporated into the new design



### Challenges Presented:

- One of St. Louis' famous 3 spires had structurally declined to the point of great concern
- Affected in the deterioration was the housing of the original 1819 church bell
- The pilasters on the spire were pulling away from the rest of the structure, contributing to a shifting masonry shell and exterior cracking
- Throughout any potential repair program, technicians would need to leave the appearance of this symbolic structure unaltered and normal operations undisturbed







# Repair and enhance without changing the aesthetics.

## Services and Solutions:

- Masonry Solutions began by evaluating the spire and its pilasters to determine the extent of the separation and damage
- MSI technicians used fiber-optic borescoping and ground penetrating radar to non-destructively evaluate any underlying structural conditions
- Once a clear understanding of the situation was attained, MSI worked with the design team to develop a multipronged approach
- The first phase of the program called for pinning the separating pilasters back to the main structure
- Masonry Solutions designed, manufactured, and installed custom Gruenstark fabric anchorage that was both non-corrosive and non-epoxy based, tying the large stone pillars to the rear supports
- Masonry Solutions laboratory engineers then developed a customized, compatible CIF, one that would match the characteristics of the spire's masonry and promote long term stability, breathability, and sympathetic performance
- MSI techs, utilizing a low pressure injection system, then carefully injected the spire, immobilizing the masonry shell to prevent future cracking
- Throughout Masonry Solutions' work, the church bells continued to ring out from St. Louis Cathedral, an outcome not possible with the alternatives originally considered



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*Masonry Solutions International has worked in the field of masonry preservation and enhancement for over 20 years. It has pioneered a number of advanced techniques, including compatible masonry injection and undercut fabric anchorage.*