

## Minnesota State Capitol

St. Paul, MN

CASE STUDY | government buildings



Client - Minnesota State Capitol

Rep Office - SVL

Architect - HGA Architects and Engineers

Historic Team Consultant - Schooley Caldwell Associates

Construction Management - J.E. Dunn Construction

Historic Lighting - Crenshaw Lighting

LEED Certification - None

### Project Highlights:

- » 379,000 square feet
- » Renovation and restoration
- » 2017 AIA Minnesota Honor Award
- » 30,000 pieces of stone in capitol facade
- » Completed August 2017

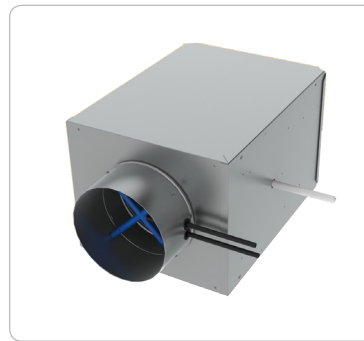




## ABOUT THE PROJECT

Renowned architect Cass Gilbert's Minnesota State Capitol was built in 1905. Time, weather and other environmental factors had severely taken hold of the historic building through the years. The exterior was crumbling in a few locations, safety concerns had to be addressed and the roof was causing issues both inside and out. Harsh environmental issues over the years made the roof unserviceable. Additionally, the roof made issues in the interior a burden too. Water damage had leaked in via the dome and caused issues with the finishes inside. Ineffective and outdated systems, sub-standard public areas and the fantastic murals that graced the walls had begun to fade or were damaged by the diminishing roof. Another concern that had to be addressed was creating more meeting space within the existing footprint in order to meet the needs of the legislation members.

Between 2010 - 2011, a unique team of historians, architects and civic leaders gathered to decide what would be the best way to restore and preserve the capitol building. HGA Architects and Engineers led a diverse design team and partnered with a variety of experts related to preservation and restoration. Construction began in 2013 and the renovated capitol was completed in August 2017.



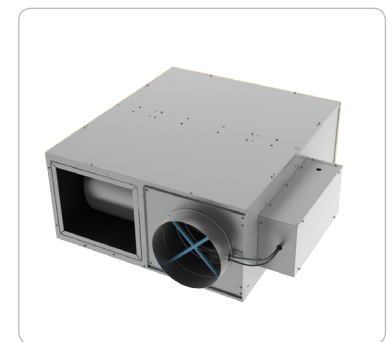
DESV



350R



FLOWBAR



DTQP





## THE TITUS SOLUTION

Updating and integrating new mechanical systems and products presented another challenge for the project team. The historical building's outdated system had to be updated to meet new standard requirements while preserving the history of the architecture. BIM models of the original system as well as other renovations were used to assist with the layout of the new systems. Enhancing the HVAC system was part of this process. The products selected were not only chosen for their performance, but for their aesthetics and seamless integration features as well. Several Titus products were installed including the FlowBar, DESV, DTQP, and 350R grilles.

The FlowBar™ architectural linear diffuser system maximizes engineering performance without sacrificing aesthetic considerations for the designer. Its outstanding performance allows higher airflows than conventional linear diffusers, with lower noise levels, making it ideal for high profile designs like the Minnesota State Capitol. For even better aesthetics, it can be curved to match the curvature of the ceiling making it truly a one-of-a-kind air distribution unit and a perfect fit for this project.

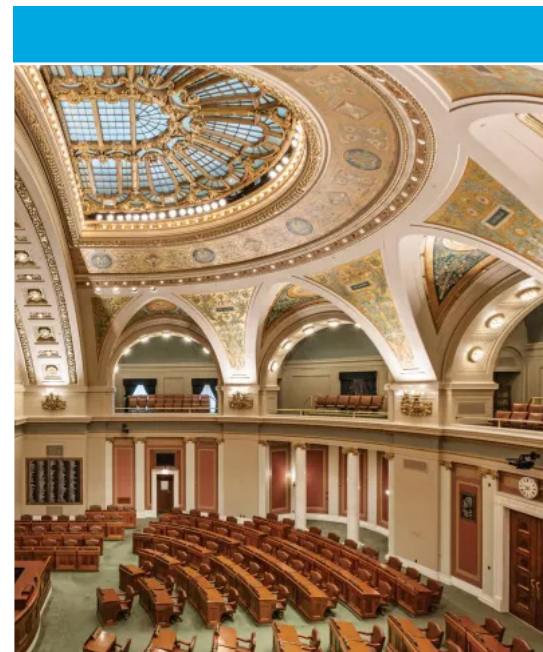
The DESV is a single duct terminal unit that regulates airflow to a zone in response to zone temperature requirements. The Titus ESV is unique as it incorporates many design features that increase performance, decrease service and installation costs, and offer increased value over the lifespan of the unit.

The DTQP is a parallel flow terminal unit with the fan positioned outside of the primary airstream and runs intermittently, when the primary air is off. Parallel flow or variable volume fan powered terminals operate in two distinct modes: variable volume, constant temperature when handling high cooling loads; and constant volume, variable temperature when heating or handling light cooling loads.

Our 350R is a steel return grille with 3/4" blade spacing, 35 degree deflection and has blades parallel to the long dimension. Titus' 300/350 Series return grilles have defined the standard for the industry for several years.

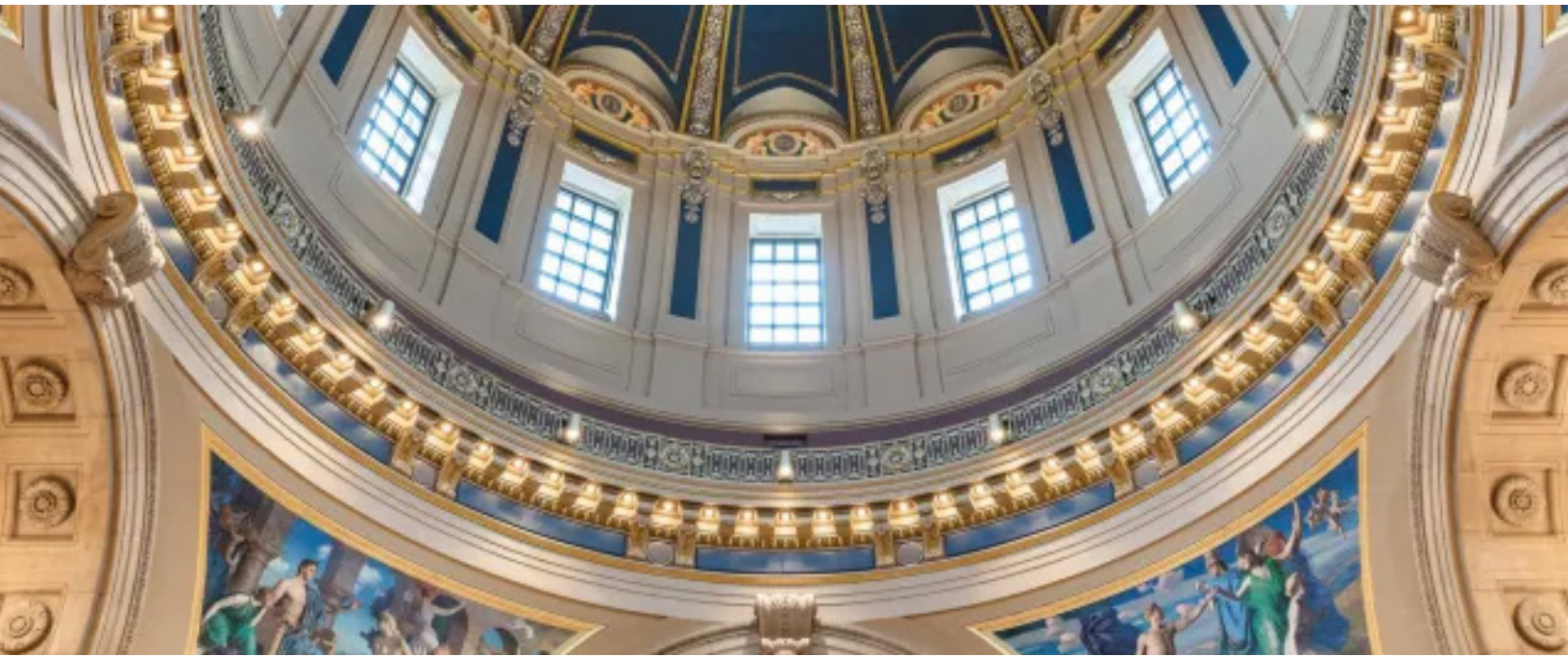
## THE END RESULT

The impressive design originally created by Cass Gilbert, one of the most renowned architects of his time, will now live on for a whole new generation to appreciate. All of the stakeholders involved were able to perfectly blend new technology and innovations with the historic aesthetics of the capitol building in order for the Minnesota State Capitol to continue to be fixture of the community for the next hundred years.



*photo - Paul Crosby Photography*

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