

Lumen and Forge Illuminates the West Virginia State Capitol Dome for America's 250th Birthday

Las Vegas immersive studio transformed Cass Gilbert's 293-foot gold-leafed landmark into a nightly canvas for "Liberty and Lights".

LAS VEGAS, NV, UNITED STATES, July 23, 2026 /EINPresswire.com/ -- [Lumen and Forge](#), the Las Vegas-based immersive technology studio behind some of the most ambitious large-format light installations in the United States, has completed one of the most significant architectural projects in its history: a four-night [projection mapping](#) production staged on the dome and façade of the West Virginia State Capitol in Charleston, presented as part of the state's official celebration of America's 250th anniversary.

The production, titled "Liberty and Lights," ran nightly throughout the America250 Capital City Celebration held on the Capitol Complex grounds from July 2 through July 5, 2026, with the marquee performance falling on Independence Day itself. Shows played on a rolling schedule between 9 and 10 p.m. each evening, repeating roughly every fifteen minutes so that the tens of thousands of visitors moving through the grounds could experience the full narrative without competing for a single viewing window.

For Lumen and Forge, the commission represented a rare convergence of technical difficulty, historic responsibility, and civic scale.

The West Virginia State Capitol is not an easy building to project onto. Designed by Cass Gilbert,



the architect responsible for the United States Supreme Court Building and the Minnesota and Arkansas state capitols, and dedicated in June 1932, the structure is faced in Indiana limestone over a structural steel frame and crowned by a 23-karat gold-leafed dome rising 293 feet above the Kanawha River. The dome stands roughly five feet taller than the dome of the U.S. Capitol and remains the tallest of any state capitol dome in the country. The building is listed on the National Register of Historic Places.

Gold leaf, curved surfaces, a colonnaded drum, deep window recesses, and Corinthian porticos all present distinct challenges for architectural projection. Gilded surfaces reflect light in ways flat masonry does not. Compound curvature means a flat video frame will distort unless the geometry is solved in advance. And a protected historic structure permits no rigging, no anchoring, and no physical alteration whatsoever.

To solve for that, the Lumen and Forge team began with a survey phase months ahead of the event. Specialized drones flew and photographed sections of the Capitol Complex, generating the geometry needed to build an accurate digital twin of the building. That model became the foundation for the entire production: every frame of content was designed, rendered, and pre-visualized against a millimeter-accurate virtual Capitol before a single projector was positioned on the lawn.

This front-loaded [event design](#) process is a signature of the studio's approach. By laying out the entire activation in a 3D environment, modeling and rendering in Cinema 4D, with supporting work in AutoCAD, 3D Studio Max, Rhino, and SketchUp, the team can validate sightlines, brightness, throw distances, blending zones, and audience positioning long before load-in begins. On a project where the canvas is a state capitol and the deadline is a national anniversary that arrives exactly once, that margin matters.

Rather than adapting generic patriotic content to a new surface, the production was written specifically for West Virginia. The show wove the nation's founding narrative together with the state's own history and culture, its statehood, its industry, its landscapes, and its people, mapped across a building that West Virginians have long called "The People's Building."

State officials had cited the acclaimed projection displays staged on the Washington Monument in Washington, D.C., as the inspiration and the benchmark for what the Charleston production should achieve. Delivering that standard on a dome five feet taller than the U.S. Capitol's, in a four-day window, on a live public site shared with a 230-foot Ferris wheel, multiple concert stages, and a full festival midway, required close coordination between the creative, technical, and operations teams.

"Liberty and Lights" appeared alongside the rest of the state's Capital City Celebration programming, which included the America250 Wheel, the world's tallest portable Ferris wheel, featuring 45 gondolas, one for each U.S. president, plus free concerts by ALABAMA, the West Virginia Symphony Orchestra, and The Marshall Tucker Band, an official ceremony honoring Gold

Star Families and veterans, historical exhibits, guided Capitol tours, artisan markets, and fireworks. The celebration coincided with Charleston's Sternwheel Regatta, drawing visitors from across the Mountain State and beyond.

The West Virginia Capitol project joins a portfolio that has made Lumen and Forge one of the most recognizable names in American architectural projection. With more than fifteen years of industry experience, the studio has projection-mapped the Las Vegas Stratosphere twice, transforming the tower into a towering bottle of Tequila Don Julio 1942 for Super Bowl week, and later deploying thirty high-powered Panasonic projectors across the structure for McLaren and Mastercard during Formula 1 weekend.

Other credits include a full-building Nike and Air Jordan projection adjacent to the arena during 2023 NBA All-Star Week in Salt Lake City; a world record at the Tropicana for the world's largest video game screen, streamed globally; a precision installation that turned the Hollywood Sign's "D" into a blue tribute for the Dodgers' World Series run; the Texas Tech 100th anniversary celebration; and a 60-foot geodesic centerpiece dome built for Travis Scott's CactusCon at ComplexCon 2024.

The company's client roster spans Nike, Toyota, Mastercard, Google, Microsoft, Meta, Coca-Cola, Pepsi, Verizon, Dell, HP, Jeep, Jaguar, John Deere, Capital One, EA Sports, National Geographic, the United States Marine Corps, Meow Wolf, and the Venetian and Luxor resorts, among others.

Beyond building-scale projection, Lumen and Forge designs, engineers, and operates 360-degree dome projection environments, geodesic domes from 10 to 90 feet, and inflatable structures ranging up to 200 feet, handling design, engineering, content creation, installation, show operation, and strike as a single integrated scope.

Cities and states have been steadily shifting how they approach public commemoration, with projection increasingly supplementing pyrotechnics at heritage sites where fire risk, noise, air quality, and animal welfare are concerns. A projection show leaves no residue, touches nothing, and can be re-programmed, re-themed, and re-staged for future anniversaries.

For a nation now entering a multi-year season of semiquincentennial observances, the Charleston project offers a working model of what that looks like at the state level: historically grounded, locally authored, technically rigorous, and free to the public.

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