



# Professional Roofing

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**D**uring the Hadrian reign in Italy (A.D. 117-138), a woman named Sophia gave birth to three daughters: Faith, Hope and Agape. Sophia taught her daughters Christianity, openly teaching them piety and prayer during a time when it was forbidden by Roman law. When word of their manner of life reached the emperor, he sent soldiers to bring them before him.

The emperor attempted to change their world view by offering them luxuries and a different lifestyle. However, despite their young years, the sisters were committed in their faith. Thinking their steadfastness only was a result of supporting each other, the emperor separated them.

Twelve-year-old Faith boldly dismissed the emperor's flattery and shamed his deeds against Christians. The maddened emperor tortured Faith and beheaded her. Ten-year-old Hope confessed Christ as steadfastly as her sister Faith, so the emperor threw her into a raging furnace. The flames extinguished upon touching her, so she, too, died by the sword. Agape, the youngest at 9 years old, was as devoted as her sisters. The emperor, now furious, hung her on a gallows, broke her limbs and beheaded her, as well.

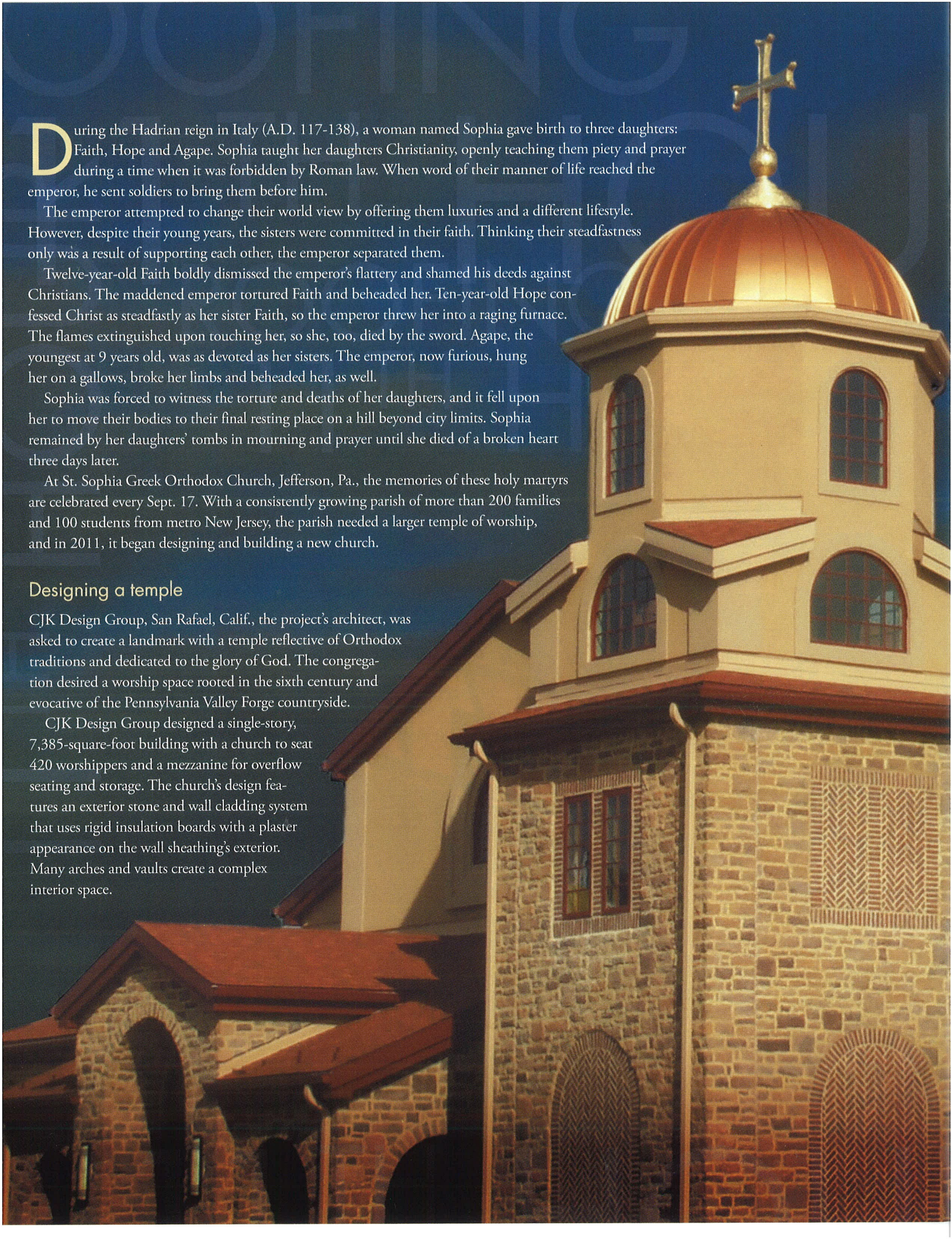
Sophia was forced to witness the torture and deaths of her daughters, and it fell upon her to move their bodies to their final resting place on a hill beyond city limits. Sophia remained by her daughters' tombs in mourning and prayer until she died of a broken heart three days later.

At St. Sophia Greek Orthodox Church, Jefferson, Pa., the memories of these holy martyrs are celebrated every Sept. 17. With a consistently growing parish of more than 200 families and 100 students from metro New Jersey, the parish needed a larger temple of worship, and in 2011, it began designing and building a new church.

## Designing a temple

CJK Design Group, San Rafael, Calif., the project's architect, was asked to create a landmark with a temple reflective of Orthodox traditions and dedicated to the glory of God. The congregation desired a worship space rooted in the sixth century and evocative of the Pennsylvania Valley Forge countryside.

CJK Design Group designed a single-story, 7,385-square-foot building with a church to seat 420 worshippers and a mezzanine for overflow seating and storage. The church's design features an exterior stone and wall cladding system that uses rigid insulation boards with a plaster appearance on the wall sheathing's exterior. Many arches and vaults create a complex interior space.







# ROOFING IN THE 11<sup>TH</sup> HOUR

GSM Roofing steps in to finish the metal roof system on St. Sophia Greek Orthodox Church in Jefferson, Pa.

by Chrystine Elle Hanus



**Project name:** St. Sophia Greek Orthodox Church  
**Project location:** Jefferson, Pa.  
**Project duration:** January 2012-March 2012  
**Roof system types:** Metal  
**Roofing contractor:** GSM Roofing, Ephrata, Pa.  
**Product manufacturers:** ATAS International Inc., Allentown, Pa.;  
 Grace Construction Products, Cambridge, Mass.



A critical design component was to have a dome on the church. Centrally oriented to be omnipresent from the interior and exterior spaces, the dome was designed to be made of metal to follow the Greek Orthodox church tradition of using metal. The building's height at the top of the dome is 53 feet, and eight columns brace the 32-foot-wide diameter dome,

which has 12 windows representing the 12 disciples. A second dome, the bell tower, features a star atop marking it as an important element that, along with the main dome, was designed to proclaim the church's message.

### A stubborn leak

After numerous attempts by the roofing contractor first hired by the church to fix a stubborn leak in the main dome, the general contractor, Horst Construction, Lancaster, Pa., made the decision to call GSM Roofing, Ephrata, Pa., for help.

"We needed an experienced company to help us out in a pinch," says Scott Burkholder, project manager for Horst Construction. "The GSM Roofing guys jumped at the challenge."

GSM Roofing accepted the challenge and committed itself to getting the job completed in two months, in time for the scheduled church dedication.

### A tight schedule

Despite an extremely tight timetable and the pressure of knowing iconographers from Greece were in flight to Montgomery County to paint murals on the domes' ceilings, the GSM Roofing team worked to quickly resolve the leak and finish the work the original roofing contractor could not complete.

After repairing the leak caused by improper underlayment installation, GSM Roofing's crew covered the domes' plywood decks with Grace Construction

Products' 30-mil-thick Ultra self-adhering underlayment followed by 3,725 square feet of ATAS International's 0.040-inch-thick aluminum standing-seam panels coated in a Coppertone KYNAR® 500 finish.

"The metallic finish adds incredible dimension to the luminosity reflecting God's light and defining the dormered windows," says Joseph Soares, designer for CJK Design Group. "The metallic surface also is a stunning contrast to the lush green landscaping."

### More challenges

The dormers around the main dome's windows created a particular challenge. Working in GSM Roofing's sheet metal shop, GSM Roofing's sheet metal crew hand-fabricated the arches for the main dome's half-moon windows using ATAS International's 0.040-inch-thick Kynar-coated aluminum and then custom-assembled and installed the arches on-site. All workers wore harnesses with retractable lanyards while working on the domes' high-reach areas and on the roof.

Because the materials required for the project already were on-site when GSM Roofing arrived, another challenge was perusing inventory for the correct material types and quantities needed. A close eye had to be kept on the supply, and orders were placed immediately when shortages were discovered.

### A blessed completion

GSM Roofing began its work Jan. 30, 2012, and despite working under a tight schedule, it successfully repaired the leak and completed its work in time for the christening of the crosses, which signified the project's end. On March 11, 2012, GSM Roofing worker Kevin Shimp and Father Peter Thornberg ascended to the top of the dome to bless and install the crosses that serve as a crowning glory of the new church.

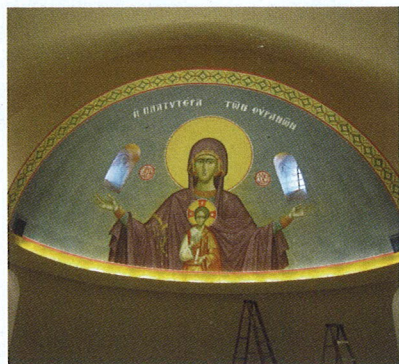
"For GSM Roofing, some days just don't get any better than that," says J. Reed Gooding, president of GSM Roofing.

With GSM Roofing's help, the new St. Sophia Greek Orthodox Church is a beautiful sight that causes passersby to stop, visit and reflect on faith, hope and agape, creating a regional attraction and Greek Orthodox icon of faith that would make St. Sophia rejoice. 🌟🌟



Photos courtesy of GSM Roofing, Ephrata, Pa.

From top to bottom: The domes were covered with Grace Construction Products' 30-mil-thick Ultra self-adhering underlayment followed by ATAS International's 0.040-inch-thick aluminum standing-seam panels; GSM Roofing hand-fabricated the arches for the windows.



Iconographers from Greece were flown in to paint murals on the domes' ceilings.

**CHRISTINE ELLE HANUS** is Professional Roofing's associate editor and NRCA's director of communications.