



PRECISION, PREPARATION, & PERFORMANCE: Restoring a High-Visibility Metal Roof in Georgia



In Marble Hill, Georgia, a freestanding metal building stood prominently along a well-traveled roadway, its pitched roof exposed to decades of relentless environmental stress. Year after year, intense southern sunlight, seasonal storms, and repeated temperature fluctuations had quietly tested the roof's resilience. From the ground, the structure still appeared intact, but closer inspection revealed a different story. Minor leaks had begun to develop during heavy rains, fasteners had loosened as the metal expanded and contracted over time, and the original protective finish had deteriorated under prolonged UV exposure. The building itself remained structurally sound, but the roof had reached a critical point where proactive intervention would determine whether restoration or replacement lay ahead.

At approximately 18,500 square feet, the metal roof still possessed strong structural integrity. The panels were secure, corrosion was limited, and the underlying system remained viable. This distinction was critical, because it presented an opportunity to restore the roof rather than replace it entirely.

Acting early would allow the owner to preserve the existing structure while extending its service life, improving weather resistance, and securing long-term protection through a manufacturer-backed warranty. Recognizing the advantages of restoration over full replacement, the owner made a strategic decision to invest in extending the life of the existing system.

To execute the restoration, the owner partnered with ArkBow Roofing, a contractor known for its disciplined approach to commercial roof restoration and its specialization in silicone coating systems.

A TEAM DEFINED BY EXPERIENCE AND EXECUTION

ArkBow Roofing was founded by retired U.S. Army veteran Steven Jacks, whose military background instilled a strong emphasis on precision, account-





ability, and methodical execution. Based in Alabama, the company has built a reputation for restoring commercial and industrial roofing systems, helping building owners extend the life of existing roofs while minimizing disruption and cost.

On this project, ArkBow's responsibilities extended beyond installation. The team evaluated the roof's condition, developed a restoration strategy, coordinated with product specialists, and guided the project from initial assessment through completion.

Their relationship with W. R. MEADOWS representative Christopher Korn, who supports the KNIGHTSHIELD line of silicone roofing products, played an important role in aligning the project with the appropriate materials, training, and installation standards and support.

From the beginning, the restoration was approached as a coordinated effort. The contractor, manufacturer representative, and building owner worked together to ensure the selected system would address existing issues, meet performance expectations, and provide reliable long-term protection.

UNDERSTANDING THE ROOF'S CONDITION

ArkBow's first step was a thorough evaluation of the roof to identify areas requiring attention and determine whether restoration was viable. Walking the pitched metal surface, the team documented conditions commonly associated with aging metal roofing systems. Minor leaks were present in isolated areas, particularly around penetrations and seams. Surface oxidation had weakened portions of the original finish, leaving metal panels vulnerable to continued deterioration. Flashings showed signs of wear from years of expansion and contraction, and fasteners, essential for maintaining structural stability, required careful inspection and correction.

PREPARATION: THE WORK THAT DETERMINES LONG-TERM SUCCESS

With the restoration plan in place, ArkBow's crew began the preparation phase, understanding that the long-term success of any coating system depends on the condition of the substrate beneath it. The team thoroughly cleaned the roof surface, removing dirt, debris, and contaminants that could interfere with adhesion. Areas affected by oxidation were addressed, and existing leaks were repaired to ensure the roof was watertight before coating began.

Fasteners were treated with particular care. Each fastener was individually inspected, tightened, or replaced where necessary. Once secured, the crew applied KNIGHTSHIELD KS-5700 silicone flashing grade sealant to encapsulate the fasteners. This process created a flexible, vulcanized seal that bonded directly to the metal substrate. By encapsulating each fastener, the sealant helped prevent water intrusion while also reducing the likelihood of fasteners backing out over time due to movement caused by temperature changes.

Despite these issues, the most important finding was that the metal panels themselves remained structurally sound. There was no widespread structural failure or severe corrosion that would require replacement. This meant the roof could be restored effectively, preserving the existing system while addressing vulnerabilities before they progressed further.

The roof's visibility added another layer of consideration. Unlike flat commercial roofs hidden behind parapets, this pitched metal roof was fully visible from multiple angles. The restored system would need to deliver reliable waterproof protection while also presenting a clean, uniform appearance consistent with the building's exterior.





The crew also used KNIGHTSHIELD KS-5600 silicone flashing grade sealant to reinforce critical details across the roof. Seams, penetrations, pipes, and transition areas were carefully flashed with KS-5600 to ensure these vulnerable points were protected against expansion, contraction, and moisture infiltration. This step helped ensure that movement-prone areas remained watertight and durable under changing environmental conditions. During preparation, ArkBow identified a ridge vent that had been added after the original installation and had not been properly integrated into the roof system. Rather than attempting to coat over an incompatible detail, the team replaced the ridge vent with a properly matched component and prepared the surrounding area to ensure full integration with the restoration system. Addressing these details before coating ensured the entire roof would perform as a unified system.

SELECTING AND INSTALLING THE RESTORATION SYSTEM

After preparation was complete, ArkBow installed the KNIGHTSHIELD silicone roof coating system from W. R. MEADOWS. Silicone coatings are particularly effective for restoring metal roofs because they provide excellent UV resistance, waterproofing capability, and long-term flexibility. Once cured, silicone forms a seamless membrane that protects against moisture intrusion and environmental stress.

The system was completed using KNIGHTSHIELD KS-5100 silicone roof coating as the finish coat. KS-5100 provides durable waterproof protection and, when installed by a certified contractor as part of a complete system, qualifies for a 10-year full system warranty covering both material and labor. The owner selected KS-5100 in black, one of KNIGHTSHIELD's three standard colors. KS-5100 is also available in five premium colors, providing flexibility to match building aesthetics. Additional color options may be available through consultation with a W. R. MEADOWS representative when specific project requirements exist.

Installation required careful attention to environmental conditions. Cold morning temperatures initially fell below recommended application thresholds, and the crew delayed coating until temperatures rose to ensure proper curing. Once conditions were suitable, the coating was applied evenly across the prepared surface. The silicone adhered smoothly to the metal panels, seams, fasteners, and flashing areas, forming a continuous, seamless membrane that eliminated potential points of water entry.

ArkBow's training and certification ensured the coating was applied according to manufacturer specifications, preserving both system performance and warranty eligibility.

A VISIBLE TRANSFORMATION

As the restoration progressed, the transformation of the roof became increasingly apparent. The original weathered green finish was replaced by a uniform black surface that complemented the building's exterior. The new coating provided not only enhanced protection but also improved the building's overall appearance, reinforcing the value of restoration as both a functional and visual improvement.

Beyond aesthetics, the seamless silicone membrane provided continuous protection against moisture, UV exposure, and environmental stress.

The restored roof was now equipped to withstand Georgia's demanding climate while protecting the structure beneath it.

EXTENDING ROOF LIFE THROUGH STRATEGIC RESTORATION

Upon completion, the restored roof provided renewed waterproof protection, reinforced structural reliability, and extended service life. The KNIGHTSHIELD system sealed fasteners, reinforced vulnerable areas, and created a seamless protective membrane across the entire roof surface. The building owner gained long-term protection backed by a manufacturer-supported warranty while avoiding the cost and disruption of full roof replacement.

The project demonstrated how early intervention, proper preparation, and certified installation can extend the life of an existing metal roof while improving both performance and appearance. By addressing vulnerabilities before they escalated into structural failure, the team preserved the existing roof system and delivered reliable, long-term protection.

Through careful planning, disciplined execution, and coordinated teamwork, ArkBow Roofing successfully restored the roof and ensured its continued performance for years to come. The project stands as a clear example of how preparation, precision, and the right materials can transform an aging roof into a durable, protected system capable of meeting the demands of its environment.



PROJECT SPECS

Location: Marble Hill, Georgia
Building Type: Freestanding Pre-Engineered Metal Building

Roof Area: 18,500 Square Feet

Contractor: ArkBow Roofing

Sales Representative: Christopher Korn

Products Used:

KNIGHTSHIELD KS-5700 Silicone Flashing Grade Sealant
KNIGHTSHIELD KS-5600 Silicone Flashing Grade Sealant
KNIGHTSHIELD KS-5100 Silicone Roof Coating (Black Finish Coat)



About W. R. MEADOWS

Since 1926, W. R. MEADOWS has been a leader in developing products that protect structures from moisture infiltration. From below-grade installations to rooftops and in-between, issue-specific products target and prevent potential, costly problems. Today, patented technologies enable more environmentally effective, efficient designs, and many of our products contribute LEED-certification “green” credits. With 12 manufacturing facilities throughout the U.S. and Canada, the materials you need are within easy reach. For additional information, call 800.342.5976 or visit www.wrmeadows.com.



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