

CASE STUDY

RETAIL & WHOLESALE

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RETAILERS BENEFIT FROM THE METAL BUILDING MODEL



The retail market faces rapid change as demographics diversify, e-commerce grows and expectations change. Today's consumers know they can shop online more quickly and conveniently than traveling to a shopping center, mall or a warehouse store. Still, the touch and feel of retail products keeps consumers walking through the doors of brick-and-mortar stores throughout America. Yet studies indicate that today's in-store customer wants to shop in locations that are well-designed, comfortable, organized and interesting. Metal building systems provide that form and function, as well as many features that make the buildings more efficient and economical for the owner.

RETAIL MARKETS INCLUDE:

- Discount stores
- Department stores
- General merchandise stores
- Home goods stores
- Specialty stores
- Main Street merchants
- Grocers
- Warehouse stores
- Wholesalers
- Chain restaurants

Metal building systems accommodate these types of businesses very well for a variety of reasons. Here are some key factors.

Metal buildings are quick to construct. Speed-to-market is critical for retailers. The sooner the doors open, the sooner customers and revenue begin to flow in. Metal buildings are constructed from components that are fabricated and finished before they arrive at the job site. The streamlined process for delivering completed metal buildings minimizes downtime between trades and often makes it possible for construction crews to work year-round. For example, metal building erectors orchestrate the assembly of the structural steel, metal roof and walls and typically install the doors and windows. This means one subcontractor coordinates all these activities to erect and enclose the building faster than other construction processes.

Metal buildings offer inherently flexible designs. These structures provide open, column-free spaces with high vertical clearance that give store retailers tremendous flexibility to change out displays, reorganize departments and reconfigure shelving and stocking scenarios. When appropriate, design-build teams can create hybrid structures that blend metal building components with conventional materials, such as glass or masonry, to conform to unique display situations or changes in product offerings.

Customization is at the core of a metal building. In response to codes that influence aesthetic requirements for retail facilities, metal building manufacturers and their custom suppliers provide store owners and developers with a wide range of exterior building finishes and detailing options. These make it possible to custom-design facilities in ways that uphold a retailer's brand standards while meeting the expectations of local zoning officials. Additionally, metal buildings can be designed with an eye toward future expansion. This typically entails simply removing a wall, erecting the steel framing system for the new space and cladding the addition to match the existing structure.

Metal buildings enable a collaborative, integrated design-build process. Innovation plays a key role in helping retailers secure and retain a competitive edge in a dynamic marketplace. For instance, the computer modeling software used by metal building manufacturers allows project teams to digitally test design ideas. What's more, they can incorporate lessons learned from facility managers and store employees to further customize metal building components and features. This process draws upon the skills, experience and knowledge of all team members and channels this cumulative expertise into ongoing quality improvements.

Metal roofing protects and preserves precious inventory. Metal roofs, a key component of metal building systems, can handle heavy snow, remain watertight during torrential rainfalls, have exceptional fire resistance and are shown to withstand hurricane-force winds. Both standing and double-locked seams are options when incorporating metal roof systems, which can be easily integrated with daylighting technology, solar arrays and other unique features.

Metal buildings contribute to achieving today's sustainability goals. For example, metal roof and wall systems typically include high-performance insulation that meets or exceeds energy code requirements. In addition, the metal building manufacturing process reduces waste and energy use. Further, cool metal roofs meet solar reflectance and infrared emittance benchmarks and help to mitigate the heat island effect while lowering building cooling loads. Finally, the steel used for metal buildings is typically recycled and also 100% recyclable.

Metal buildings provide just-in-time delivery. The components needed to construct a metal building can be delivered on a just-in-time basis. This minimizes the laydown area required, makes it easier to keep the job site clean and organized, and reduces (or eliminates) the amount of materials that need to be protected from inclement weather. It also means there is less traffic to and through the site, improving safety for both construction crews and the public.

Metal buildings are low-maintenance solutions. Metal buildings keep operations costs down while minimizing business interruption. For example, metal wall panels, roofs and their exterior finishes are generally warranted to last between 25 and 35 years. In comparison, conventionally constructed commercial facilities, on average, need to be repainted, resurfaced or patched and repaired every five to seven years, depending on the materials originally used to build them.

Metal makes buildings that last. Metal buildings stand up to the elements and are long-lasting. Steel doesn't rot, is mold and mildew resistant, doesn't warp and doesn't deteriorate with age. The lower life-cycle costs make metal buildings an investment that continues to keep building costs attractive for decades.

Architects, engineers and contractors who specialize in retail buildings attest to the value, creativity, reliability and speed of delivery that is found in this form of construction. To speak with an accredited metal building manufacturer in your area, contact mbma@mbma.com.





COSTCO WAREHOUSE STORES

According to Ali Moayeri, senior vice president of construction for Costco Wholesale Corporation (Costco), the technology used for fabricating and constructing metal buildings has improved so substantially over the past few decades that this multinational retail corporation now uses metal building systems to construct 90% of its new warehouse stores.

“Costco first tested using a metal building system 32 years ago in California,” Moayeri says. “Since then, the technology and the process for completing metal building projects have improved considerably. For example, metal building manufacturers can now achieve 60-foot spans between rafters. That has enabled us to eliminate three bays, 200 joists and 33 columns. These changes result in a cost savings of about \$150,000 per warehouse store and increase our flexibility for merchandising.”

Speed of construction, durable and attractive exterior finishes, innovative coating processes, and the ability to achieve a lightweight, strong structure are also key benefits described by Moayeri and others involved in the design and construction of Costco stores.

“It’s important to Costco for cash registers to ring as soon as possible after the decision to build has been made,” says Ernie Brandi, vice president for Span Construction, Inc., which has built more than 100 million square feet of space for Costco. “The less time we spend in construction, the earlier the store can open, and the sooner Costco members can start shopping.”

“We can enclose a metal building in 45 days,” Moayeri explains. “Once the roof is on, the building is 100% watertight. The installation of electrical, plumbing, fire protection and lighting systems can proceed while the exterior details and features are being completed. We have a very aggressive schedule. We can build a metal warehouse store—from foundation to opening—in 110 days. The typical schedule for a conventional construction process is 160 to 180 days.”

Russ Hazzard, AIA, president of MG2, an architecture firm that has designed more than 700 Costco warehouse stores across the U.S. and abroad, says metal building systems help architects to efficiently achieve the client’s practical goals while also meeting the aesthetic requirements of local jurisdictions.

“Costco’s philosophy is simple: keep costs down and pass the savings on to Costco members,” Hazzard says. “The prototype set we’ve developed for Costco serves as the basis for designing the warehouse stores. How the parts of the metal buildings are put together is fairly consistent because the prototype is based on Costco’s merchandising and logistical requirements. However, like other retailers, Costco must address the architectural requirements set by local zoning authorities. All kinds of nuances can influence the design of an individual store.”

“At the end of the day, we are all committed to bringing the right solution to the owner,” Brandi concludes. “Using metal building systems enables us to provide a high-quality product that costs the owner less while performing to expectations.”

DRUG MART RENOVATION AND RETAIL MALLS

“We have constructed dozens of strip malls, retail stores and restaurants using metal building systems,” says Roman Paich, executive vice president of Pride One Construction in Medina, Ohio. “For strip malls, we start by building a warm white box. After the roof and exterior are finished, the mall owner can add interior partition walls and separate water and electrical services for each unit. In addition, we’ve worked with Drug Mart, Jo Ann Fabrics and Subway restaurants. We recently completed the 150,000-square-foot National Design Mart in Medina.”

Paich says the large spans and high ceilings that can be achieved using metal building systems were key factors in choosing this option for the National Design Mart, which sells flooring, furniture, granite and other materials to people who are remodeling their homes.



The Drug Mart interior build-out that Pride One completed in Plain City, Ohio, demonstrates how long-lasting and adaptable metal buildings can be. Paich says this existing store was 15 to 20 years old at the time his company “gutted and completely redid the interiors.” He adds: “The exterior was also updated. That’s a great thing about metal buildings. You can peel off the exterior skin and add new cladding to make them look like new again.”

FLEMINGTON DEPARTMENT STORE

Art Hance, president of Hance Construction, Inc. in Washington, New Jersey, has over 30 years of experience in constructing metal buildings. He says the ability to use an efficient, streamlined delivery process is a win/win for store retailers, mall owners and contractors.

“Our retail work is local and owner-occupied,” he says. “We’ve found that these clients are interested in the quality and long-term value that metal buildings provide. They consider them an investment. We do a lot of additions to existing buildings because we are in a very built-up environment.”



The project Hance Construction completed for Flemington Department Store in Flemington, New Jersey, illustrates these points. “This was an expansion of an existing metal building,” Hance says. “We managed the erection of the metal building addition and made sure all aspects of it met the owner’s expectations.”

Hance says the single-source convenience metal building systems offer made it easier to accomplish those goals. “The roof, walls and doors—the entire building envelope—are designed and detailed as a kit,” he says. “When we use a conventional approach, we have to get the masonry, structural steel, walls and roof from separate entities, separate suppliers.” Spending less time on project coordination means the doors to a new or expanded and remodeled retail facility can open sooner.

This is advantageous for the general contractor, too. “Every day we aren’t done is still a day when we are paying all of our overhead and general conditions costs,” Hance says.



Located in Isanti, Minnesota, Coborn's Marketplace is a 51,101-square-foot grocery store prototype that emphasizes fresh products throughout, with large produce, meat and deli departments. It also has a test kitchen with a seating area on the second floor, a Caribou Coffee shop, pharmacy, self-service fuel pumps and an automated car wash.

COBORN'S, INC. AND CASH WISE FOODS

Rice Companies, Inc. is a construction firm based in Sauk Rapids, Minnesota, with offices in Mankato and Glencoe. For company President Chris Rice, the major benefits metal buildings offer retail store owners are three-fold: 1) the ability to open new stores year-round; 2) to have experienced crews construct each building, and 3) to use sophisticated computer software to digitally test and refine designs before a shovel hits the earth.

"We build all over the Upper Midwest," Rice says. "Location, budget, time of year and client preferences are all factors we consider when recommending metal buildings for retail projects. For example, we've constructed a lot of grocery stores for companies such as Coborn's, Inc. and Cash Wise Foods. We'll often switch between hybrid and metal building options, depending on the location, price point and the look our client wants to achieve. Metal building systems offer many options for customization. We've had people not even realize they are in a metal building—and this is exactly the point! All that matters is that owners are happy with their buildings—that they love the quality, how long each store took to build and the price point and performance."

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President, Rice Companies, Inc.



Cash Wise Foods started in 1979 as a new business model for Coborn's, Inc. when the company's owners converted one of their stores from a supermarket to a discount grocery warehouse. Since then, Cash Wise stores have grown in size and number. They are larger than typical supermarkets and offer products at substantially lower prices. There are 17 Cash Wise Foods stores across Minnesota and North Dakota. The 52,500-square-foot retail facility shown here is in Fargo, North Dakota.

The fact that Rice can assign crews that have experience working with metal building systems is valuable for both the contractor and the owner. Each crew efficiently erects and encloses a retail facility, then the subcontractors finish their work in a conditioned space. This extends the construction season in a climate that has everything from blizzards and bone-chilling cold to high winds, torrential rain and hail and heat waves where the outside temperature can soar above 100 degrees. This flexibility underscores that retailers can roll out store openings throughout the year, in spite of climate fluctuations.

Since Rice Companies is a design/build firm, Rice is especially enthusiastic about how computer visualization software has made design a lot more collaborative in-house. "Our designers can import information from a metal building manufacturer into Revit and use this to check everything from the purlin spacing, frame design and locations of bracing and columns to wall thicknesses and heights, window locations and roof penetrations," he explains. "We're able to look at how everything will work together and make adjustments long before we start construction. This gives us more time to develop different options, if this is something a store or mall owner wants."

ARKANSAS MUSIC WORKS

Music Works, of Bentonville, Arkansas, was designed by Burn's Mangold Architecture and constructed by Oelke Construction Company. Just under 10,000 square feet, the metal building space serves three diverse retail functions that include: sound-sealed practice spaces for music students; a retail sales floor for instruments ranging from pianos to electric guitars; and an online instrument sales division, serving clients nationwide.



GENE'S GALLERY

Gene's Gallery in Springfield, Missouri, was designed by R.E. Werner Architects, LLC and built by Williams Construction Company. Just under 9,000 square feet, a metal building system was chosen in lieu of a conventionally framed steel structure to create a hybrid steel solution. This configuration provided the most economical and expedient design for this unique retail application. This system includes unsupported and standard metal columns, rectangular spandrel beams to support metal stud framing, horizontal siding and a glazed storefront system. Channel spandrel beams and structural purlin angles support exterior load-bearing metal stud framing with exterior sheeting. The roof system integrates an efficient fiberglass insulation system and floating roof curbs.



PET FOOD CENTER

Pet Food Center in Evansville, Indiana, was designed by Mills-Wallace & Associates and erected by Hinderliter Construction. The nearly 12,000-square-foot metal building features a stone and EIFS facade, skylights to invite natural daylighting inside, a painted, exposed interior steel structure and efficient LED lighting throughout.





ALPINE LUMBER

Alpine Lumber, founded in 1963, has grown to include 18 locations throughout New Mexico and Colorado. Committed to its motto “We supply. You build.,” the company is 100% employee-owned and caters to both professional builders and homeowners.

In 2021, the Alpine team opened a strategically placed lumber yard in Silverthorne, Colorado, to provide materials and supplies to an underserved community. The \$7.3 million facility sits on 9 acres. Three metal buildings, totaling 38,000 square feet, provide office space, a showroom/retail store, indoor lumber yard and storage, and a large outdoor lumber yard with exterior racking. Saunders Construction served as general contractor. The erector was Big Johnson Construction. Galloway & Company Inc. provided architecture, civil engineering, development and entitlements, MEP engineering and structural engineering, as well as interior design, landscape architecture and site lighting design. The design included a standing seam metal roof with an R-41 liner system. The buildings are clad with 4-inch insulated metal panels.

Due to the building's prominent location in the town, there were specific expectations that its architecture should complement the surrounding aesthetics. To address community expectations, Galloway's architectural team specified a natural palette of



browns, beiges and greens that coordinate with neighboring businesses while incorporating Alpine's company colors. Galloway also chose timber-accent entryways to add to the drive-up appeal and to address the client's specific vision.

Galloway also built a natural ventilation pathway into the project, which its website refers to as “a unique way to reduce costs for the heating and cooling loads of this mountain facility.” By inviting mountain air inside through the placement of operable windows, air conditioning is not needed during the summer months. Most of the windows are operable, including the translucent panels in the “pop up” accent roof. Those panels also direct natural lighting from above into the showroom below without creating hot spots or glare.



LULU'S RESTAURANT

From her watermelon feta cheese salad and her sweet tomato pie to the walls on Lulu's Restaurant in North Myrtle Beach, South Carolina, owner Lucy Buffett's love of color is obvious.

The building has a wood entry with a canopy wrapped in aluminum with "Safety Yellow" panels. "Nifty Turquoise" roof panels top the structure, and "Jovial Peach" wall panels complete the exterior color palette. Buffett built this third restaurant location large—over 16,000 square feet—because she wanted to share what she calls "Gumbo Love" with as many customers as possible with less wait time.

The facility, designed to serve 5,000 guests per day, consists of a 15,663-square-foot themed restaurant/entertainment venue and a 2,200-square-foot retail building. LuLu's provides an outdoor playing area sporting a mammoth sandbox called the "Fountain of Youth." A covered outdoor dining area rests among 30-foot live oaks. The bar is composed of reclaimed hardwood pines from North Carolina, reclaimed tin and hand-painted bar columns. The kitchen boasts state-of-the-art equipment and a dual chiller.

Architect LS3P designed the structure using a metal panel wall system with 6-inch faced insulation. Fourteen overhead doors provide options for indoor and outdoor activities. Mashburn Construction Company served as general contractor.



4TH STREET CROSSING MARKET HALL

The 4th Street Crossing Market Hall in Silverthorne, Colorado, is billed as a place where "mountain meets modern." Architect Neostudio designed the 23,000-square-foot mixed-use facility using the main-street concept. Developer and general contractor Milender

White (MW) followed the design criteria set out within the Downtown Core Design District Standards and Guidelines and the Silverthorne Comprehensive Plan. The result is a pedestrian-friendly atmosphere—a place for residents to enjoy shopping, dining and attending activities in the 6,000-square-foot event hall. Several overhead doors in the market and hall open to plazas and landscaped areas and the design allows flexibility for various vendors.

The exterior of the metal building features wood for a combination of contemporary and traditional design. With an eave height of 27 feet 4 inches, the building has a standing seam roof and an R-46 liner system. The cost of the steel was \$1,142,000.

One of the unique features of the 4th Street Crossing is the Mint restaurant. Originally built in 1862, this structure served as a saloon where gold miners could quench their thirst. A perimeter mezzanine building was designed and constructed around this pre-existing historical building.

BEULAH COMMERCE CENTER

Beulah Commerce Center, located in Winter Park, Florida, is a 12.5-acre multiuse commercial and industrial park. The \$7.2 million first phase of the project includes three buildings totalling 97,000 square feet. Architect Harter-Adams designed the buildings to include sloped canopies and vertical parapet walls. Ceiling heights measure 17 to 20 feet high. Exterior construction includes use of EIFS, stucco and metal.

Prevost, an upscale bus manufacturer, occupies the largest of the buildings, which covers 41,600 square feet. Eugène Prévost built his first coach in 1924 and the company continues to manufacture and service custom luxury motorhomes and buses. The Winter Park facility is one of the company's nine service centers in the United States.

A second building will provide 24,300 square feet of flex-space for small business offices and warehouses and a third building, measuring 31,000 square feet, will house various warehouses, showrooms and offices. The owner speculates that about 100-200 jobs will be generated by the commerce center.



RUGGED RADIOS

Rugged Radios, a radio communications company based in Arroyo, California, began as a supplier of high-performance communications equipment for professional offroad racing enthusiasts. Its legendary dedication to the racing sector has led to the development of products valued by both amateurs and professionals.

After experiencing record growth in 2021, Rugged Radios expanded its senior management team and built its new headquarters in Arroyo. Steven Puglisi Architects (now Pegasus Architecture) designed the 15,000-square-foot facility using a metal building system and a metal roof. Varying trim colors and wall panels, accent columns and a structural steel tower design each enrich the building's architectural flair. Three additional buildings will house the research and development departments and a public café.



BLAIN'S FARM & FLEET

At Blain's Farm & Fleet, shoppers have been known to say, "If Blain's doesn't have it, you don't need it." The retail company sells almost everything: home basics, pet supplies, clothing and shoes, food and beverages, sports and outdoor equipment, lawn and garden supplies, farm and livestock implements, toys and games and auto parts. It also has a small-engine repair shop and an automotive service center that provides a two-minute vehicle inspection and battery, brakes and diagnostics checkups.

Recognized by Forbes magazine as one of America's best mid-sized employers, this growing company has 14 stores in Wisconsin, 19 in Illinois, five in Iowa and most recently expanded into the Michigan market. Its recent addition in Holland, Michigan, is its fourth location in the state. As customers walk up to the front of the 106,000-square-foot store they are greeted by an inviting architectural entry. But, in truth, they don't really have to walk up at all because the design includes a drive-thru, which allows customers to purchase what they need without leaving their vehicles.

Blain's Farm & Fleet facilities incorporate a prototype design format. The buildings are hybrid structures, incorporating metal building system elements with conventional construction methods and materials. The prototype's many sustainable features are based on the LEED green building rating system. The buildings typically incorporate 50% more wall and roof insulation than minimum code requirements. Blain's requires 9 inches of fiberglass in the ceiling and 6 inches in most walls. The low-maintenance walls are composed of insulated precast concrete panels, split-face block



and horizontal and vertical architectural metal panels. The metal building components are among the most recycled and recyclable materials in the building, and the metal roof system has a record of 40 years of proven low-maintenance and sustainability in the field.



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