

UTILITY MEETS BEAUTY

The best
uses of
architectural
mesh on
parking
garage
façades.

IMAGIC Weave



By Wendy DeCapite

According to the U.S. Census Bureau, there are more than 105 million commercial parking spaces in the U.S. As cities grow more crowded and new businesses emerge in the suburbs, the need for parking garages has increased. Despite its status as a functional necessity, the parking garage has long been viewed as a background structure.

Historically, multi-story parking garages evoked mental images of stark, cold, and dark buildings. Today, however, architects, designers, building owners, and communities want structures that combine functionality with beauty and form, bringing garages to the forefront. Cue architectural design mesh.

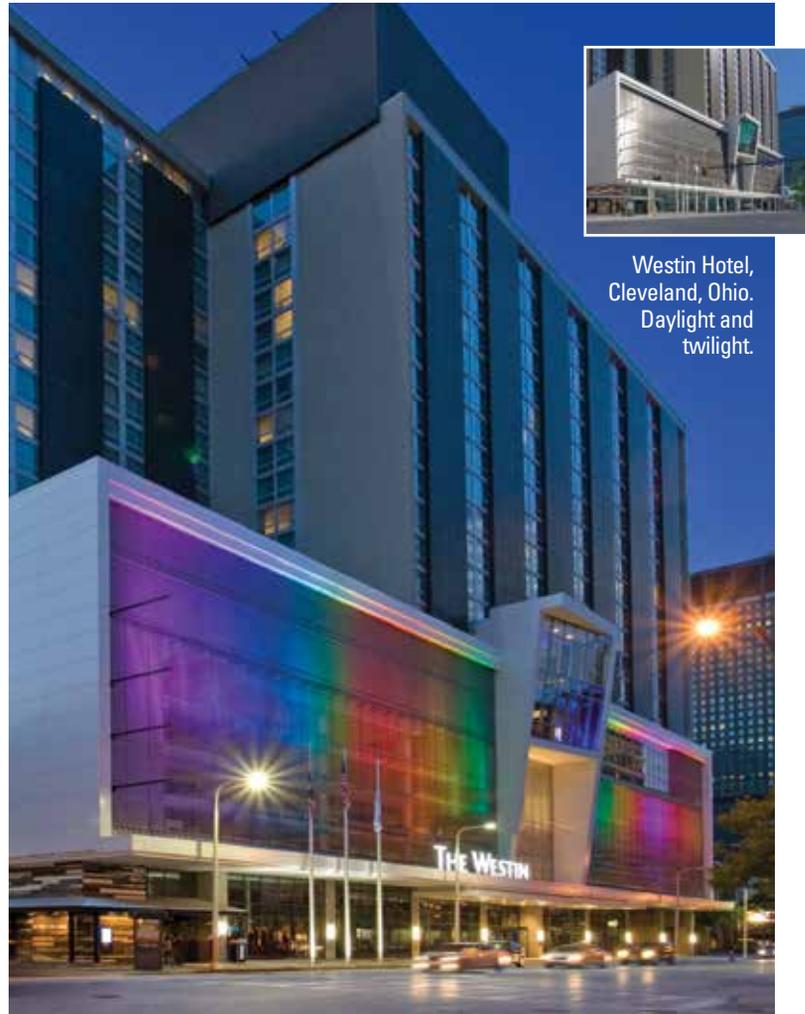
A traditional material with a contemporary look, architectural design mesh can help create a one-of-a-kind aesthetic while meeting the safety and security priorities that are essential to the successful operation of a parking structure. With features and benefits such as distinctive, vibrant weaves and designs, durability, and ease of maintenance, architectural mesh provides a dynamic combination of elements ideal for many parking facilities.

Advantages

According to the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) *Journal*, “Enclosed parking facilities present several indoor air quality problems. The most serious is the emission of high levels of carbon monoxide (CO) by cars within the parking garages. Other concerns related to enclosed garages are the presence of oil and gasoline fumes, and other contaminants such as oxides of nitrogen and smoke haze from diesel engines.”

Light, durable, and transparent, architectural design mesh provides an array of benefits for parking structures. The transparency of the mesh acts as a natural ventilation system, allowing owners or facility managers to reduce the need for costly HVAC systems (it is estimated that owners spend 10-15 percent of total annual expenses on energy resources). In turn, costs are decreased dramatically. The product’s openness allows an abundance of natural light and air to flow through the garage, permitting car emissions to be dispersed outside and improving the air quality in the space.

The stainless steel construction and diverse, variable weave patterns of mesh façades also act as an effective weather barrier, minimizing the recurring costs associ-



ated with snow and other debris removal. At the same time, the horizontal nature of the wires serves as a light shade and maintains comfortable temperatures inside the garage. Because the woven mesh solutions can be customized, architects may also elect to use the effect of the sun as a design element by creating a shimmering surface on the outer layer of the façade.

Safety and Security

Maintaining planned structural openings is possible with the use of architectural mesh. The strong, rigid, and durable construction delivers extra protection from personal injury. By incorporating full-height tensioned panels into the design of the lot, patrons are shielded from elevated voids, eliminating fall risks. Additionally, the product can be used for railings in other areas of the garage, adding an extra level of safety and protection.

Because mesh façade panels can be tensioned over the full height of the parking garage, only a solid substructure is required at the top and bottom mounting points. The different levels of a parking garage require an intermediate tube to absorb horizontal loads. The costs of this substructure and installation are significantly less than those of many framed façade materials solutions.

Car Park Two
at Chesapeake,
Oklahoma City, Okla.



Manufactured to specifications unique to the structure, the material is ready to mount upon delivery to the job site. Ready-mount custom hardware helps simplify the installation process and reduce labor costs associated with fabricators and installers. Using architectural design mesh as a façade solution can improve natural ventilation in the garage, which can reduce the cost of a fire protection system.

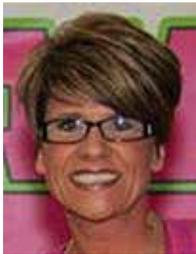
Sustainability

The use of mesh not only provides a custom look detailed to the specifications of the owner but also increases the sustainability of the building. Stainless steel has an average recycled content of at least 60 percent and is 100 percent recyclable at end of use.

Once installed, stainless steel mesh façades provide extreme durability and a little-to-no maintenance schedule for low-cost upkeep. Because it uses no water, chemicals, or energy for maintenance, the product ensures diminished environmental impact. Plus, the material will be around for the entire lifespan of the facility.

The concept of a static parking façade that remains the same year after year is a thing of the past. Thanks to the design possibilities offered by the use of architectural metal mesh, exteriors that incorporate color, texture, transparency, and light are reality.

It is important to constantly examine different ways to visually enhance buildings and give them their own unique character. By weaving wires of different colors vertically or horizontally, or adding light and technology, it is possible to create something truly spectacular. 



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PROJECT:
Los Angeles Police Department
Parking Facility
Los Angeles

MESH TYPE: EGLA-MONO 4832

ARCHITECTS: John Friedman
Alice Kimm Architects, Inc.

TO PROTECT AND SERVE

To meet the dual challenges of security and neighborhood homogeneity for the Los Angeles Police Department's (LAPD) parking structure and motor pool maintenance facility, John Friedman Alice Kimm Architects, Inc., clad the building in painted stainless steel design mesh. The garage sits in a downtown mixed-used area with a rapidly expanding arts community.

Painted panels were incorporated into the design of the building façade. The metal mesh veils the activities within the structure and blends into the streetscape with an aesthetically pleasing green leaf pattern.

"A series of undulating metal mesh screens are intended to veil the building while simultaneously providing security and allowing the structure to breathe," said Claudia Kessner, senior associate, John Friedman Alice Kimm Architects.

The mesh is painted with an overlay of larger and smaller leaf-like patterns in two different shades of green, with some areas of the pattern left unpainted. This allowed the architect to take advantage of the natural sparkle and reflective quality of the unpainted stainless steel. The painted mesh is suspended from the building by a series of more than 150 pipe struts around the cantilevered walkways of the various parking levels.

According to Kessner, "The customer did not want to end up with something that looked like a dark concrete box. People are interested in colors, lighting, and images to create depth and variety. We considered fabric as an option but would have had to deal with fading and durability. The reaction to the structure by people in the neighborhood has been amazing. They don't always realize it is a parking deck."

