

Amazon Headquarters – Metropolitan Park ARLINGTON, VA

Owner:

Amazon

Project Developer:

JBG Smith
Washington, D.C.

Architects:

ZGF Architects
Washington, D.C.

Vitro Architectural Glass Products:

Solarban® 72 Starphire® Glass

Vitro Certified® Glass Fabricator:

Oldcastle BuildingEnvelope®
Wright City, MO

Cristacurva
Guadalajara, Jalisco

Glazing Contractor:

Harmon Inc.
Glen Burnie, MD

General Contractor:

Clark Construction Group Inc.
Bethesda, MD

Façade Consultant:

Curtainwall Design and Consulting Inc.
Leesburg, VA

PROJECT BACKGROUND

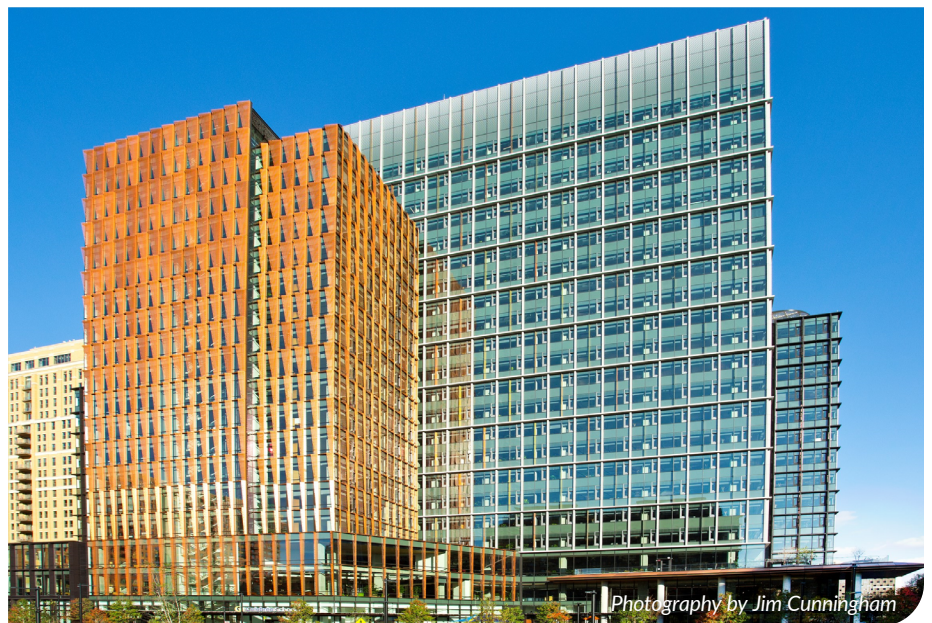
Executed through the Vitro Concierge Program®, an exclusive service designed to ensure supply chain success for large, complex or high-profile commercial construction projects, Amazon Headquarters - Metropolitan Park in Arlington, Va., embodies Amazon's vision and goals to design a highly sustainable campus, the world's largest LEED® v4 Platinum building, and give back to the local community.

In addition to constructing two glass towers with 2.1 million square feet of office space, the U.S. technology giant, global e-commerce, cloud computing and digital streaming company renovated and expanded the public Metropolitan Park to 2 ½ acres next to two, 22-floor towers



Photography by Jim Cunningham

Amazon renovated and expanded the public Metropolitan Park and opened its two daylight lobbies to the public with free coffee and donuts.



Photography by Jim Cunningham

Amazon's Metropolitan Park, the technology giant's second Arlington headquarters, features two 22-story office towers, clad with Solarban® 72 Starphire® glass curtainwall.

Amazon Headquarters—Metropolitan Park, Arlington, Virginia

housing 14,000 Amazonians and their dogs. The two ground-floor lobbies are open to the public and offer free coffee and donuts to both employees and the public. Decorated with plants and sliding glass doors, these welcoming spaces present a front-lawn type of vibe.

Part of Amazon's design strategy included ample daylighting and a feeling of openness for the lobbies, office towers and 50,000 square feet of retail where employees and visitors can patronize local businesses.

Supporting ZGF Architects' quest, *Solarban® 72 Starphire®* glass from Vitro Architectural Glass maximizes daylighting through an expansive curtainwall system comprised of approximately 13-ft. by 5-ft. modules with approximately 7 ft., 6-in.-tall vision panels and an approximately 5 ½-ft.-tall spandrel section.

According to Brian Earle, AIA, principal, ZGF Architects, Arlington, Va., the team considered a wide range of glazing options, but ultimately, *Solarban® 72 Starphire®* glass was chosen for its high energy efficiency performance and clarity. "The low iron makeup makes it extremely clear without the green tint common in high-iron glazing," he says.

The podium cladding is charcoal-colored terracotta, which references the site's historic use as a brickyard, and the first tower, Jasper—code name for an Alexa project—is comprised of dichroic glass, an iridescent, dynamic material that changes hues as the sun rises and sets. The second building, Merlin—code name for an Amazon Web Service project—features metal fins with a color-shifting pearlescent coating.

All of the storefront and curtainwall glazing is *Solarban® 72 Starphire®* glass, including a large 35-ft. picture window at the building's Large Event Center where it is integrated into a 2-in.-thick acoustical layup.

Solarban® 72 Starphire® glass delivers exceptional clarity and superior solar control performance, allowing 68 percent of the visible light to pass through while blocking 72 percent of the sun's solar rays.

To meet the project's aggressive energy goals 24 percent below the ASHRAE baseline, the architects designed the two towers with deep setbacks to bounce light far into the interior while simultaneously shading the buildings. Additional shading is provided by perforated copper-colored fins attached to scalloped light louvers on the west-facing amenity zones.

"The louver system has engineered sightlines to eliminate glare, allowing the roller shade to be mounted below it," relates Earle. "This ensures that even when the shades are drawn for privacy, ample light still makes its way deep into the space."

Another daylighting strategy is the large vision panels, which start at 30 inches above the finished floor and extend upwards to 120 inches. The top two feet of the panels contain integral light shelves that project natural daylight up to 50 feet into the building's interior, thereby providing daylight autonomy for 88 percent of the occupied areas.

Yet another light harvesting strategy is the addition of skylights in areas of the buildings where site constraints required deeper floorplates on the lower levels.

"In addition to reducing the need for energy-intensive electric lighting, daylight has proven to have a positive impact on occupant mood and productivity," reports Earle.

Enhancing the building enclosure's performance, ZGF specified custom gray spandrel panels for above and below the vision panels where the daylighting is less beneficial.

Between the two buildings, a total of 3,008 custom single-hung operable windows with

an integrated bug screen were developed in partnership with Harmon and Wausau Window and Wall Systems.

Located near the Potomac River, a major bird migratory corridor, the architects designed the facades to be bird safe. A combination of terracotta, metal and glass fins break up the façade, thereby enabling the birds to see it. For the lower stories facing the park, an additional Walker Glass frit was added.

Walker's *AviProtek®* E pattern 216 is a bird friendly glass solution with acid-etched visual markers on the exterior surface of the glass and *Solarban® 72* solar control, low-e coating by Vitro on surface two.

Between the two buildings there are 19 rooftop terraces, eight of which are occupied, including a farm terrace where Amazon employees can volunteer to grow herbs and vegetables for free distribution to local organizations.

The all-electric campus is powered by 100 percent renewable energy from an off-site solar array and the plumbing systems were designed to reduce water consumption to 50 percent below code.

"Amazon HQ2 was a monumental project, and we were pleased to be able to keep ahead of it, meet the critical timelines and supply exceptional glass," said Julie Unitas, Vitro Architectural Glass Project Manager for the Signature and Concierge Programs. "It was an honor to work with Aaron Spindler, the General Manager of Oldcastle Wright City and his team, who provided the utmost partnership in communication and quality control. We also hosted the Harmon and Clark Construction teams at Carlisle. This provided more glass education to the teams and created greater confidence in both Vitro, and its supply chain partners."

About the Vitro Concierge Program®

The *Vitro Concierge Program®* is designed to help ensure supply-chain success for large or complex construction projects fabricated with products from Vitro Architectural Glass (formerly PPG glass). It's available at no cost to members of the *Vitro Certified®* Network and their glazing contractor customers in the U.S. and Canada. While most projects, even very large ones, can be handled effectively by *Vitro Certified®* Network's

normal supply chain approach and with standard Vitro inventory, some unique projects with atypical glass configurations or non-standard glass components require extra production and logistics management. The *Vitro Concierge Program®* provides customized coordination through a dedicated *Vitro Concierge Program®* manager, who will align Vitro inventory and production schedules, even providing priority.

To learn more about the *Vitro Concierge Program®*, visit Concierge.VitroGlazings.com, call 412-820-8004 or email concierge@vitro.com.

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