

**UNITED STATES  
LAND PORT OF ENTRY**

Columbus, New Mexico



The United States Land Port of Entry in Columbus, New Mexico was realized through the U.S. General Services Administration's Design Excellence Program, an initiative to create and preserve outstanding public buildings for generations of use and enjoyment.

April 2021

# **UNITED STATES**

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**The Columbus land port conveys the friendship that Columbus and Palomas celebrate every year, and it more generally represents our nation's belief in global citizenship.**

Charles Hardy  
Acting Chief Architect, GSA













## BUILDING FOR FRIENDSHIP

On a typical weekday morning at the United States Land Port of Entry located in Columbus, New Mexico, rush hour begins precisely at 6:20. That is when a steady stream of students, all U.S. citizens living in Palomas, Mexico, starts flowing across the international border to attend middle and high schools in Deming, New Mexico. As yellow buses bound for Deming pull onto the NM-11 highway an hour later, the land port welcomes groups of younger children heading to elementary school in the nearer-by Village of Columbus.

Deming is home to the only major medical center in this remote part of the Chihuahuan Desert, and many of the 800 or so children who commute to school via the Columbus land port were born in that hospital to Mexican parents. While mixed-citizenship families can be found all along the United States–Mexico border, Columbus embraces American-born children’s right to public education with unique openness. In 1993, the former principal of Columbus Elementary recalled to the *New York Times*, “I just never said no to any child who came in from Palomas.” Twenty-five years later, the superintendent of Deming Public Schools

echoed that sentiment, telling the *Christian Science Monitor*, “We’re going to continue to accept them because they’re part of our community...they’re just all our kids.”

Binational cooperation defines Columbus broadly. Americans frequently cross into Palomas to visit the dentist or dine at restaurants. To mark the anniversary of General Francisco “Pancho” Villa’s 1916 raid of Columbus, American and Mexican horseback riders gallop through Palomas and Columbus on a Remembrance Ride that has taken place every March since 1999, as part of a Festival of Friendship held annually since 1966. Writing in the *Washington Post*, a former mayor of Columbus lauded his hometown and Palomas as a “porous place.”

The land port of entry that the U.S. General Services Administration (GSA) opened in Columbus in 2019 enhances the porosity between communities, while embodying the rigorous security and safety standards of a 21st-century border crossing. A multidisciplinary team of specialists led by Corpus Christi, Texas–based Richter Architects configured enclosed buildings,

inspection booths, and other structures to reduce congestion of privately owned vehicles (POVs) and trucks at the facility. And, although this siting lengthens the pedestrian journey across the border, the project designers ensured that passage on foot includes conveniences missing from the land port that had previously served Columbus: whereas students once had to thread through idling cars and trucks each morning, today they do so at a remove from the paths of commercial vehicles, on walkways protected from the desert sun and monsoon rains.

The team behind New Mexico's only 24-hour border facility exercised similar consideration for the U.S. Customs and Border Protection (CBP) agents and other federal employees who occupy it. The design safeguards CBP's sightlines to travel activity and minimizes the physical distance between officers and duty stations. "Because law enforcement can be tense, we did not want officers to feel like they were going to work in a bunker," adds Elizabeth Chu Richter, principal of Richter Architects. "We strived to make a place that feels transparent, open, and pleasant.

The project improves the order and safety of CBP functions first and foremost, but it also celebrates officers and staff, their everyday good work, and the context in which they're doing it."

While the United States Land Port of Entry maximizes functionality for different users, it also stresses commonalities between them, as Richter Architects' use of geometry and material palette express the environment and traditions of the desert. "A successful land port of entry supports a range of complex activities, while also symbolizing the relationship between the United States and its neighbors," Charles Hardy, acting chief architect of GSA, says of this design's emphasis on regional beauty over political borders. "In terms of both performance and poetry, the Columbus land port conveys the friendship that Columbus and Palomas celebrate every year, and it more generally represents our nation's belief in global citizenship." Thanks to GSA's and the design team's multidimensional commitment to excellence, the new facility has been praised as "perhaps the finest front door to our entire country."







Closed

3 All Travelers  
Todos los Viajeros

2 All Travelers

Closed  
Cerrado

Lane  
Closed  
Carril  
Cerrado

U.S. Customs and  
Border Protection



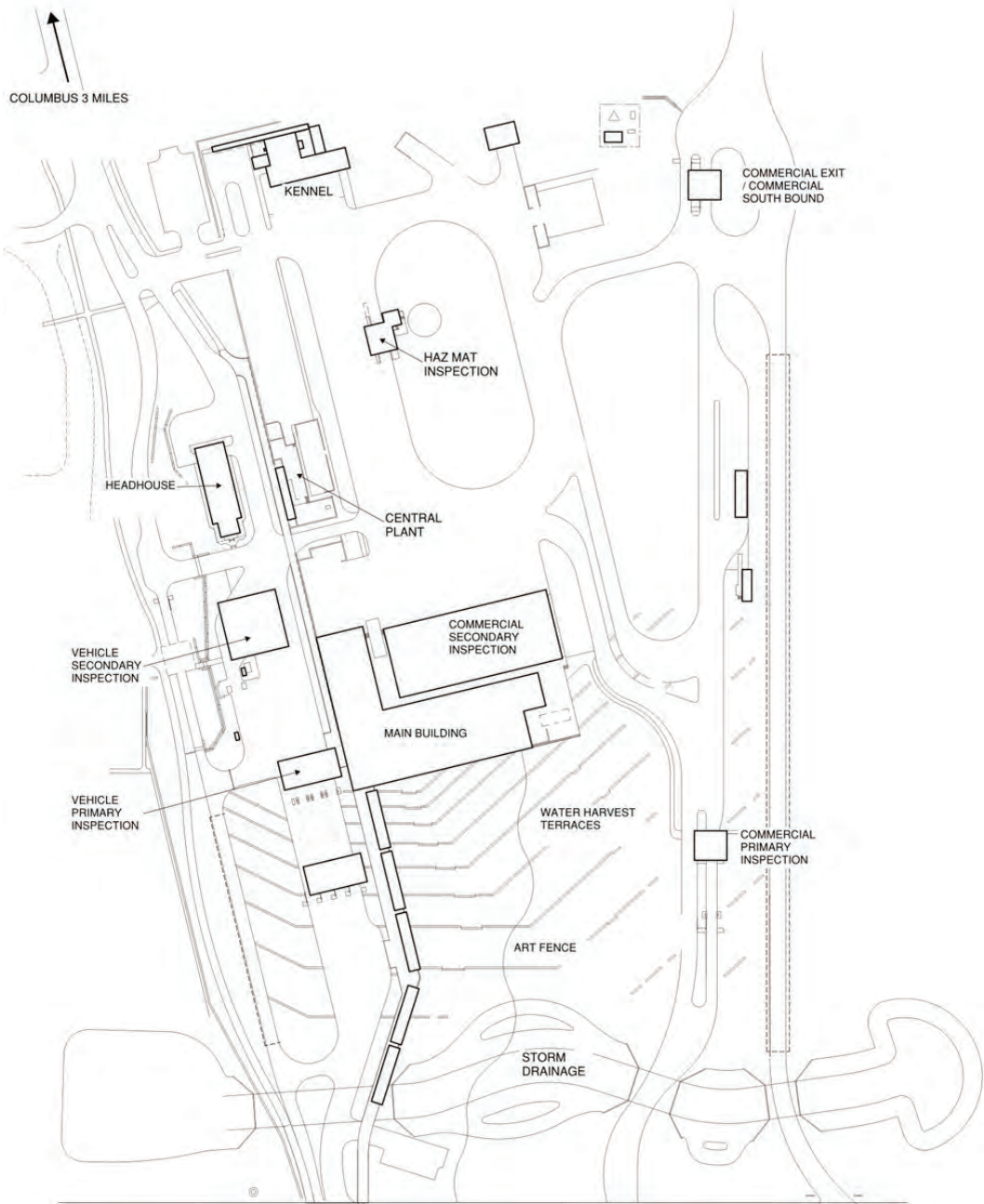
## AN EFFICIENT, EVOCATIVE DESIGN

Because Columbus's 1980s-era land port could not keep pace with rising traffic counts and the increasing sophistication of CBP inspection techniques, GSA's brief to Richter Architects expanded the port program to encompass three inspection booths for POVs, 14 docks for commercial vehicle inspection, and two pedestrian processing counters. The agency added approximately 18 acres to the existing port's 6.8-acre site to accommodate this larger operation, which also includes structures like a kennel, headhouse, and public restroom.

Predicting that even a replacement land port would demand future updates, Richter Architects treated the new facility as a campus where individual structures are surrounded by room for expansion. Approximately 500 feet north of the United States–Mexico border, a 37,000-square-foot main building—which houses workstations and meeting rooms, as well as four lanes by which pedestrians reach the processing counters—serves as the functional core of the campus. In plan, this single-story building resembles an inverted L rotated 90 degrees clockwise. Pedestrians enter and exit the building through its southwest corner.

Northbound POV and commercial traffic flows efficiently around the main building in separate paths. Immediately west of the pedestrian route, a pair of three-bay booths support preliminary and primary inspection of POVs; a third canopied structure near the northern edge of the campus is available for secondary inspection. Commercial drivers trace the east side of the main building to undergo inspection, parking beneath a canopy-shaded area nestled in the crook of the building's L shape in the case of secondary inspection.

The main building is both the functional and expressive center of the United States Land Port of Entry, with its angular roofline echoing the peaks of the Tres Hermana Mountains in the northwest distance. Throughout the campus, strongly horizontal buildings clad in weathered steel and brick evoke desert grassland textures and the strata of ancient rammed-earth construction. Richter Architects principal David Richter says that this responding to setting is inherent to the practice, noting, "We've always walked onto a site with a blank piece of paper, looking for clues as to what a project wants to be."



**Site Plan**







## ARCHITECTURE AND NATURE

GSA is a leader in sustainable design, a movement that focuses the process of designing a brand-new space or renovation on minimizing buildings' environmental impact. Sustainable design also yields more productive spaces for building occupants, by prioritizing healthy materials, access to daylight, and other criteria where ecological and human benefits overlap. Since 2010, GSA has mandated that newly constructed federal facilities achieve a minimum rating of Gold under Leadership in Energy and Environmental Design, a certification system better known as LEED.

The United States Land Port of Entry in Columbus, New Mexico, is one of only a handful of GSA projects to exceed LEED-Gold standards and earn Platinum certification. The new facility was further recognized in 2020 by the COTE Top Ten Awards, a sustainability honors program conducted by the American Institute of Architects' Committee on the Environment.

Sustainability is best accomplished when architects work in tandem with engineers, landscape designers, and other building professionals toward environmentally

sensitive performance, so the means by which the Columbus land port achieved LEED Platinum and COTE Top Ten are not entirely visible to users. Yet the facility wears certain environmentally high-performing solutions on its sleeve. The most legible of these is the evocative roof that tops the new main building.

In lieu of a conventional, flat plane, Richter Architects divided the main building's rooftop into a series of 43 modules tilted in a southwesterly direction. This reinterpretation of the sawtooth roof pays homage to the jagged skyline of the Tres Hermanas Mountains. Because the geometry also maximizes exposure to the sun's daily and seasonal paths across the sky, the design team crowned it in photovoltaics that produce an average of 305,000 kilowatt-hours of electricity annually.

Tapping the roof's full sustainability potential, the design team also inscribed the north- and east-facing sides of each module with a clerestory window, delivering diffuse daylight to the workstations inside and reducing their dependence on electrical illumination. (Low-power, digitally







controlled LEDs illuminate the campus). In addition, the inbound faces of each module are embedded with sound absorption as well as mechanical raceways, which removes acoustical and visual obstacles from the main building's expansive interior and makes that space easier to reconfigure should border-crossing protocols or technologies change. In a similar nod to future adaptation, the interior includes raised floor systems that hold electrical and communications infrastructure. Other roofs are mounted almost indiscernibly with solar thermal collectors that support solar water heaters, providing up to 70 percent of their buildings' hot water.

Elsewhere in the United States Land Port of Entry, Richter Architects enlisted the most expressive elements of the architecture in the service of sustainability. The brick walls that evoke the striated colors of the desert and rammed-earth construction, for example, are the source of thermal mass that mitigates extreme temperature shifts. Or consider the weathered steel that also recalls the hues and patterns of the Chihuahuan Desert: fashioned into screen elements facing east, south, and west, the

material shades windows that band the main building and headhouse.

The land port contains many more sustainability solutions that are less apparent. The main building's east-west orientation and minimal east- and west-facing fenestration decrease the occupied area exposed to the thermal gain and glare of low-angled desert sun. To reduce the energy consumption associated with interior climate control, energy recovery units retain existing heating or cooling and pre-condition incoming air, while variable refrigerant air-conditioning provides zone-specific occupant comfort. Elevated and filtered air intakes protect that indoor air from dust storms.

When the United States Land Port of Entry earned a slot in the COTE Top Ten in 2020, competition jurors commended the facility's multifaceted approach to sustainability. In a statement they declared, "A port of entry is a challenging building type. The designers in this project not only met that challenge, but [showed] us how architecture of any kind can make human environments healthy and dignified. This is a thoughtful, durable building made to last."





**Building projects involve a lot of investment not just of money, but also of talent and time. GSA shared our values and aspirations of problem solving for a mission, while maintaining focus on context and environment.**

Elizabeth Chu Richter  
Architect

## RESTORING THE LANDSCAPE

“West of the Rio Grande, the border ignores nature. Except for one short jog at the Colorado River, a series of straight lines adhering to treaty, not topography, define the boundary. As a result, the terrain along these political extremities often refuses to cooperate. Water flows where we don’t want it; the land tilts unfavorably in one direction or another; and much of the frontier discourages access,” journalist Alan Weisman wrote in *La Frontera*, an award-winning 1986 depiction of the United States–Mexico border accompanied by a photo essay by Jay Dusard.

Water’s ignorance of political borders has defined Columbus since its 1891 inception. Although the area receives a mere 10 inches of precipitation in an average year, most rain events take place in bursts in the July–September monsoon season and fall atop a stretch of Chihuahuan Desert that encompasses grassland on clay deposits. During one of these monsoon events, water is largely unable to penetrate the ground and flows from northwest to southeast, down the Tres Hermanas Mountains and toward Lake Palomas on the outskirts of its namesake Mexican town. In July 1911,

Columbus’s very own founder, Colonel Andrew O. Bailey, lost \$1,000 in crops and irrigation equipment to flooding. In more recent memory, floods seriously damaged low-lying businesses and stranded several residents in their homes in August 2006.

Located at a nadir in the Columbus area’s stormwater drainage basin, the new United States Land Port of Entry has historically stood in the crosshairs of water and mud rolling toward Lake Palomas. Although weather and soil conditions would seem to preordain the facility to periodic flooding, the GSA project’s landscape design actually diminishes that risk by employing mechanisms of water retention and absorption that also support revegetation and habitat restoration. “A traditional civil-engineering approach to flooding would be to dig a deep pond as far removed from CBP officers’ sightlines as possible,” says Aaron Zahm, principal of Albuquerque-based MRWM Landscape Architects, which oversaw the scheme, “but GSA and Richter Architects urged our studio and the civil engineer to devise an ecologically sensitive solution. We celebrated water’s ability to transform an arid landscape into a place that is





**Landscape Plan**



hospitable to plants, wildlife, and humans. Living in the desert, we have witnessed water's transformative power firsthand."

As much as 3 million gallons of stormwater runs off the roofs and paved areas at the land port annually. In order to recast water from property threat to precious commodity, MRWM first determined how the site's stormwater could better infiltrate the soil. Strategies included using 18-inch-diameter augers to insert compost sponges in the earth. Filled with compost and wood material, these sponges absorb rainfall so trees' and shrubs' root systems can access that moisture later. The compost sponges are concentrated at the lowest points of the land-port site. The design team also imagined low-lying areas as desert washes where riparian plants thrive off stormwater runoff, and they positioned stormwater retention basins mostly along the southern and eastern borders of the campus; the siting prevents taller cottonwoods and sycamores from blocking CBP officers' views to travelers.

MRWM further sculpted the topography, so that precipitation does not inundate the

desert washes all at once. Vegetated water harvesting terraces and depressions are sandwiched between the land port's main building and the international border, in a series of concentric, southward-pointing chevron shapes. The terraces are formed by gabion walls, which are filled with concrete that had been salvaged from the former land port's demolition.

For terraces and other areas not surrounding the retention basins, MRWM aimed to restore grasslands that dominate the wider region. To do so, it amended the soil so that its pH approximates the slight alkaline quality of natural grassland. The design team then seeded the site with several dozen types of native plant grasses, wildflowers, and shrubs, all of which can survive on less than nine inches of annual precipitation. The chosen plants are shorter, to defer to CBP sightlines, though larger varieties hem near walkways to mitigate heat island effect for those who circulate through the land port on foot.

Within the restored grassland, root systems bore through the clayey earth, making it more absorptive of monsoon events. Seen

alongside the landscape design's water harvesting features, MRWM's specification of native plant species dramatically reduces demand for irrigation. After plant establishment, only select trees and shrubs near the land port's main building will be watered by a responsive, state-of-the-art irrigation system. According to the EPA WaterSense budget tool, MRWM's overall scheme reduces outdoor long-term water use to 97 percent below baseline. The initial irrigation reduction is calculated at 76 percent below the EPA WaterSense baseline, which accounts for plants' water demands during their acclimation to the site.

In 2015, GSA adopted Sustainable Sites Initiative (SITES), a sustainability certification program dedicated to economic and environmental sustainability beyond a building's envelope. The variety of solutions at the Columbus land port earned its landscape a silver rating under the SITES program and contributed to the wider facility's Platinum certification under LEED.

Zahm, the landscape architect, says that the achievement of multiple certifications announces itself time and again—in

the blooms that native plants produce through the seasons, for example, or the abundance of migratory birds and other wildlife that treat the border-crossing campus as a home. "Landscape design can serve ecosystem functions, handle adverse stormwater conditions, and support barrier and security measures," he notes. "It also is a tool to make a place more comfortable. For regular users of the land port, like schoolchildren or CBP officers, the peace and dignity of this scene is palpable."

Whereas the former land port operated on a disturbed landscape in which several mesquite trees punctuated expanses of pavement and gravel, the new United States Land Port of Entry restores 550,000 square feet of Chihuahuan Desert. Silver-level certification through the SITES program is now required of all GSA projects, reinforcing federal civilian buildings' place in the vanguard of sustainability and contemporary design.









Palmas

Florida





## ART IN ARCHITECTURE

The United States government has a noteworthy history of sharing art with the American public at the places where it conducts business. As the steward of federal civilian buildings, GSA continues America's patronage of public art by commissioning sculpture, paintings, and installations for new construction and major modernizations through its Art in Architecture Program. The funding for each of these building project's artworks is one half of one percent of its estimated construction cost.

Art in Architecture commissioned two works for the new United States Land Port of Entry in Columbus. Fastened to the west, brick-clad elevation of the land port's main building, the mural *Bordertowns* resembles a map of Columbus and Palomas. Yet closer inspection of the aluminum surface reveals that artist Lordy Rodriguez has created a collage of images—colors of local landmarks, letterforms found on billboards—excerpted from the daily life of these intertwined communities. By substituting visual artifacts for traditional wayfinding devices, Rodriguez has created a portrait of local culture.

Whereas Rodriguez is a cartographer of culture, Charles Mary Kubricht explores how cutting-edge instruments, namely telescopes and microscopes, have allowed humans to perceive things that had been historically imperceptible. Inside the Columbus land port's main building, the artist's nine-foot-square *Landscapes Near and Far* is a photographic representation of the distant as well as the close-up. The wall-mounted work combines an image of the galaxies NGC 3226 and NGC 3227, which are located 49 million light-years away in the constellation Leo, with a highly specialized depiction of the mineral fluorite found here on Earth. Kubricht pays homage to New Mexico in this piece. Her subjects are drawn from the New Mexican astronomical facility Very Large Array Radio Observatory as well as the Mineral Museum at New Mexico Tech. The work also conveys the artist's belief that scientific innovation is an essential aspect of American identity. Kubricht's aim is not unlike Art in Architecture's breadth of vision. The program champions creativity that simultaneously deserves national attention and deepens the relationship between a GSA building, its users, and place.





**It exists as a proud symbol and manifestation of the welfare of this country, democracy, and all of those whose hard work has made it so. It is perhaps the finest front door to our entire country.**

AIA New Mexico

## **THE DESIGN AND CONSTRUCTION TEAM**

### **Owner**

U.S. General Services Administration  
Public Buildings Service  
Greater Southwest Region  
Tracy A. Graham, design and construction director  
Marsha Howard, contracting officer  
David Holland, contract specialist  
Daniel Partida, project manager  
Tracy Bayless, Joseph DePalma, Emily Endres,  
Hugo Gardea, Guru Gurusamy, Charlie Hart,  
Danny Hinton, Sergio Perez, Kendall Waldie,  
Mark Woods, Lonnie Wright

### **Tenant**

U.S. Customs and Border Protection  
U.S. Immigration and Customs Enforcement  
U.S. Department of Agriculture  
U.S. Food and Drug Administration  
Federal Motor Carriers Safety Administration

### **Architect**

Richter Architects  
Corpus Christi, Texas  
Elizabeth Chu Richter, David Richter, principals  
Stephen Cox, Sr., project manager  
Lonnie Gatlin, Bob Mitchell

### **Landscape Architect**

MRWM Landscape Architects  
Albuquerque, New Mexico  
Tess Houle, designer  
Brian Verardo, Aaron Zahm, principals

### **Artists**

Charles Mary Kubricht  
New York, New York, and Marfa, Texas  
Lordy Rodriguez  
Benicia, California

### **Construction Management**

Studio Collaboration  
Albuquerque, New Mexico,  
Sam Sterling, principal  
Devendra Contractor, project architect  
Brian Burchett, project manager

### **General Contractor**

Hensel Phelps  
Austin, Texas  
Brad Winans, district manager  
Dwight Runkels, operations manager  
Jeremy Morkovsky, project manager  
Joe Busbee, superintendent

**Civil Engineer**

JQ Infrastructure  
Dallas, Texas

Darin Jennings, project manager

**Structural Engineer**

Walter P Moore  
Austin, Texas

Usnik Tuladhar, project manager

**Mechanical/Electrical Engineer**

IMEG Corp.  
San Antonio, Texas

James Drummond, electrical project  
engineer

Ali Hami, mechanical project engineer

**Design Excellence National Peers**

William Browning  
Terrapin Bright Green  
New York, New York

Tim Christ  
Buro Happold  
New York, New York

Laurie Hawkinson  
Smith-Miller + Hawkinson Architects  
New York, New York

Larry Hopp  
Creighton University  
Omaha, Nebraska

Eddie Jones  
Jones Studio  
Tempe, Arizona

Roger Schluntz  
University of New Mexico  
Albuquerque, New Mexico

Lawrence Speck  
Page Southerland Page  
Austin, Texas

Louis Slade  
Gorove Slade Associates  
Washington, DC

Allison Williams  
AGWms\_studio  
San Francisco, California

**Art in Architecture/Fine Arts National Peers**

Kimberly Davenport  
Rice University  
Houston, Texas

Dana Friis-Hansen  
Grand Rapids Art Museum  
Grand Rapids, Michigan

**Construction Excellence National Peers**

Steve Hamline

JE Dunn

Denver, Colorado

Eric Wilbur

Wilbur Consulting

San Antonio, Texas





**U.S. GENERAL SERVICES ADMINISTRATION  
AND THE DESIGN EXCELLENCE PROGRAM**

*Public buildings are part of a nation's legacy. They are symbolic of what government is about, not just places where public business is conducted.*

Since its establishment in 1949, the U.S. General Services Administration (GSA) has been responsible for creating federal workplaces. The agency provides all the products and services necessary to make these environments healthy and productive for federal employees and cost-effective for American taxpayers. As builder for the federal civilian government and steward of many of our nation's most valued architectural treasures, GSA is committed to preserving and adding to America's architectural and artistic legacy as it executes its mission.

GSA established the Design Excellence Program in 1994 to better achieve the mandates of public architecture. Under this program administered by the Office of the Chief Architect, GSA has engaged many of the finest architects, designers, engineers, and artists working in America today to design the future landmarks of our nation. Through these collaborative partnerships, GSA is implementing the goals of the 1962 Guiding Principles for

Federal Architecture: producing facilities that reflect the dignity, enterprise, vigor, and stability of the federal government, emphasizing designs that embody the most compelling contemporary architectural thought; avoiding an official style; and incorporating the work of living American artists in public buildings. In this effort, each building is to be both an individual expression of design excellence and part of a larger body of work representing the best that America's designers and artists can leave to later generations.

To find talent most suited to this vision, the Design Excellence Program has simplified the way GSA selects architects and engineers for new construction and major renovation projects, enhancing opportunities for emerging, small, disadvantaged, and women-owned businesses. The program recognizes and celebrates the creativity and diversity of the American people.

The Design Excellence Program is the recipient of a 2003 National Design Award from the Cooper-Hewitt, Smithsonian Design Museum, and of the 2004 Keystone Award from the American Architectural Foundation.





