Putting the best minds together to push the creative and technical limits of what’s possible.

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U.S. Air Force
Foreword

This edition of our Design Review presents AECOM’s recent design work around the world and our multidisciplinary approach to project delivery.

Notable projects include infrastructure-related design work such as 3 MiamiCentral, a transit-oriented mixed-use building and the Lower Manhattan Coastal Resiliency project which addresses sea level rise while creatively incorporating public space into the solution. The new Senate Building for the Philippine Government, the China Shipping Headquarters Building and the Center for Cyber Innovation are all iconic and expressive of their occupants’ brand and presence in their respective communities. Intimately-scaled interiors for Accenture in Barcelona are technology-oriented and focused on collaborative space for teams. Several projects in this publication illustrate our leadership in cities with innovative projects that connect neighborhoods and integrate design as infrastructure.

For us, it is the combined technical excellence of our strategists, architects, planners, engineers, designers, technical specialists, economists, cost consultants and construction and infrastructure professionals that inspires and enables some of the best design outcomes: turning challenges into solutions and dreams to reality.
MODERN LANDMARK
Mindful of its important geographical location among Shanghai’s significant landmarks, the new China Shipping Company headquarters offers a modern setting that respects the site’s past. The building is located along the bank of the Huangpu River, just across from the Bund, Shanghai’s famous waterfront. Originally, the site was occupied by the Dongjia Ferry House, the best ferry in the Far East in the 20th Century. The industrial heritage of the site has greatly influenced China’s modern maritime history, culture and techniques. ‘Flow’ is the main concept that organizes the building’s interior and exterior spaces. AECOM’s concept unites the site with the building’s facade, integrating the podiums, the tower and the internal atrium design through flowing lines. Views across the Huangpu River, Binshui Greenbelt and the old ferry are connected along the main axis of the site. Buildings located on the north and south sides are slightly rotated, giving a direct view from the atrium toward the Huangpu River. The tower is designed on the north side of the axis, where its height creates an overlook to Lujiazui, Shanghai’s financial district. Buildings at the south side of the axis provide connections and access between the building and the river.

The building’s exterior is integrated into the urban environment, designed as a new landmark with scenic spots for everyone to enjoy. A new ferry garden provides relaxation and education with an exhibition to learn about the old ferry’s history. The rooftop is also a landscaped terrace, creating a setting to admire and coexist among the architecture, history and stunning location.
CIVIC Icon

Among forty entries narrowed to five teams, AECOM’s winning design stood out to the Senate Committee on Accounts and the Bases and Conversion Development Authority (BCDA) as the “conceptual design for the Senate’s permanent home [that] best represents the honor, dignity and legacy of this independent institution.” To realize a decade-old plan, the BDCA assisted the Philippines Senate in procuring an almost two-hectare lot, located in a new expansion area of Bonifacio Global City, a district in Metro Manila, for the construction of the building. Reflecting the Philippines’ growing confidence, the Senate in late 2017 launched a global conceptual design competition to kick off the development. Translated as “Bagong Senado” in Filipino, the “New Senate” building’s design was evaluated for its iconic and unique design, constructability and feasibility, sustainable and green design, functionality and security. This building’s opening is planned for July 2021.
SUNSHADING
- BALCONY OVERHANG

SUNSHADING
- BRISE SOLEIL (FAÇADE SYSTEM)

EVAPORATIVE COOLING
- REFLECTIVE POOLS

NAL CROSS VENTILATION
is designed to create a barrier to flooding using

BASIN DISTRICT
TOWERS DISTRICT
PIERS DISTRICT
PARK DISTRICT
PIER 6
VAN BRUNT ST.
COLUMBIA ST.
BROOKLYN–QUEENS EXPRESSWAY
ATLANTIC AVENUE
PIER 7
PIER 8
PIER 9
PIER 10
ATLANTIC BASIN
HUGH L. CAREY TUNNEL ENTRANCE
BUTTERMILK CHANNEL

DESIGN REVIEW

COMMERCIAL

AECOM
This proposed master plan consists of four districts: the Basin, Tower, Pier and Park Districts. Each district has a land side, establishing the urban edge of Red Hook and a water side, essentially the land atop the piers which consists largely of parks, esplanades and raised plazas. The highest concentration of residential and commercial uses and the tallest towers are located adjacent to a future subway station. The entire development is designed to create a barrier to flooding, using either elevated land form or deployable structures to form a continuous chain of protection for the adjacent Red Hook neighborhood.
CITY FOR THE FUTURE

The Meishan California Smart Town (MCST) caters to California-based technology companies by offering R&D facilities and high-quality residential space in a modern, smart town environment. The plan is conceived as a series of multi-use pedestrian districts served by a micro-grid and localized water recycling systems. Each district is supported by surrounding streets and infrastructure at the perimeter of the entire development, but is interconnected to the other districts by a smart technology corridor that channels autonomous vehicles, aerial drone delivery, utilities, communication infrastructure, pedestrians and bicycles within a single, linear structure.

The California Smart Town is an entirely new typology for a future smart city where human-scaled communities are nested within a holistic green infrastructure, and interlinked with smart technology where pedestrians are close to but separate from vehicular and service traffic.
AECOM is leading a multi-disciplinary team that unites landscape architecture, planning policy, urban design, architecture and engineering driven by a shared goal to improve the physical, social and economic resiliency of Lower Manhattan. The Lower Manhattan Coastal Resiliency (LMCR) Project is an integrated coastal protection initiative aimed at reducing flood risk due to coastal storms and sea level rise in Lower Manhattan. The 3.5-mile-long project extends from the northern portion of Battery Park City to the Two Bridges neighborhood. In concert with infrastructure resilience measures, the LMCR Project aims to improve access to the waterfront and augment green space in the neighborhoods it will traverse. The LMCR Project builds upon several years of community planning efforts to improve the waterfront. Residents provide critical input to shape the project through workshops, focus groups and numerous other engagement activities, confirming a strong desire for more green space, open space and recreation areas.
Residential aging buildings in the flood zone are 71%.

75 out of 163 acres of Two Bridges is within the 2050s 100 year floodplain.

46% of the population is elderly (65+).

20% of the elderly have a classified disability.

EXISTING CONDITIONS

SANDY FLOOD LEVELS

~4FT
LMCR goals prioritized project concepts and infrastructure typologies that were implementable, while identifying opportunities for long-term resilience, and engaged with the community on core design principles and priorities.
Engineering Approach: The diagrams above illustrate how infrastructure typologies promote accessibility and frame waterfront views. Deployed gates provide flood prevention and when undeployed, they accommodate parks and other neighborhood uses.
EXISTING ESPLANADE ORGANIZATION

CREATE POCKETS FOR PROGRAMMING

DISTRIBUTE PROGRAMS

INTEGRATE FLOOD INFRASTRUCTURE

PROMOTE INTERACTION

SCALEABLE

FLEXIBLE

EXISTING ESPLANADE ORGANIZATION

CREATE POCKETS FOR PROGRAMMING

DISTRIBUTE PROGRAMS

WALL PROGRAMMING

WALL PROGRAMMING - DEPLOYED CONDITION

AS A SPORT COURT

AS A CLASSROOM

AS AN INTERACTIVE WALL

DESIGN REVIEW

AECOM
UPDATING A CLASSIC

Celebrating the history and spirit of the 1959 Max Abramovitz-designed mid-century modern icon, the reimagined State Farm Center at the University of Illinois seamlessly integrates the comforts, technology, revenue generation and experience of a contemporary arena. A total transformation of the seating bowl and fan experience resolves existing sight line issues and introduces new premium products while aggressively attacking site circulation, building circulation, entry and arrival experience, level of service and accessibility challenges. Additional improvements include new administrative offices, an Illini Basketball Hall of Fame, dramatically improved concourses and the creation of four new hospitality lounges. A total replacement of mechanical systems and controls, the introduction of air conditioning, the replacement of all building lighting/controls and electrical distribution system were also part of the project scope. SFC is eligible for listing on the National Register of Historic Places and has received LEED Gold certification.
Consolidating three previous locations into a new single space in Barcelona provided the opportunity to reinforce Accenture’s leadership in digital transformation while incorporating local culture and history. The reception and meeting rooms are the core areas of the project. They are highly reconfigurable and aim to inspire and add value to employees and clients by integrating technology. The fourth and fifth floors accommodate corporate teams and are designed similar to the firm’s offices in Madrid. The third floor houses the digital teams and is more visually disruptive with graffiti, movable panels and reconfigurable project areas. This floor occupies the historic building tower and is used as a showcase space for latest technology. Overall, the design reflects and strengthens Accenture’s brand as a future-focused consultancy.
From its modest beginning in 1985, NarroWay has steadily attracted theatre goers interested in family religious entertainment. AECOM worked closely with NarroWay and Walters Strategic Solutions in conceptualizing a new, world-class venue for entertainment that is meaningful, educational and family-oriented. As design lead, we first performed a site and economic analysis to fully understand the development potential. The theatre complex, hotel and parking structure are organized in a sweeping arc embracing and framing an expansive green
space in clear view from the ceremonial entry drive. The complex includes 1,200-person and 300-person theaters and supporting spaces, a 900-person multi-purpose ballroom/banquet hall and kitchen, cast dressing rooms and flexible rehearsal/conference spaces. Upon entering the complex, visitors are in clear sight of the box office, theatres and retail venues. They are also made dramatically aware of the building’s connectivity with the landscape, as the floor continues from interior to exterior and terraces into a 40-foot descent punctuated by an outdoor performance stage, gardens and reflecting pool.
A series of flexible support spaces together, the concourse offers a 120 guest rooms, a café, fitness of first floor space is dedicated to Theatre Complex with Concert & Conference Venues.
THE NARROWAY DEVELOPMENT CONCEPT, FT. MILL, SOUTH CAROLINA, US

ultimately guided into the definitive office, theatres, and retail venues. Reflecting pool.
The Yards West presents an opportunity to connect The Yards, a vibrant urban environment along the Capitol riverfront, to adjacent burgeoning urban developments Buzzard Point and Poplar Point, integrated by a new, urban public space system. Located on 18 acres in Southeast Washington, D.C. between Nationals Park and the Washington Navy Yard, the site is within walking distance to two stadiums, a metro station and riverfront amenities, including those associated with the new Frederick Douglass Bridge project. A central spine extending nearly five blocks forms the foundation of the master plan. It provides a strong link from the vibrant urban/retail environment of The Yards to the riverfront and leisure activities. Our design and engineering teams developed a comprehensive, sustainable public realm and infrastructure implementation program for The Yards West to advance plans by the developer, Forest City Washington, to create a pedestrian environment extending from M Street to the Anacostia River. The master plan also considers future demands of an increasing number of visitors to the riverfront by providing qualified amenities and an effective wayfinding system.
THE YARDS WEST PUBLIC REALM MASTER PLAN, WASHINGTON, D.C., US
A WINTER FOREST

Connecting downtown Peterborough, Ontario to the rest of the city, Charlotte Street Urban Park is a crucial component of the Peterborough Downcity Revitalization Plan and link to the adjacent proposed Bethune Street Masterplan. This vibrant multi-use park space will provide a place of respite and recreation within the urban fabric, drawing inspiration from the rich landscape of the Kawartha Lakes. Ice Forest Park is envisioned as a narrative programmatic experience woven between two distinct site anchors - a signature civic space at Charlotte Street and a serene forest at King Street.
SPATIAL ORGANIZATION
The dichotomous park anchors splinter into a procession of spaces held together and accessed through a core.

CIRCULATION
Circulation through and around the spaces is articulated. Open and accommodating in the Civic Space graduating towards a meandering path in the Ice Forest.

SPATIAL DEFINITION
The circulation pattern builds another layer of nuance into the spaces, defining the human-scaled experience.

PROGRAM REFINEMENT
Additional site programming riffing off the idea of an Ice Forest is the final layer that builds a complete urban park.
CREATING COMMUNITY

Sendero Verde is at the heart of East Harlem. The mixed-use affordable housing project hosts a courtyard for future development users to share. The half-acre rooftop courtyard will provide residents, students and visitors a vital place to experience the multi-building complex by providing an intensive and lush landscape experience, as well as a vibrant urban amenity not only for its residents but for the neighboring community. The project includes a playground, an interpretive learning vegetation garden, outdoor art and science gardens for a proposed charter school; exercise zones for a preventive health care facility; and a raised stage and amphitheater for outdoor performances. At street level, the relocation of four existing community gardens will tie seamlessly into the project site, as well as the neighborhood of East Harlem.
CITY INSPIRED

AECOM’s new Midtown office in New York City showcases collaboration, a core company principle. Located on the second and third floors of the 605 3rd Avenue building, the new offices live directly above the street life of 3rd Avenue. To further that experience, the very nature of the city was used for design and planning inspiration with an overall aesthetic that complements the architecture and materiality of the rich urban fabric. Highlighted by backlight, folded metal wall panels and understated fabric textures, the architecture and design of the space provides a timeless canvas primed to showcase design, innovation and collaborative thinking. In this employee-focused space that meets the needs of an evolving and agile workforce, employees have the ability to choose where and how they work and ample collaborative areas support project teams and allow for social interaction. Workplace flexibility is reinforced through accommodation of individual-oriented spaces as well. Designed to encourage imagination and contribute to effective interaction, client-facing areas (reception, larger conference rooms, etc.) are centrally located and supported by concierge services. The inspiration of AECOM’s iconic work is ever present in these areas to continually reinforce our focus on delivering each client’s vision.
3 MiamiCentral is the first mixed-use tower to be completed at MiamiCentral, a new transit-oriented development in downtown Miami which includes a transit hub and rail station, two office buildings (2 and 3 MiamiCentral), twin apartment towers, retail shops and the city’s first food hall. The project has opened in time for passenger rail service to commence via All Aboard Florida’s Brightline, a 235-mile network of rail lines connecting South Florida to Central Florida. Since its opening in early 2018, the 12-story building has set a new standard of urban connectivity and has quickly attracted tenants which include Brightline’s corporate headquarters. Features of the project include 95,000 square feet of office space, public art by neighborhood artists integrated at street level as permanent installations and a parking garage that is wrapped with an image-perforated metal facade featuring artist Robert McKnight.
Fitness/Lounge
28
Residential
18-27
Office
9-17
Parking
2-8
Retail/Lobby
G
Parking
P1-P2

Two Part Tower

Base
CHARM CITY REVITALIZATION

One Light Street is a new 775,000-square-foot, 28-story mixed-use tower on a downtown site that had been vacant since 2000. After recently building 10 Light Street, Madison Properties was looking at adjacent properties to redevelop in the area, coinciding with M&T Bank’s search for a new location for its regional headquarters. Thus, One Light Street came about through a shared commitment to the revitalization of Baltimore (nicknamed Charm City by locals) and to attracting a diverse, millennial community and workforce. Sheathed in a dramatic glass curtain-wall, the development aims to reinvigorate Baltimore’s historic central business district through distinctive design and creation of a vibrant live/work environment. The building offers nine floors of modern, virtually column-free office space topped by 280 luxury apartments with sweeping views of the Inner Harbor and Baltimore skyline, as well as ground floor retail and structured parking.

Leading the design, our architecture and engineering team worked with the developer to configure the right balance of uses for the three-quarter-acre site. One Light Street’s mix of uses and environmental improvements create activity and breathe new life into this neglected area of Charm City.
Envisioned as the vertical “heart” of a new city, this tower and its street-level development are designed to spark industry and sustainable living. The project will include cultural, commercial, residential and retail elements. The design is inspired by organic forms with sky gardens and environmental decks at the podium level. The distinctive tower design houses a unique 418-meter sky gallery with a commanding 360-degree view of the city skyline and surrounding landscape.
INDUSTRIAL ELEGANCE

Pingxiang is one of the earliest heavy industry bases in China, and is famous for its rich mineral resources. Its discovered mineral deposits include coal, iron, manganese, copper, limestone, kaolin, quartz, porcelain and other minerals.

The design of this tower is inspired by the hexagonal structure of carbon atoms. Each tower’s facade is modeled to creatively and uniquely resemble five abstracted carbon atoms. The towers maintain a square floor plan, guaranteeing efficient space utilization.
The State University of New York (SUNY) system’s new Science, Technology, Engineering and Math (STEM) Center will be a model for future buildings at its main campus. Envisioned as a “living laboratory,” the 24,000-square-foot STEM Center consists of classrooms, labs, study lounges and symposium space where students are able to measure and analyze the various building systems. The STEM Center takes its cue from the environment – the sun and the earth – to showcase Net Zero ideas. Set as a rising triangular wedge column, the two-story building is infused with natural light from all directions. A series of stepped north-facing clerestory windows and a full roof of PVs define the basic massing of the building. Nature is represented by a low berm around three sides of the building, providing enhanced insulation, and a large berm on the south which leads to a demonstration green roof on the second floor.
Simple Box
Tilt Roof for Solar Exposure
Punch Roof for Daylighting
Berm Up to Green Roof

SKY SOLAR

EARTH WATER
The U.S. Air Force Academy (USAFA) Center for Cyber Innovation will bring together U.S. Air Force CyberWorx, the Department of Homeland Security’s Center of Innovation and the Academy’s Department of Computer and Cyber Sciences under one roof. This collaborative force will attract a variety of problem solvers — cadets, industry leaders, academics and military operators — to educate, design and develop effective solutions. Given the unique nature of the Cyberworx mission and the prominent placement on the landmark Academy grounds, direction was given to create an iconic yet integrated design. The architecture is modern while maintaining a visual connection to the mid-century modern campus. With a mission purpose rooted in applying design thinking to complex problem solving, Cyberworx required a unique, vibrant and flexible interior environment. Basing space planning on a seven-by-seven-foot module, AECOM’s design team was able to program an interior that will be easily reconfigurable if/when future advancements in technology methodology arise. The project comprises 34,000 square feet.
Leveraging a new operating and speed-to-market model, Cyberworx will more effectively support a unity of effort in developing new products, policies and systems that respond to short, medium and long term security threats. Through market testing of physical and digital focus areas, we created a portfolio-based approach to mission streams. An implementation model was developed that allocates missions to a portfolio area and then defined study, development and response times to interdisciplinary partnership teams. A feedback loop ensures that lessons learned inform subsequent streams. We developed a model that aligns growth in training with human resources, research funding and space allocation. This assisted in creating a robust program and design for the research facility.

Process Diagram
Working at AECOM

We’re passionate about what we do. We work collaboratively and across disciplines to solve complex challenges facing cities and communities.
About AECOM
AECOM is built to deliver a better world. We design, build, finance and operate infrastructure assets for governments, businesses and organizations in more than 150 countries. As a fully integrated firm, we connect knowledge and experience across our global network of experts to help clients solve their most complex challenges. From high-performance buildings and infrastructure, to resilient communities and environments, to stable and secure nations, our work is transformative, differentiated and vital. A Fortune 500 firm, AECOM had revenue of approximately $20 billion during fiscal year 2018. See how we deliver what others can only imagine at aecom.com and @AECOM.