

Purpose of The MWBE Forum

- Tutor Perini/Parsons, JV, STV and Grimshaw want to continue building strong relationships with minority- and women-owned businesses ready to work on the EWR Terminal One Project
- Goals for today's networking session
 - Meet with our staff
 - Identify if your services are needed on this project
 - Learn how you can prepare to participate
 - Build and sustain relationships that lead to contract opportunities

Tutor Perini/Parsons, JV



San Francisco International Airport

Tutor Perini Corporation

- Local company with more than 10,000 employees worldwide
- Ranked 10th on Engineering News-Record's Top 400 Contractors list for 2016
- More than 120 years of successfully delivering complex infrastructure projects
- Leader in design-build (DB) delivery, undertaking numerous highprofile, heavy civil projects, including more than 50 DB projects valued at over \$8 billion



Miami International Airport New Hub Terminal

Parsons Transportation Group Inc.

- Developing, building, and improving the world's infrastructure for 90-plus years
- New York firm with more than 3,000 U.S. based employees
- Ranked #1 in Alternative Project Delivery Top DB Designers, by Public Works Financing in 2016
- Delivered more than 112 alternative project delivery (ADP) projects valued at over \$37.5 billion
- More than 450 airports in 40 countries have counted on the firm's expertise to plan, construct, enhance, and sustain their infrastructure

Members of Tutor Perini/Parsons, JV Team



Delta Terminal at JFK International Airport

STV Incorporated — Lead Designer

- Has been a leading provider of design services since 1912
- More than 1,800 team members in North America
- #9 on Engineering News-Record's Top 50 in Transportation category
- Delivers the benefits of expertise gained through over 20 years of design-build practice on major projects throughout the U.S.



Heathrow Terminal 2

Grimshaw Architects, P.C. — Lead Architect

- Firm's international portfolio has been honored with over 200 international design awards for its commitment to design excellence
- Delivered world-class architectural design at airport terminal throughout the world beloved by its users

Our Commitment To The Community

- Tutor Perini, Parsons, STV and Grimshaw all have long-standing commitments to small businesses in the communities in which we work
- We strive to establish relationships with our subcontractors that build capabilities and capacity for local firms and MWBEs
- Each JV partner and the design lead has a demonstrated track record of projects where we exceeded established goals — resulting in recognition and awards

TUTOR PERINI/PARSONS, JV





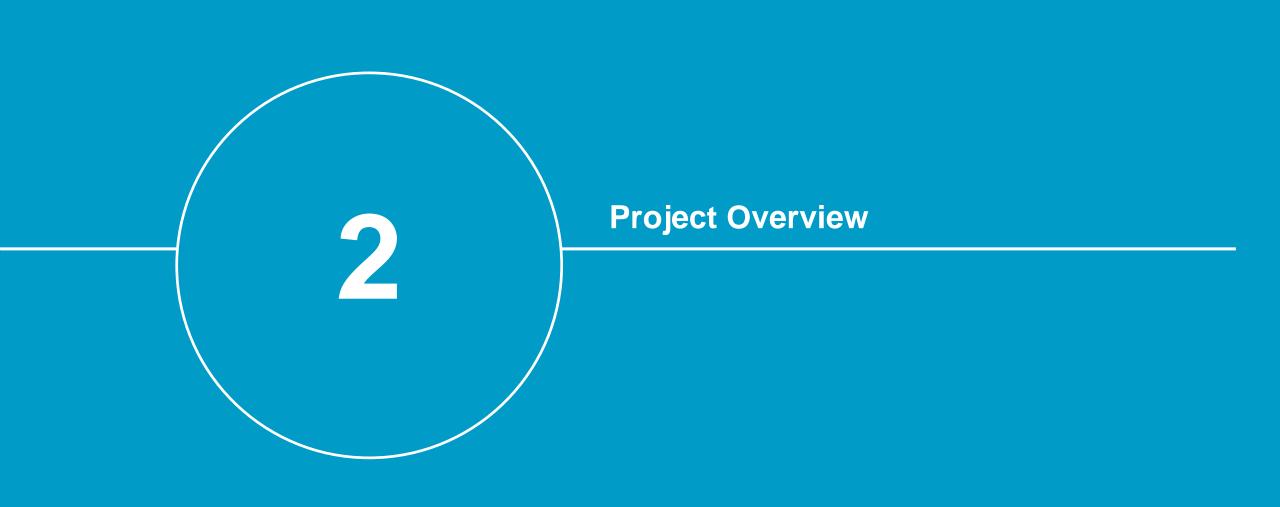


Today's Attendees

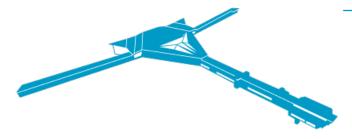
First Name	Last Name	Title (for this project)	Office Phone	Email address		
Tutor Perini Corporation						
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STV, Inc. (Lead Designer)						
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Today's Attendees

First Name	Last Name	Title (for this project)	Office Phone	Email address			
Five Star Electric							
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WDF, Inc.							
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Scot	Binder	Director of Mechanical Operations	(914) 776-8040	sbinder@wdfinc.net			
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Michael	Wolfe	Project Executive	(914) 776-8000	mwolfe@wdfinc.net			



Design Concept



Renderings Courtesy GRIMSHAW

When Newark Metropolitan
Airport first opened in October
1928, it was the first major airport
serving passengers in the New
York Metro Area, and it grew to
become the busiest commercial
airport in the world.

The modern era for Newark International Airport (EWR) was master-planned and developed in the last 1960s which resulted in Central Terminal Area (CTA) comprised of three terminals and a connecting landside roadway network, whose identity and brand were architecturally and operationally unified.

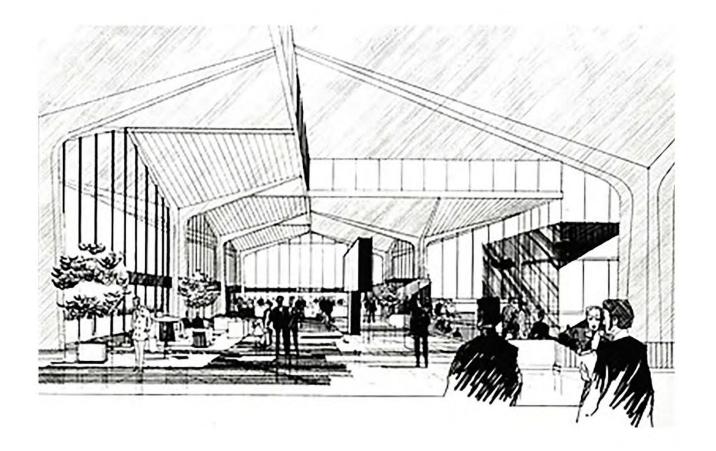






The architectural language of the new terminal's modular structure embraced the pioneering construction technology of the time. More importantly, this expansion represented the modern airport modular, interconnected, open and day lit, pushing structures to new limits and providing large spaces for passengers to dwell in, and move intuitively through. It was an architectural tour de force.

Currently, the Port Authority clearly recognizes that a bold, new plan is needed for EWR, to position itself for decades to come and to successfully accommodate a rapidly changing industry and unprecedented levels of growth.





Seed for the Future

The New Terminal 1 plants a seed for the future of EWR. In the words of the Port Authority, the new terminal must establish a signature design that can be used as a basis for influencing the coordinated aesthetic theme for the Airport's future developments; as such, it should be carefully crafted as a timeless piece of architecture—one that is designed with flexibility in mind. New technologies, materials, and systems will continue to appear as the aviation world continues to evolve, and the terminal structure will be able to embrace the challenge of adaptation as EWR expands over time.

This future vision is clearly visible in today's most successful contemporary airports. The majority of these are based on repetitive, modular systems in which careful, open planning is tied to expressive and repetitive structural systems to create legibility and an iconic sense of place. Istanbul's New International Airport, Madrid's Barajas Terminal 4, Chek Lap Kok Airport in Hong Kong, Beijing's Capital International Airport, Jordan's Queen Alia International Airport and, closer to home, Newark's Terminals A, B, C, are all examples of instantly recognizable terminal designs that are both enduring and unique—where large span structures offer open, bright spaces with elegant roof geometries.







The design of the new Terminal 1 relates to the legacy modular concrete structure of the existing terminals reinterpreted in a light, modern, steel and glass building with vast openness and natural light.

Intuitive wayfinding through well-directed, open and fluid spaces allows passengers to move in comfort and ease. These updates yield a modern and iconic exterior design in continuum with Newark's legacy and history.











Embodying the Spirit of the Region

The New Terminal 1 will be an enduring, elegant and well-founded piece of architecture, reflecting the region's significance as the world's leading cultural, financial and educational hub. This vision is achieved through an optimized building structure and rooflines, opening the spaces to clear, uninterrupted views, creating transparency and providing a striking aesthetic to welcome both departing and arriving passengers, as well as employees.

The TPP Team has worked hard to create an architectural language that is designed with flexibility in mind, that is imbued into all elements of the architecture, from the column cladding to the drop-off canopy, to create a family of elements and a singular architectural language that will form a timeless, memorable and flexible solution – and a unique gateway into the region.





The architectural language works closely with the experiences on offer to provide a holistic identity to this new Terminal 1. Clever design in the building's structure and envelope helps minimize the stress associated with travel by introducing passengers to views of the gates and aircraft early in their journey, and expressing the changing of seasons and weather by bringing natural light into the terminal.

Inserting characteristics of the New Jersey and New York region is vital in curating unique and memorable experiences for the passenger. Passengers have come to expect enhanced retail, dining and entertainment offerings, as well as diversified premium services and lounges. Locally inspired amenities will provide the airport with a unique identity specific to our region.

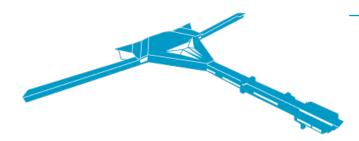
New Jersey's "Garden State" image, with its expansive geographical variations, inspires in the proliferation of landscape elements throughout the terminal, creating green and relaxing spaces, critical to relieving stress and passenger anxiety.

New Jersey's urban neighbor, New York's "Empire State" reputation as a capital of business, culture and media is propagated through various amenities, interactive multi-media technology and F&B offerings provided within the terminal. The energy of the city is forecasted for arriving passengers and remembered by departing passengers.

The Design is state-of-the-art in all its elements, and will provide an optimized level-of-service for both current and projected future airline and aircraft operations, as well as for passenger flows throughout all areas of the building.

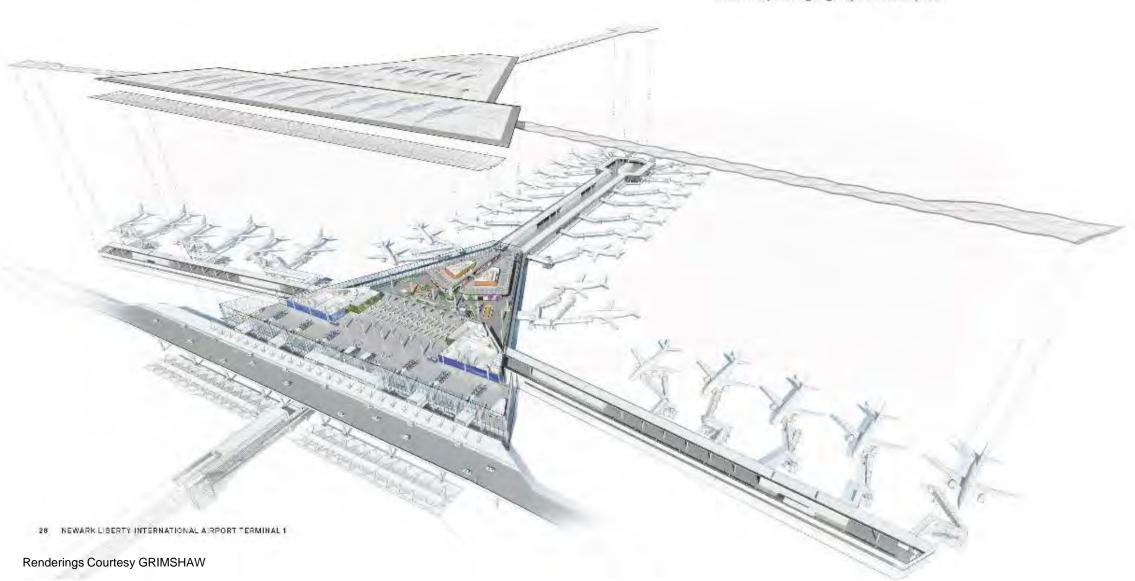


Terminal Planning

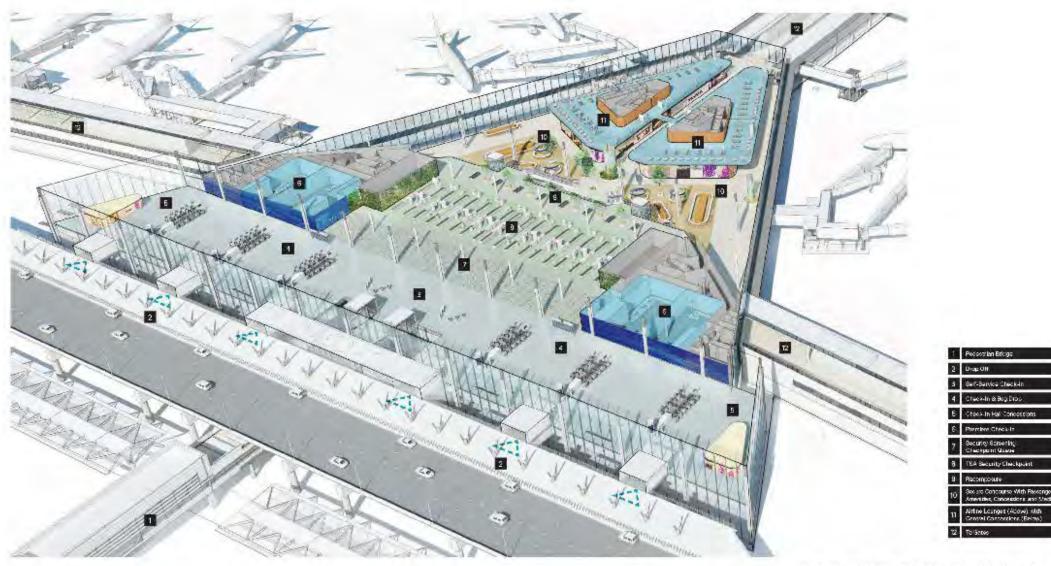


Exploded Axonometric View

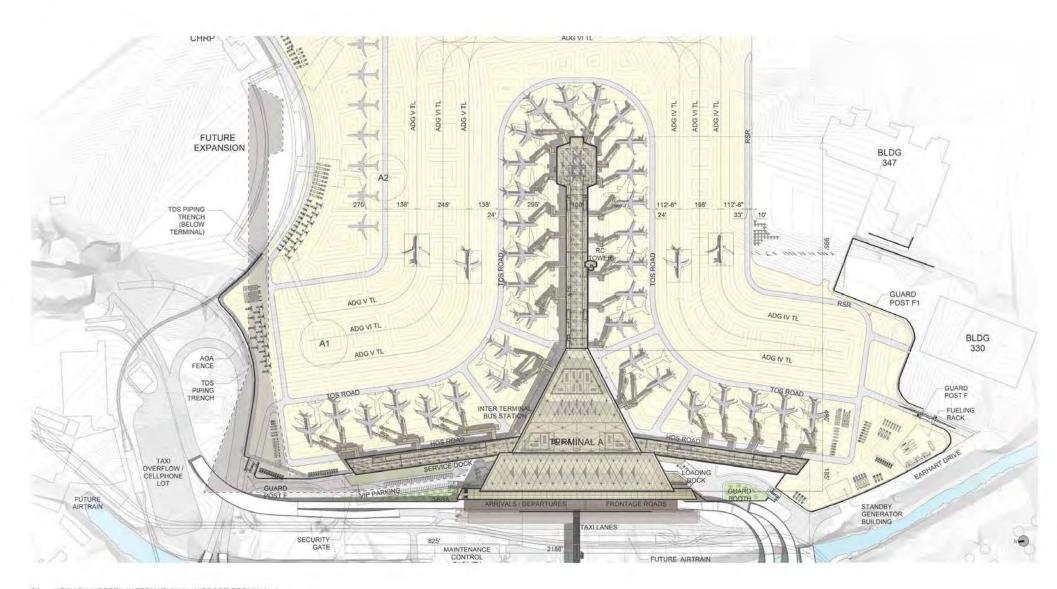
The design is efficient, offering flexibility and enhanced technology for all operations. It also offers an enhanced, world-class passenger experience. This stems not just from smooth, effective, linear processing, clear wayfinding and building navigation, but also from what is on offer to the different passenger groups at the airport.



Axonometric View of Departures and Concourse Level

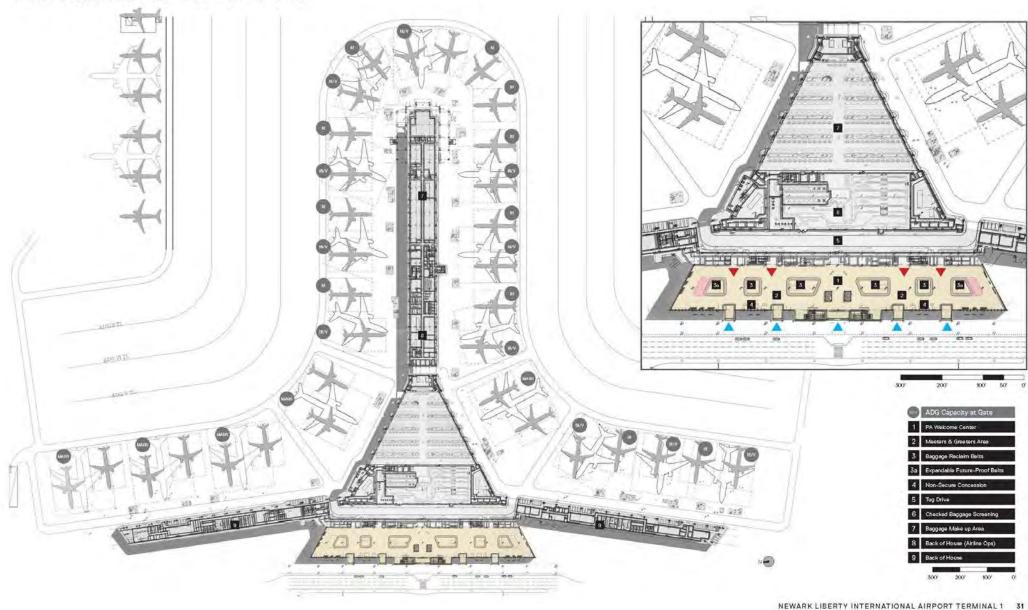


Site Plan

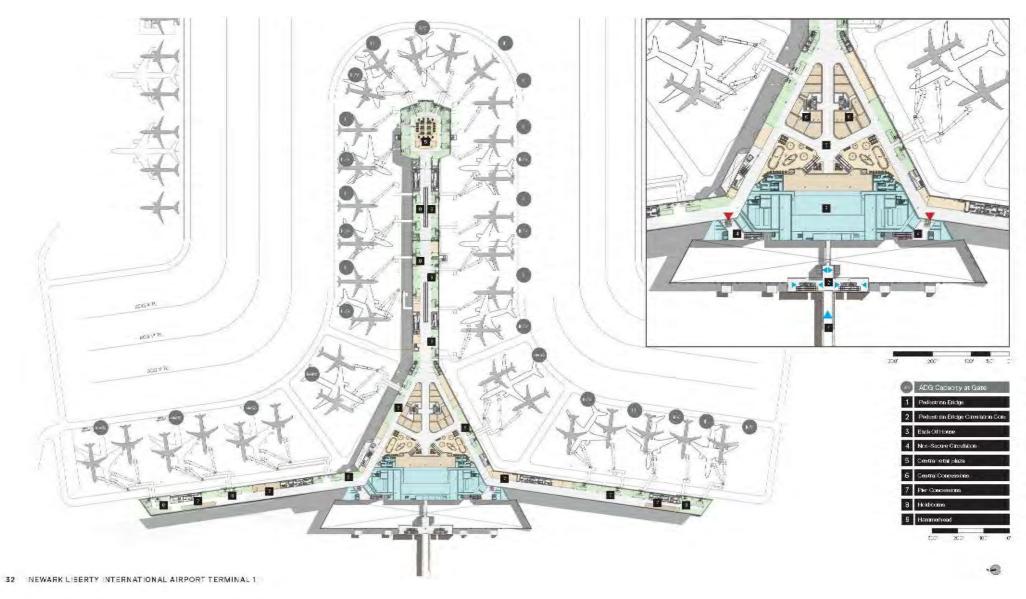


30 NEWARK LIBERTY INTERNATIONAL AIRPORT TERMINAL 1

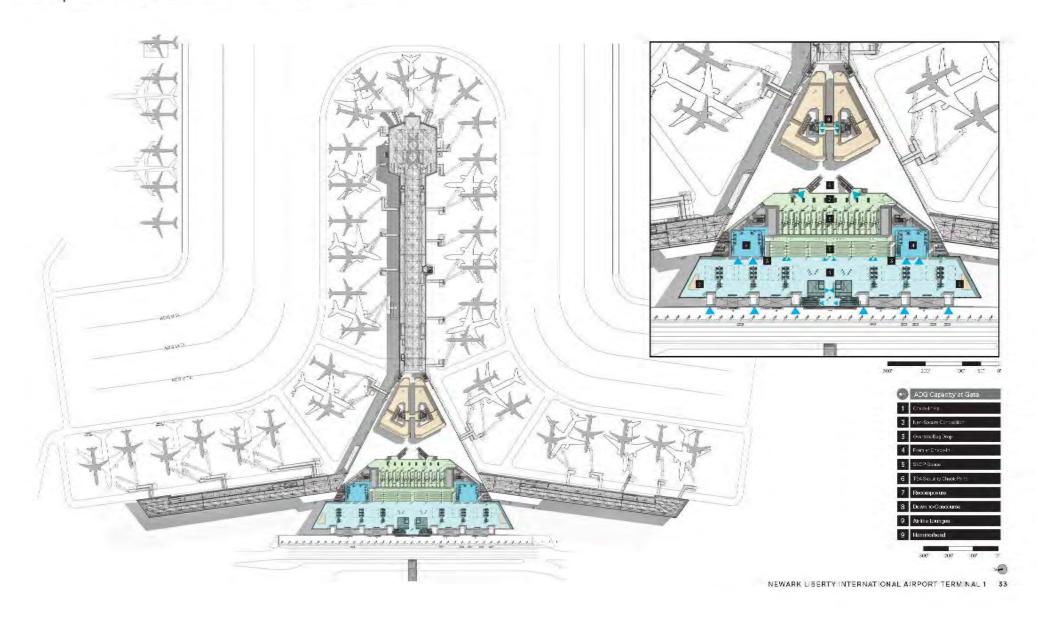
Arrivals Level +11'-0" FFL



Concourse Level +27'-6" FFL



Departures Level +48'-0" FFL







Renderings Courtesy GRIMSHAW

When approaching the new Terminal 1, passengers are welcomed by a carefully crafted, unique and memorable icon for the region. Terminal 1 relates to the legacy terminals of Newark Airport while reflecting an image of lightness, transparency, modularity and modernity, with a dynamic roof line and dramatic overhangs.



On the departures approach road, one has an expansive view of the full frontage of the façade. This view also conveys an immediate understanding of the length of curbside available for passenger drop-off.



At the drop-off, passengers will have ample curbside access and a grand transparent façade allows clear visibility and an overview of the entire departures level. Dynamic signage clearly communicates airline drop-off areas along the full length of the Terminal, thereby relieving congestion of any single area. A glass drop-off canopy with integrated solar cells expresses the sustainable design features embedded throughout the design.



The Check-in Hall is characterized by open planning with clear and unobstructed sightlines to promote intuitive wayfinding. The strategic placement of skylights above the dynamic folded ceiling planes enhances passenger well-being. Multiple check-in options are made available to accommodate passenger preference.



Thoughtfully arranged, automated Check-in and Bag Drop-off islands allow for effective passenger flow throughout the space, with direct visibility to the TSA Queuing and Security Check Points.



To ensure high efficiency, the TSA Security Check-Points are organized for straight/linear processing. Automated Security Lanes (ASL) make security screening faster and smoother. The areas will be furnished with greenery and natural materials which are known to reduce passenger anxiety and stress.



A generous and well-furnished recomposure zone immediately follows the TSA security Check-Points.



An overlook platform prepares passengers for the next step in the journey by providing a commanding view over the entire retail plaza. This is the "Aha" moment. From here, passengers can see the airplanes and gate locations as well as the entire retail plaza area with landscape plantings, digital media displays and regionally-inspired concessions offerings.



Upon descending to the central retail plaza, the heart of the terminal complex, an array of regionally-inspired offerings and amenities await passengers prior to proceeding to the boarding gates. In addition to diversified premium services and lounges, enhanced retail, dining and entertainment opportunities are available in this area.



After enjoying the amenities in the Central retail plaza, and in anticipation of imminent departure, the last step of the journey takes the passengers through the streamlined piers towards the individual gates. The directionality of the daylighting arrangement and the integrated design of wayfinding and other terminal elements will improve the passenger experience prior to boarding, leaving them with a positive memory of travelling through the departure region.



The arriving passengers return through the dynamic central retail plaza before heading down to the baggage claim hall. Clear and intuitive wayfinding elements, such as screens and interactive totems, help lead passengers swiftly to the baggage claim hall.



After crossing the security threshold vestibules, passengers are directly taken down into the baggage claim hall. Open escalators and elevators grant an immediate overview of the hall to foster easy orientation before heading to the baggage belts and exits, facilitating a stress-free exiting process.



The Port Authority Welcome Center is centrally located at the baggage claim hall, providing arriving passengers with customer assistance and passenger services, with daylight and views from the upper level departures.



At the exit from the baggage claim hall, the multi-level building façade creates a grand portal into the region with direct access to a full range of transportation modes.





Expectations & Opportunities

Expectations of Subcontractors, Subconsultants & Vendors/ Suppliers

- All MWBE subcontractors, subconsultants and vendors/suppliers must be certified and appear in the Port Authority of New York and New Jersey MWSDBE Directory by the bid/proposal due date
- Send written scoping letter to estimators within two weeks of request; preliminary pricing is appreciated, but not required at this time
- Submit scope and pricing with enough time for the estimating staff to review and ask any questions; late submissions cannot be considered
- Since this project is a DB Procurement, Tutor Perini/Parsons, JV cannot provide final quantities to any subcontractor or vendor/supplier until selection by PANYNJ and acceptance of final design and
- Requests for information and completed forms will be sent to selected subcontractors, subconsultants and vendors/suppliers with due dates; Tutor Perini/Parsons, JV expects subcontractors, subconsultants and vendors/suppliers to comply with these due dates



Architectural Construction

- Access Floor System
- Acoustical Panel Ceilings
- Airport Seating/Furniture
- Architectural Concrete
- Architectural Signage
- Architectural Woodwork
- Baggage Handling System & Inspection Conveyors
- Carpet
- Ceramic Tile
- Demolition
- Electric Chain Hoists

- Electrical
- Electrical Furnish & Install Airport Systems, Inc. Public Address, Signage/Wayfinding, Security and Wi-Fi Systems
- Electrical Furnish & Install Fire Alarm System
- Electrical Furnish & install Generators and Associated Equipment/Feeders
- Electrical Furnish & Install Switchgear and Associated Power Feeders
- Electrical Furnish Conduit, Wire and Cabling

- Electrical Provide Power and Controls for Baggage Handling System
- Elevators, Escalators & Moving Walkways
- Epoxy Terrazzo, thin set
- Expansion Control
- Exterior Curtain Walls
- Exterior Metal Wall Panels
- Fall-Arrest Devices
- Fire Monitoring & BMCS
- Fire Protection
- Firestops & Smoke Seals

Architectural Construction

- Floor Hatches and Access Panels
- Floor Mats & Frames
- Furniture, Furnishings and Accessories
- Glass & Glazing
- Glass Doors
- Gypsum Board / Stud Framing / Shaft Walls / Butt Insulation / Ridgid Insulation
- HVAC Air and Water balancer
- HVAC Ductwork Subcontractor
- HVAC Electrician to Install Automatic Temperature Controls

- HVAC Equipment Supplier Air Curtains, A/C Units, Heat Pumps, AHUs /RTUs, Colling Towers, Dampers, Duct Cleaning, Fans, Fuel Oil Pump/specialties, Heat Exchanger, Heat Tracing, Heaters, Pumps, Starters / VFDs Thermometers & Gauges, Sound traps
- HVAC Instrumentation & Controls
- HVAC Insulation Subcontractor
- HVAC Material Suppliers Pipe, Fittings, Louvers, Air Outlets, Radiant Heat and Fin-Tubes
- HVAC Water treatment contractor
- Interior Curtain Walls

- Interior Metal Wall Panels
- Intumescent Fireproofing
- Joint Sealant
- Lighting Protection
- Loading Dock Equipment / Compactors / Trash Containers
- Lockers
- Louvers & Screens
- Masonry
- Mechanical & Plumbing
- Modular Metal Ceilings
- Loading Dock Equipment / Compactors / Trash Containers

Architectural Construction

- Loading Dock Equipment / Compactors / Trash Containers
- Lockers
- Louvers & Screens
- Masonry
- Mechanical & Plumbing
- Modular Metal Ceilings
- Operable Partitions
- Ornamental Metal Fabrication
- Overhead Coiling Doors, Aluminum Grills and High Speed Doors
- Painting & Coatings

- Passenger Boarding Bridges
- Pedestrian Control Equipment
- Plumbing
- Resilient Flooring
- Resinous Flooring and Floor Sealers
- Roofing
- Security System Equipment / Closed Circuit Television System (CCTV) / Access Control & Alarm Mgt.
- Sheet Metal
- Skylights

- Sprayed Fireproofing
- Steel Doors & Frames
- Tack Boards and Projection Screens
- Telephone Specialties
- Toilet Partitions/Accessories, SS
- Window Washing Equipment

Civil Construction

- Aggregates & Fill Materials
- Asphalt Paving
- Concrete Bridge Piers & Decks
- Concrete Curbs & Sidewalks
- Concrete Slabs & Foundations
- Concrete Paving & Accessories
- Concrete Suppliers Forms,
- Containers
- Contaminated Soil Truck & Dispose
- Demolition
- Disposal of Concrete & Asphalt
- Drainage Materials

- Drilled Shafts
- Driven Piles Subcontractor
- Excavation / Backfill / Earthwork
- Hydrant Fueling System
- Instrumentation & Monitoring
- Landscaping
- Milling
- Miscellaneous Metals
- Piling Supplier
- Reinforcing Steel Subcontractor
- Reinforcing Steel Supply
- Sawcutting

- Sedimentation & Soil Erosion Control
- Sign, Fence & Rail Furnish & Install
- Soil Borings
- Striping Furnish & Install
- Structural Steel Subcontractor
- Structural Steel Supply
- Trucking On-Site
- Utility Work Drainage, Sewer & Water
- Vehicular Barriers

Design

- BIM (REVIT) Modelers
- BIM / Cost Integration
- BIM / EAM Data Input
- BIM / Primavera Integration
- Bridge Superstructure and Foundation Design
- Electrical Engineering Support
- Hydrant Fueling Design
- Low Voltage Systems Integration

- Materials Research
- Mechanical Engineering Support
- Passenger Boarding Bridge Design
- Pavement Design & Grading
- Pedestrian and Traffic Control
- Photovoltaics Engineering
- Roadway Civil Design
- Roadway Lighting and Signage

- SCADA Engineering
- Specification Writing
- Structural Engineering Support
- Subsurface Electrical, Mechanical and Gas Utility Designs
- Utilities
- Visual Docking Guidance System Design
- Visualization / Animation

General Conditions

- CPM Scheduling
- Equipment Rentals
- Fuel
- Janitorial Services
- MPT Material Supplier
- Office Equipment
- Office Supplies
- Pest Control
- Printing Services

- Safety PPE Equipment
- Security Guard Service
- Tools & Equipment Purchasing
- Trailer Rentals

