

World Trade Center Quarterly Report

2nd Quarter 2009

August 5, 2009

The Honorable David A. Paterson
Governor of the State of New York
State Capitol
Albany, New York 12224

Dear Governor Paterson:

I am pleased to provide you with the third of The Port Authority of New York and New Jersey's World Trade Center Quarterly Reports – an ongoing initiative to give the public a tangible way to track the agency's progress. These quarterly installments are published on our WTC website – www.wtcprogress.com – and contain a complete accounting of the interim milestones that the Port Authority established in October 2008, as well as an overview of the other work going on at the site so the public has a full understanding of what we are doing to advance the rebuilding effort.

The 2nd Quarter of 2009 saw tangible progress on the 9/11 Memorial, One World Trade Center, the WTC Transportation Hub and the other public infrastructure the Port Authority is responsible for building. Overall, we hit 19 of 20 milestones. The one missed milestone, as described in this report, was “substantially” complete and will not affect the project's critical path. As a result, we continue to remain confident in meeting the schedules and budgets released in our October 2008 report.

Specifically, we have now installed over 70 percent of the Memorial's steel – completing a critical milestone this Quarter, which consisted of installing over 2,400 tons of steel that makes up Sector 4 of the Memorial – the equivalent of 20 Statues of Liberty. We also completed the first concrete pour of the plaza and main entrance for One World Trade Center. Construction workers spent 14 consecutive hours pouring 1,250 cubic yards of concrete to bring the plaza to street level – the equivalent of six miles of New York City sidewalk. That record pour, which began in the heavy rain, is a real credit to all the construction workers who work tirelessly day in and day out on this job. We have also continued implementing the restructured procurement process for the WTC Transportation Hub – putting out for competitive bid one of our most critical work packages that will include the permanent underpinning and build-out of the #1 Line Subway box and the future Greenwich Street, as well as bringing on Tishman/Turner as a world-class team to manage the Hub's construction as the building phase ramps up.

I am also pleased to report that – working in close partnership with the Memorial Foundation – we have made enough progress on the Memorial that the 9/11 family members will be allowed to walk out onto the Memorial Plaza for the first time during this September's anniversary – something few thought would be possible this time last year. We will continue to partner with the Memorial Foundation and the City of New York on the detailed logistics of that day.

As the Port Authority looks ahead to next Quarter, we will continue to be confronted with a number of challenges. In recent months, the Lower Manhattan Development Corporation – the owner of 130 Liberty Street (the former Deutsche Bank Building) and the agency responsible for its abatement and demolition – has announced that it will not meet its 3rd Quarter milestone for the complete abatement and demolition of the building. These ongoing delays have forced us to rethink the construction staging of the Vehicle Security Center. As a result, this coming quarter we will begin implementing a new workaround strategy to mitigate these delays. In addition, the perimeter steel of One World Trade will begin rising above street level, which signals progress to be sure, but also poses significant logistical challenges. Some of these columns are 60 feet tall and weigh up to 70 tons each. This will require a tremendous amount of coordination, which our Office of Program Logistics will lead the effort on.

But, as you are well aware, our greatest challenge going forward remains the private office development on the eastern portion of the site. Unfortunately, just as we have gotten the public construction on track, we have seen that, like everything else, the rebuilding effort is not immune to the economic crisis. Working cooperatively with Silverstein Properties, we hope to rationalize their private development to meet the market, while continuing to advance the public projects and infrastructure. We appreciate the leadership position you have taken on this issue and agree with your principled approach of protecting public resources.

Finally, as you will see from this report, we have added a new six-month look ahead so you and the public have an understanding of what key milestones are coming up around the corner.

I look forward to updating you next Quarter on our progress as well as our challenges, as we work every single day to rebuild the World Trade Center.

Sincerely,

Chris Ward
Executive Director
Port Authority of New York & New Jersey

Cc: Governor Jon Corzine
Anthony R. Coscia, Chairman, Port Authority of NY & NJ
Henry R. Silverman, Vice-Chairman, Port Authority of NY & NJ
Port Authority Board of Commissioners
Mayor Michael Bloomberg
Assembly Speaker Sheldon Silver
Senate Majority Leader Pedro Espada Jr.
Senate President Malcolm Smith
Assembly Minority Leader Brian Kolb
Senate Minority Leader Dean Skelos

State Senator Daniel Squadron
Council Speaker Christine Quinn
Council Member Alan Gerson
Manhattan Borough President Scott Stringer
Senator Charles Schumer
Senator Kirsten Gillibrand
Congressman Jerrold Nadler

MILESTONES



March 2009



June 2009

A full description of the 2nd Quarter 2009 milestones is provided below, along with a six-month look ahead at the key milestones for the 3rd and 4th Quarters of 2009.

2nd Quarter 2009

National September 11 Memorial & Museum

- Complete Pavilion Interior Design (by NS11MM) – Complete

The Pavilion's Interior Design was completed by the NS11MM and design drawings were received and are presently under review. This design package consisted of over 100 pages of drawings. These design documents provide the final details for the construction of the Pavilion core and shell, including mechanical, electrical and mechanical details and finishes. The exterior cladding design was completed this past quarter. These drawings are expected to be released for procurement during the 3rd Quarter of 2009.

- Complete Approximately Half of Sector 3A Steel over the PATH Line – Substantially Complete

This represents over 480 tons of steel that covers the southern projection of the PATH line into the WTC site. The installation of this steel is facilitating construction of the Memorial's Museum by providing a street-level access for material into the site through the southern lift. All steel work in this sector was accomplished when the PATH railway line was inactive during scheduled weekend outages. The remaining portion of Sector 3A steel is scheduled for completion prior to the end of the year. The reason this is marked "substantially" complete and not just "complete" is because, while the necessary section of steel

for Sector 3A was installed in order to keep on the project's critical path, that section did not end up composing "half" of the sector's steel; it was more like one third.

- Complete Sector 4 Steel – Complete

Erection of this steel was aggressively managed and progressed to meet the milestone even with the heavy rainfall that was recorded this past June. "Sector 4" steel (over 1,295 pieces of steel totaling over 2,400 tons) makes up a significant portion of the center of the Memorial structure and joins the South pool structure with the North pool structure. This section of the steel also encases the area that contains the "Survivor Staircase", as well as the Central Chiller Plant.

- Turn over Sectors 2 and 3 to the Concrete Subcontractor – Complete

All of Sector 2 and a majority of Sector 3 was turned over to the concrete contractor and placement of the deck slabs and storm water harvest tank has begun. The concrete placed in the two areas in the 2nd quarter totals approximately 4,800 cubic yards (CY).

- Begin Concrete Operations on Interior of Memorial – Complete

Concrete operations began at the north end of the Memorial site, including the storm water harvest tank and major portions of concrete for the North Pool. Concrete operations will continue as steel erection is completed and sections are turned over to the concrete subcontractor in other areas of the project. The 4,800 CY of concrete placed in the 2nd quarter represents almost 10% of the total 50,000 CY of concrete that will be placed in the Memorial.

- Activate North Lift Complex and Install South Lift Complex – Complete

The installation of the personnel and equipment lift at the northern portion of the Memorial construction area is complete. The installation of this lift facilitates the movement of personnel and equipment into the project site. The installation of this lift enabled the displacement of one of the two Memorial cranes that were working from inside base of the site.

WTC Transportation Hub

- Begin 9A Underpass Excavation for East-West Corridor – Complete

Begin excavation for the portion of the East-West Connector that passes from the WTC site, under Route 9A to the World Financial Center and the rest of Battery Park City. Approximately 1,700 CY of soil was removed in the 2nd quarter. When complete this underground section will link the World Financial Center with the

Hub's East-West Connector.

- Complete Concrete Placement on All Sectors of the Fulton Street Deck – Complete

Placement of concrete was completed on all sections of the metal decking over the 47 Calatrava arches, which are currently in place along the East-West Connector. This concrete slab will support Fulton Street, which is critical for the productivity of the construction site, as well as the final completion of Fulton Street itself. The Fulton Street slab is a concrete slab 4 feet thick, consisting of over 2,100 CY of concrete and over 600 tons of rebar.

- Bid out Early Action Work Packages to Support Steel Erection – Complete

These are a series of work packages that went out for bid this past month. They must be complete before the Hub's steel arrives on site. In order for these packages to be complete to meet the steel erection's critical path, the procurement process must be well under way during the second quarter. They were put out to bid on May 15, 2009.

- Complete Fabrication of the Remaining Calatrava Arches for the East-West Connector – Complete

These eight new arches represent the remaining arches out of a total of 55 that will support Fulton Street. These new arches will be installed on the far West side and far East side of the East-West Connector, and must be delivered and installed during the 3rd Quarter 2009.

- Take PATH Platform A and tracks 1 & 2 Out of Service – Complete

This outage will facilitate completion of foundation work to support the steel columns in the Transit Hall. This will also allow the demolition of Platform A to begin, which will be replaced by a 10-car, ADA-compliant platform. This platform is currently used as a surplus platform to store PATH trains during off-peak hours and has not affect PATH service going forward.

WTC Vehicular Security Center and Tour Bus Parking Facility

- Complete Slurry Panels 1-4 and 8 – Complete

The completion of these slurry panels, which have approximately 25 tons of reinforcing steel bar ("rebar") and 160 CY of concrete, provide a portion of the interface with NYSDOT along Route 9A and will enable NYSDOT to finish construction of their utilities in this area.

- Assemble and Activate Slurry Plant – Complete

The on-site slurry plant that produces and pumps a slurry mixture into the excavated holes for the placement of the wall panels is on site and operational. The mixture produced and pumped by this plant prevents the narrow panel excavations from collapsing before the reinforcing bars and concrete can be placed.

- Complete Trenching and Installation of Buttress Guide Walls – Complete

Completion of these guide walls enable construction of the five buttress walls, which will support the southern face of the south bathtub slurry wall along Cedar Street. Rather than traditional tiebacks to support the slurry wall, which are being used throughout the rest of the site, this buttress support structure is necessary to hold up the slurry wall because tiebacks could not be drilled along Cedar Street. Construction of the buttress guide walls has been deferred pending completion of the workaround design to mitigate the delay in the demolition of the former Deutsche Bank building. Over 300 CY of concrete was utilized to place the guide walls.

One World Trade Center

- North Core Shear wall complete to B1 – Complete

Completed placement of reinforcing steel and high strength concrete for the North Core of One World Trade Center to bring it up to the B-1 level – this is the last level before grade. Over 1,500 CY of concrete was placed in the 2nd quarter to complete this work.

- South Core Crane Jump – Complete

The DCM tower crane within the center of the south core “jumped” from its location within the core to the erection steel which precedes the concrete placement of the core itself. This was the second of numerous jumps the crane will make as construction of 1WTC proceeds above ground.

- Finish Concrete Placement on the #2 - Auxiliary Shear Wall – Complete

Completion of approximately 350 CY of concrete in the Auxiliary Shear Wall enabled the start of the at grade slab work, which will facilitate vehicle and equipment access to support further above-grade construction at One World Trade Center.

- Complete First of Three Sections of Cutback on the Vesey Street Deck – Complete

Removal of approximately 100 feet out of a total of 380 feet of Vesey Street has allowed for installation to continue on the remainder of One World Trade Center's exterior columns and completion of basement deck in the area. All asbestos was removed from this area of street, which was already inside the fenced-off project area and does not affect pedestrian movements. (In our last quarterly report, the title of this milestone had a typo and was missing the preposition "of." There are three sections of Vesey Street and this milestone included finishing the first of those sections, not all sections.)

Greenwich Street

- Phase 1 Excavation and Bracing – Complete

Completed the soil excavation to elevation 285 and installation of 1 level of steel mini-pile bracing. These represent the first steps in the permanent underpinning of the active #1 Subway Line from Liberty Street to Vesey Street. Minor welding and punch list items are ongoing, though these actions are not on the project's critical path.

- Top-Down Contract for Greenwich Street Out to Bid – Complete

On June 1, 2009, the Port Authority released a request for bid contract documents for completion of the construction of the underpinning of the #1 Subway Line. This major contract represents the remaining excavation and permanent support below the current 1,000 feet long underpinning of the active #1 Subway Line, which bisects the 16-acre site.

Looking Ahead – 3rd Quarter 2009

National September 11 Memorial & Museum

- Complete Erection of Sector 3 Steel

This steel will complete the steel erection to grade in the south west portion of the Memorial site along West Street. This steel will be placed over the PATH tracks and must be done on weekends and during scheduled PATH outages given the active PATH system beneath it.

- Complete Sector 5 Steel Erection

This represents the completion of all steel work between the two fountains which will enclose a majority of the Museum area. Sector 5 steel also includes the construction of the pedestrian ramp from the Museum entryway to the 242 elevation viewing area. Almost 800 tons of steel comprises Sector 5. Placement of the steel in this sector began in Early June.

- Award Pavilion Structural Steel

This award will be for all of the above grade structural steel within the Memorial's Pavilion building. This procurement will allow for the commencement of structural steel erection to begin in early 2010.

- Award Pavilion Curtain Wall

This award will be for the fabrication and installation of the curtain wall systems that will encase the Memorial Pavilion structure.

- Complete Counterfort Wall behind Exposed Slurry Wall

Complete the counterfort wall behind the exposed section of the original WTC slurry wall. This slurry wall will be exposed inside the Memorial Museum as a permanent exhibit. Finalization of the placement of the Sector 5 steel will enclose the slurry wall into the Museum.

- Award Drywall / Carpentry Package

This award includes all carpentry and drywall work for the WTC Memorial, Memorial Museum, and WTC Infrastructure Projects.

- Complete Sector 2 Concrete

This concrete makes up $\frac{3}{4}$ of the concrete within the northern fountain area. Completion of this concrete will allow mechanical, electrical, and plumbing work to continue within the north fountain area. Additionally, completion of this area will allow for the reallocation of resources to ensure the prompt completion of the Central Chiller Plant Core and Shell. The total amount of concrete to be placed in this sector is over 5,000 CY.

WTC Transportation Hub

- Begin Platform Column Foundations (to be completed by end of 4Q2009)

These 22 column foundations represent those required to support the PATH Hall roof and are located on all station platforms, including the future Platform D. They will be followed by the erection of permanent columns and are incorporated into one of the early works packages that was awarded in mid July. These foundations are to be completed by the end of the year in order to support the placement of the Transportations Hub's structural steel that will arrive in the first quarter of 2010.

- Fulton Street Slab Available for Access

The completion of the Fulton Street slab will support construction on the south

side of 1WTC and placement of the remaining Calatrava arches for the East-West Connector. This area will also support the staging of material and the bending of reinforcement bars for One World Trade Center. This work will be followed-up by the construction of retaining walls and permanent sub-grade fill and a temporary paving course.

- Early Action Packages Awarded

These packages represent critical construction activities that must be accomplished immediately in preparation for the erection of Hub steel in early 2010. Items include foundation work, utility relocations, station demolition, stair fabrication and installation, and the construction of a logistical access roadway to support Station and Tower One construction.

- Complete Level C Tiebacks (H&M Station)

These tiebacks will allow for the continued demolition of the H&M station structure. They must be in place prior to demolition of the structure to the next level since they will provide the structural support of the slurry wall along the eastern portion of the site in the vicinity of the future Oculus area. This section requires 17 tiebacks which will each be in excess of 85 feet in length.

- Notice to Proceed (NTP) - Construction Management Contract

This will be the notice to proceed to the Construction Management firm who will manage the construction of the Transportation Hub project. This \$105M contract which will be awarded to the Joint Venture of Tishman Construction and Turner Construction was authorized by the Port Authority during their July 23, 2009 board meeting.

- Structures to Grade Package Out to Bid

Notification to the contracting community of the scope of the work and bidding calendar for the Structure-to-Grade, Fit out, and MEP package. This work includes all structure, finishes, and MEP in the Transportation Hub.

- Award and Issue a Notice to Proceed on the Top-Down Contract

Award and give the Notice to Proceed for the Greenwich Street Top Down construction. This work includes the permanent concrete walls, slabs and excavation of soil under the #1 Subway line, including the PATH Underpass, as well as the mass rock excavation in the Oculus site.

- Complete Installation of the 8 Additional Arches along the East-West Connector

These are the remaining arches that will support Fulton Street above the East-

West Connector. Four of the arches will be placed on each end of the current East- West Connector which currently has 47 arches in place. The work will be followed up by additional roof slab placement, which will serve as the base for Fulton Street.

- Demo 286 & 266 slabs (H&M Station)

The demolition of these two building slab levels will complete the majority of the structural demolition of the old H&M Station. This is the area where the future train hall and Oculus will be located.

WTC Vehicular Security Center and Tour Bus Parking Facility

- 130 Liberty St. Deconstruction Complete (by LMDC)

Complete demolition of the existing building to allow for the continued excavation and construction for the Vehicular Security Center.

- Finish Slurry Panels Along West St.

This will complete the section of foundation (slurry) wall along the right of way with Route 9A in the western portion of the VSC project site. These include 10 slurry panels that will extend from the southwest portion of the Memorial site to the Cedar Street – West Street intersection. (These are 10 of the 29 total slurry panels that need to be placed in the VSC site) This portion of the slurry wall will provide a portion of the foundation for the redirected Liberty Street Pedestrian Bridge.

- Complete Work Around Design for 130 Liberty

With the delay in demolition of the former Deutsche Bank building a work around design is being developed in order to mitigate the impact to the overall VSC schedule. The concept of this design is to split the Vehicular Security Center site into two sections utilizing a demising wall. By splitting the site excavation and foundation, work will be able to start on half of the site even before final demolition of the former Deutsche Bank building.

One World Trade Center

- Concrete Slabs to Grade Substantially Complete

These are the slabs that bring the 1WTC construction to grade around the entire perimeter of the project.

- Place Concrete at Shear Walls – 1st Lift Above Ground

This is the 1st lift above ground for the North Core Shear Walls. This will enable the contractor to complete the North Core shear wall 2nd lift above ground and meet up with the level of the South Core shear wall.

- Complete Demo of Vesey St

The complete demolition of the Vesey Street segments along the northern edge of the One World Trade Center site will enable the installation of the remainder of the building's exterior columns and completion of basement deck construction along the entire northern edge of the building.

- Tower Steel Erection Begins

This steel will be the next level of columns that will outline the limits of 1WTC. They will be placed on top of the columns sections that are currently just above street level.

Greenwich Street

- Notice to Proceed (NTP) for Top-Down Construction

Give a notice to proceed to the contractor who was the successful bidder for the construction of the top down construction support of the #1 Subway line. This design supports the 1 Line North and South of the PATH Underpass. It incorporates the existing temporary mini-piles into a concrete shear wall and slab system that is being constructed from the "top-down."

Looking Ahead – 4th Quarter 2009

National September 11 Memorial & Museum

- Complete 1A Steel Decking at 307 Level

This represents the last structural steel for the Memorial and completes the balance of the steel for the South Fountain.

- Complete Substantially Sector 5 Concrete Operations

Creates the Museum viewing area and is the balance of the concrete for the southwest corner of the North Fountain.

- Installation of Phase 1 of Sector 2 Interior Masonry

This will enable the fit-out for the Museum's northern area to begin.

- Complete Sector 3A Steel Erection

Complete steel erection in SW corner along interface with VSC and over PATH Right-of-Way

- Complete Central Chiller Plant Concrete

Completes slabs, hardened walls, and shear walls for the core and shell of the Central Chiller Plant.

- Complete Sector 3 Masonry walls

This will complete the masonry work in the Sector 3 area and facilitate completion of the fit-out in that area.

WTC Transportation Hub

- Begin construction of Underpass Super Columns

These very large columns serve to support the 1/9 Subway Line at the PATH Underpass as well as the PATH Hall Roof and Transit Hall grade slab, though timing will depend on the Port Authority's restructured procurement process and this milestone may be re-sequenced, though we do not anticipate it affecting the overall critical path of the project.

- Complete Steel Erection at South Mezzanine & Pavilion Transfer Structure

This represents the steel that supports the Memorial Pavilion as well as the Southeast corner of the Memorial Plaza.

- Begin Fabrication of PATH Hall Roof Steel

Following shop drawing submissions and approvals, the contractor will begin to fabricate the PATH Hall roof steel to be logically sequenced in time for delivery to the site. The first structural members expected onsite are the columns and plate girders supporting the arched roof structure. The fabrication of the PATH Hall roof steel must begin in the 4th Quarter of 2009 to allow the start of steel erection for the PATH Hall roof to begin within the 2nd Quarter of 2010.

- Complete Fulton Street Access Roadway

This work consists of retaining walls, concrete wall and slab infill, permanent backfill, and a temporary paving course for the western portion of Fulton Street. Once complete, this roadway will serve as a critical logistical access for Station roof construction and Tower One steel staging.

- Complete PATH Hall Roof Demolition over Platform A (Tracks 1&2)

Utility relocations and demolition of the existing temporary station roof over Platform A and Tracks 1 and 2. This will allow for the subsequent construction of the West Super Columns and 1/9 truss as well as the East Box Girder.

WTC Vehicular Security Center and Tour Bus Parking Facility

- Complete Buttress Wall Panels along Cedar Street

Completion of these walls will provide the support to the slurry wall along Cedar Street in an area that tie backs could not be placed.

- Start Construction of Liberty Street Pedestrian Bridge

The completion of this bridge will allow for the excavation of the VSC site while providing uninterrupted safe passage of commuters around the WTC site. Construction needs to start in the 4th Quarter so that it can be complete by early 1st Quarter 2010.

One World Trade Center

- Start Erection of Tower Steel

This will be the first placement of perimeter tower steel above street level.

- Erect Tier 2 – Floors 2M & 3 – Perimeter

After all the perimeter steel is erected at Tier 1, 2nd Floor; then the Tier 2 steel erection will take place that covers the 2nd Floor Mezzanine and the 3rd Floor.

- Jump Crane onto Steel at North Core

Once the North Core Shear Walls are completed to Ground level and erection steel is assembled, then North Crane will jump on to the erection steel. This will enable the contractor to continue with the erection of the structural steel.

- Place Concrete on Deck at 2nd & 2M Floors

This will be the first concrete placement on elevated deck to be built above Ground Level that will be visible from the street and it covers the 2nd Floor and 2nd Floor Mezzanine elevations.

Greenwich Street

- Begin Construction of Underpass Super Columns

These very large columns serve to support the 1/9 Subway Line at the PATH Underpass as well as the PATH Hall Roof and Transit Hall grade slab.

- Begin Construction of Elevation 274' Concrete Slabs

This represents the first level of concrete slabs that will be emplaced to support the mini-pile columns that currently support the 1/9 Subway line box.

QUARTERLY UPDATE

The following sections detail the significant actions taken over the past quarter beyond the specific major milestones described before:

Highlights

National September 11 Memorial & Museum

- Erection of the steel is over 70% complete
- Almost 5,000 cubic yards (CY) of concrete was placed on the Memorial in the 2nd Quarter. It was delivered by over 500 concrete trucks.
- Installed over 20,000 feet – almost 4 miles – of electrical conduit
- Completed steel in Sector 4 which consisted of over 2,400 tons – the equivalent of almost 20 Statue of Liberties

WTC Transportation Hub

- Put out to competitive bid one of the most critical work packages – Greenwich Street/Underpinning of #1 Subway Line
- Over 28,000 tons of soil were removed from underneath the #1 Subway Line
- Completed the concrete slab above the East-West connector section that supports the future Fulton Street. Over 2,100 CY of concrete was placed.

One World Trade Center

- Over 7,000 CY of superstructure concrete was poured in the 2nd quarter including the largest single concrete placement on the site to date - 1,250 CY of concrete to bring the south west plaza area of One World Trade Center up to street grade. (Overall on the site, 13,000 CY of concrete was placed throughout the site. This amount is equivalent to a sidewalk stretching from New York City to Stewart Airport, 65 miles away in Newburgh, NY.)
- Erected the 3rd tier of the steel perimeter columns for One World Trade Center. All 25 of the columns now extend above grade.

VSC

- Completed the installation of eight slurry panels which totals over 1,200 CY of concrete and 200 tons of rebar
- Developed proactive strategy to mitigate delays from the ongoing demolition of the former Deutsche Bank building

WTC Office of Program Logistics

The Office of Program Logistics (the Office) worked during the second quarter of 2009 to set the stage for the anticipated increase in construction activity that will occur by the end of the year. As the entire One World Trade Center plaza rises to grade, steel frames the Memorial plaza sub-grade, the VSC advances the placement of slurry panels, and the Transportation Hub prepares to receive its first steel deliveries, the need for coordination

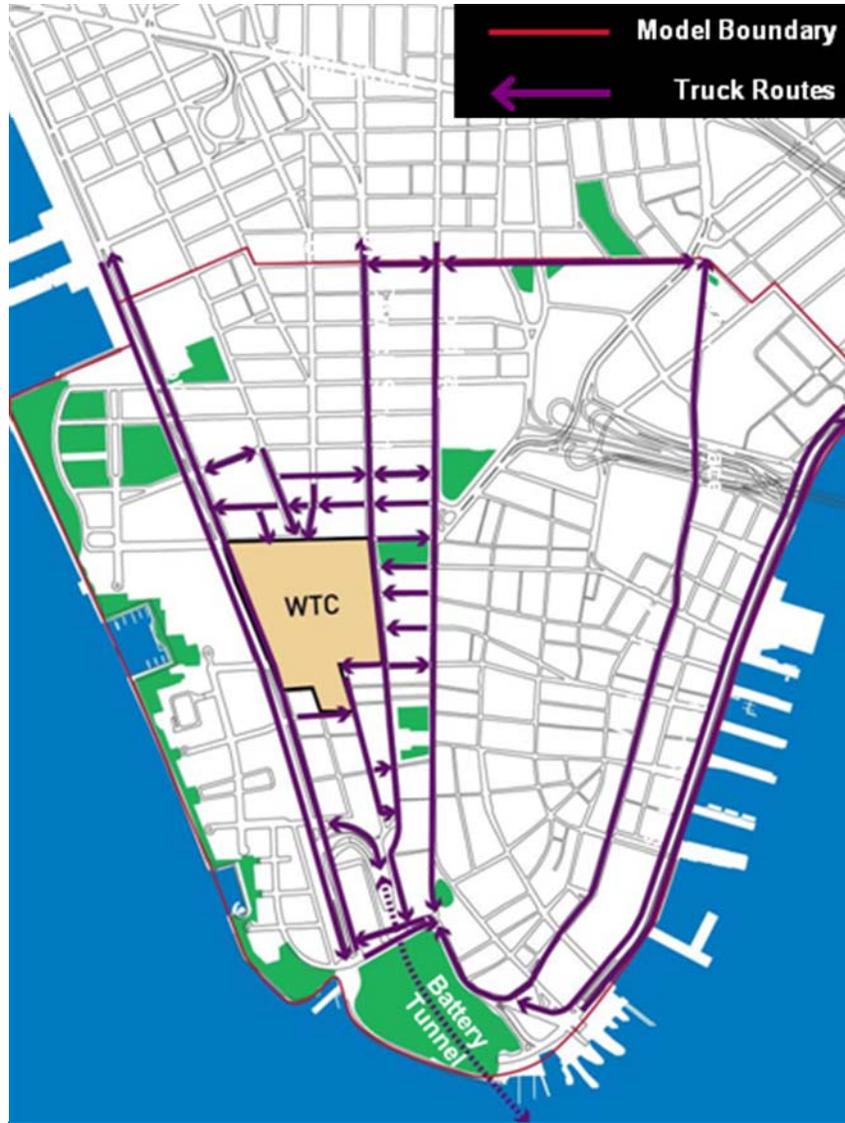
among projects will ramp up. As a result, the Office modified field conditions and undertook studies that will address on-site coordination and pedestrian and vehicle movements around the 16-acre Site to accommodate the increased construction demand. The Office advances this work through efforts in four areas: (1) Planning and Analysis; (2) Stakeholder Coordination; (3) Operations ; and (4) Communications. A quarterly update for each area is provided below.

Planning and Analysis

The Office coordinated construction logistics planning from the various project teams to proactively manage the increase in construction labor, equipment and material deliveries anticipated for 2010 and 2011 as more projects approach peak activity. This effort includes multi-year site phasing plan, including gate access coordination, equipment coordination and work zone boundaries. The planning also includes multi-year projections for truck deliveries of equipment and concrete for each Site gate in order to develop traffic management and security protocols.

Planning efforts this quarter included:

- *Memorial Tour Bus Staging:* The Office continued to advance its planning effort to study pre- and post-construction needs for bus staging and drop-off and pick-up locations. The Office is working with city agencies to identify new areas both in Lower Manhattan and beyond for further study as potential staging locations.
- *Lower Manhattan Travel Demand Modeling:* Working collaboratively with the Lower Manhattan Construction Command Center (LMCCC) and NYCDOT, the Office undertook an effort to assess whether WTC trucking activity would impact the Lower Manhattan roadway network at the height of the WTC Site construction period. The first phase of the analysis showed no corridor level impacts to a Lower Manhattan street network caused by the addition of WTC construction vehicles in 2010. The partnering agencies will kick off a Phase II traffic modeling effort in the coming months, which will include more detailed gate operations and off-site truck staging. This effort will model scenarios for 2011 and beyond and provide a more detailed analysis of truck movements in the streets and intersections adjoining the WTC Site. The collaboration with LMCCC and NYCDOT demonstrates the Port Authority's commitment to working in tandem with key stakeholders to address issues critical to Lower Manhattan, and the Office will continue to work with LMCCC and NYCDOT on issues affecting the circulation of pedestrians and vehicles around the WTC Site as construction continues to progress.

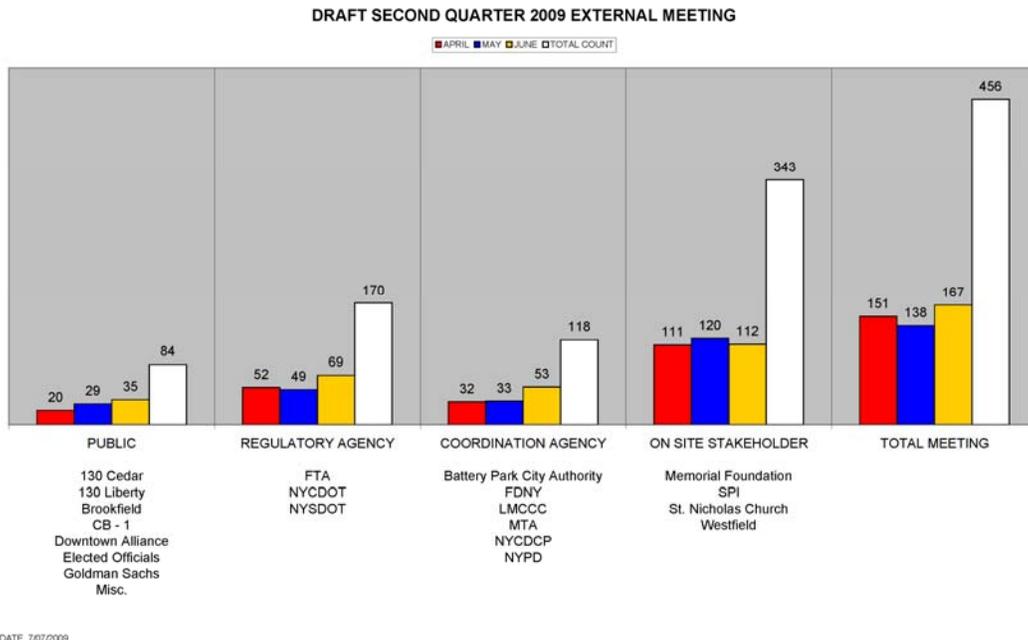


Graphic above: Lower Manhattan Truck Modeling Study

Stakeholder Coordination

The Office continues its outreach with WTC stakeholders. The success of this program has allowed the Port Authority to identify and address issues related to various projects at the WTC Site. In the second quarter, the Port Authority has participated in numerous meetings with a variety of different stakeholders. The Office meets bi-weekly with LMCCC to coordinate logistical matters and has held an array of outreach meetings, status briefings, and working sessions with external stakeholders including The Downtown Alliance, Community Board 1, NYCDOT, NYSDOT, Silverstein Properties, Councilman Alan Gerson’s Office, and the Sheldon Silver Stakeholder Taskforce. In the

last quarter alone, the Port Authority participated in approximately 456 meetings with dozens of different stakeholders (see graphic below):



These meetings have been instrumental in supporting on-site construction coordination and accommodating off-site pedestrian and vehicular corridors including:

- *Walking Tours for the Community:* The Office led a walking tour of the Site perimeter on May 13th with area residents to ensure the Port Authority remains responsive to community concerns. The ongoing “Walkshop” series has led to a number of substantive improvements around the Site, including better nighttime lighting, widened and repaved sidewalks on adjacent streets, and aesthetic upgrades such as the site fence banners.
- *9A Underpass:* In conjunction with NYSDOT and Brookfield Properties, the Office continued to examine approaches for accelerating completion of the Route 9A underpass. Options under consideration could advance the construction schedule by months, allowing the public to benefit from a weather enclosed environment from the PATH and NYCTA transit complex to/from the World Financial Center located west of Route 9A.
- *Vesey Street Pedestrian Bridge Extension:* In the second quarter of 2009, the Office coordinated a concept of extending the Vesey Street pedestrian bridge eastward to land east of Washington Street Vesey Street with utility companies such as Con Edison and adjacent property owners including Verizon and Silverstein Properties, who lease 7 WTC. The bridge extension will provide a safe environment which will separate pedestrians using Vesey Street immediately north of the WTC Site from trucks entering the Site via Washington Street, a critical delivery route for One

World Trade Center. The grade-separated crossing will minimize impacts to pedestrians and enhance the efficiency of the construction effort. The Office created and released a bid package for the “design/build” of the project and plans to start construction in the autumn, with a scheduled opening in 2010.

- *Liberty Street/Cedar Street Bridge Extension:* The construction of the Vehicle Security Center (VSC) requires the demolition of the existing pedestrian Liberty Street Bridge. The Office is coordinating with NYSDOT on alternative options to accelerate the construction of an extension to the Liberty Street pedestrian bridge. The removal of the existing extension would facilitate excavation and construction activity on the VSC site.
- *Improvements to the Liberty Street Corridor:* The Liberty Street corridor is an important east/west path for residents of Battery Park City and World Financial Center tenants. The Port Authority met with Battery Park City and Brookfield Properties to develop an enhancement plan that modifies the protective Liberty Street sidewalk shed to improve pedestrian comfort and circulation. In May, the Office installed in the sidewalk shed new decorative wall panels depicting iconic downtown destinations to improve the pedestrian experience.
- *Gate operations:* The Office coordinated with NYCDOT and NYSDOT to create an improved egress at the Site for construction vehicles. At times when substantial concrete pours are taking place, there is limited space for vehicles within the Site along West Street. As a result, the Office coordinated the revised Site configuration to allow construction vehicles to merge with Northbound Rt. 9A traffic along Route 9A.
- *Street Changes:* Ongoing WTC-related utility work on Liberty Street has required a partial closure of that street, which limits eastward egress for FDNY fire trucks. In order to ensure access to the east for fire trucks, the Office worked with NYCDOT to change the direction of Thames Street between Greenwich Street and Trinity Place. As a result of this effort, FDNY vehicles may now travel south on Greenwich Street and then travel to the east via Thames Street.



Figure 5: Routes from the North, South, East, and West to Pier 42

Graphic above: Truck Traffic Study, Routes to Pier 42

- Pier 42:* The Office continued its examination of potential off-site truck staging areas that will support on-site construction activities and mitigate potential traffic congestion on nearby streets. The Port Authority, New York City Economic Development Corporation, NYCDOT and other stakeholders are discussing issues related to the use of Pier 42 as a location to stage construction vehicles for the Hub project. The Port Authority is currently working with the EDC, among other agencies, to come to an agreement on the use of the pier and develop mitigation plans for routes to and from the site.
- 90 West Street:* As the construction of the WTC Vehicular Security Center and Tour Bus Parking Facility has progressed, the Office has made every effort to mitigate construction impacts that might affect the adjacent residential property at 90 West Street located within 5 feet of the site. One of the major components of that mitigation is an interior building pre-condition survey. The Office worked closely with 90 West Street ownership to develop an indemnity agreement that allowed the Port Authority’s contractor to perform pre-condition surveys and to install vibration monitoring equipment in the building. This equipment will allow the Port

Authority to monitor the level of any vibrations within the building in “real time.” Moreover, it will enable a more efficient dissemination of that data to 90 West Street.

- *Millennium Hotel Outreach:* As construction of the Transportation Hub continues, the Office has been making every effort to mitigate construction noise that may affect residential and commercial entities surrounding the project Site. The Office worked closely with the Millennium Hotel management to develop measures to alleviate noise impacts, including shifting certain work to daytime hours, scheduling construction activities to avoid hotel conference hours, and stringently monitoring construction noise levels.

Operations

The Office has coordinated future Site operation requirements that will ensure both the safety of labor and allow for easy access of vehicles during the up-coming construction activity. Through the coordination of Port Authority in-house expertise and City regulatory agencies, the Office has developed the following plans.

- *Site Logistics Coordination Center:* The Port Authority has made significant progress in the development of a Site Logistics Coordination Center (SLCC). This facility will provide business support tools and communications for three key functions during the construction of the WTC Site: (1) construction logistics; (2) security; and (3) law enforcement liaison. The SLCC will be the single point of contact for managing vehicle deliveries and on-time scheduling, which will ensure efficient use of individual Site gates and help mitigate on-street congestion. The Center will also be equipped with robust communications, access control monitoring and closed circuit television capabilities that are key elements of the site security management and law enforcement liaison functions. In addition, the WTCC department is preparing a Site logistics room adjacent to the SLCC, which will serve as a focal point for logistics planning and on-Site coordination as construction progresses.
- *Pedestrian Management Plan:* The Office launched a new pedestrian management program at key intersections on Church Street. It has been working closely with NYCDOT to ensure a smooth transition and enhanced pedestrian experience at managed intersections. In addition, The Office conducted a temporary pedestrian stoppage program on Vesey Street. The program assessed pedestrian conditions when holding pedestrians to allow construction vehicles to enter gate 4A (at Vesey and West Broadway). The program demonstrated that Vesey Street may remain open for several months after the start of 2WTC construction rather than closing immediately after work begins.

Communication

This quarter, the Office published its first three public newsletters documenting the construction issues at the Site. This monthly publication, “WTC Progress” is disseminated to WTC stakeholders, including area residents, public agencies and civic groups in an effort to inform those most impacted by the rebuilding. Additional construction schedule bulletins were developed for the residents of 90 West Street to inform them of construction activities at the Vehicular Security Center. In addition, the Office continued to send out construction notices to area residents, workers, and businesses as construction activity progressed.

The Port Authority regularly provides updates and photographs of our construction progress on www.wtcprogress.com in order to keep the public informed of the day-to-day progress. The web site hosts our “Ask the Port Authority” feature, which allows us to respond directly to questions from the public regarding the WTC building program.