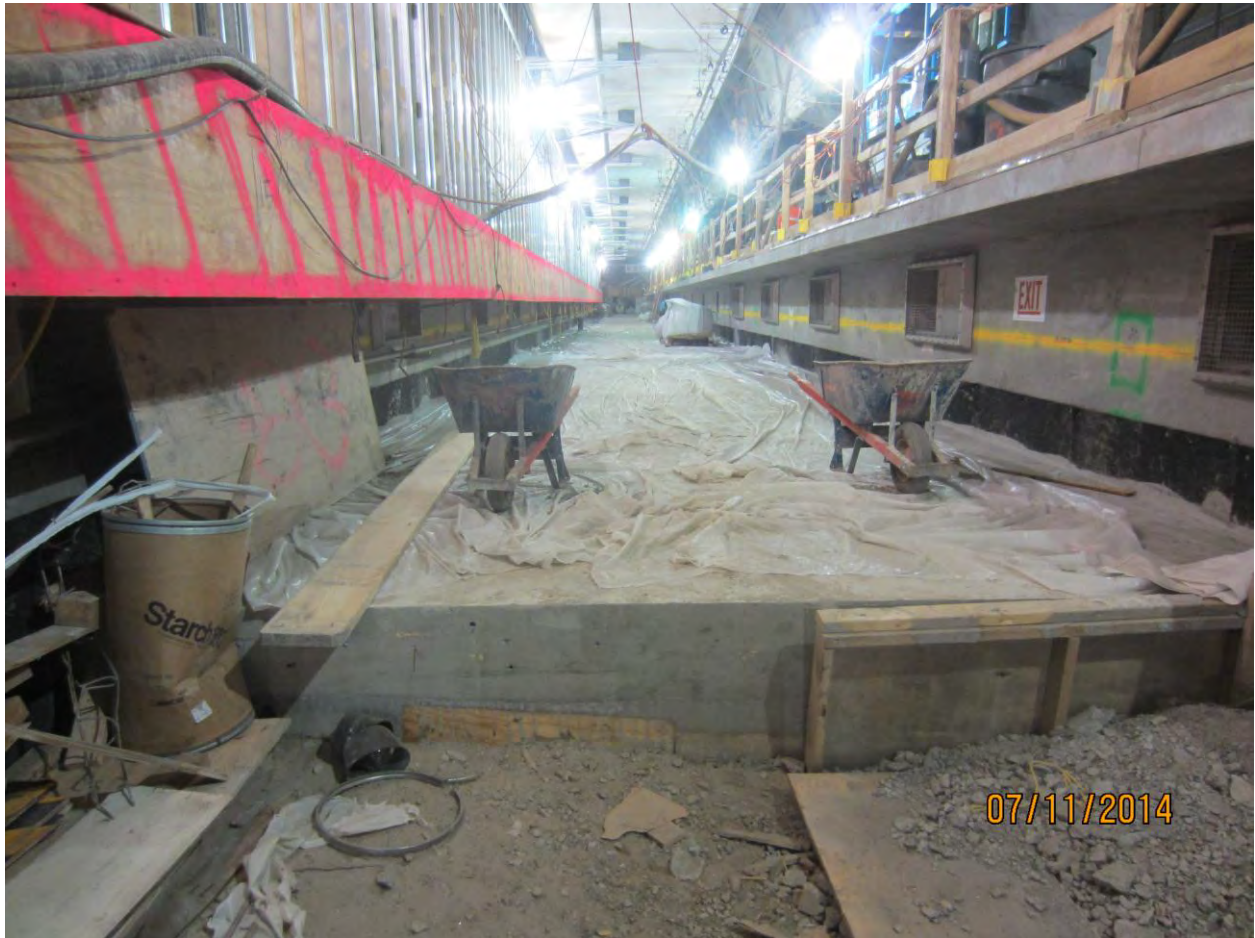


## MONTHLY MONITORING REPORT

**World Trade Center Port Authority Trans-Hudson Terminal**  
**PORT AUTHORITY OF NEW YORK AND NEW JERSEY**  
New York, New York

*July 2014*



PMOC Contract Number: DTFT60-09-D-00008

Task Order Number: T09002, Project Number: RV-43-0001, Work Order No. 005

O.P.s Reference: 01, 02, 25

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PMOC / Start of Assignment: David Evans and Associates, Inc. / October 2008

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*Cover: Looking south at the first sections of base slab for Track 2 adjacent to the new Platform B, which appears at right.*

## **DISCLAIMER**

This report and all subsidiary reports are prepared solely for the Federal Transit Administration (FTA). This report should not be relied upon by any party, except the FTA or the project sponsor, in accordance with the purposes as described below.

For projects funded through FTA's Lower Manhattan Recovery program, the FTA and its Project Management Oversight Contractor (PMOC) use a risk-based assessment process to review and validate a project sponsor's budget and schedule. This risk-based assessment process is a tool for analyzing project development and management. Moreover, the assessment process is iterative in nature; any results of an FTA or PMOC risk-based assessment represent a "snapshot in time" for a particular project under the conditions known at that same point in time. The status of any assessment may be altered at any time by new information, changes in circumstances, or further developments in the project, including any specific measures a sponsor may take to mitigate the risks to project costs, budget, and schedule, or the strategy a sponsor may develop for project execution.

Therefore, the information in the monthly reports may change from month to month, based on relevant factors for the month and/or previous months.

## REPORT FORMAT AND FOCUS

This monthly report is submitted in compliance with the terms of the Federal Transit Administration (FTA) Contract No. DTFT60-09-D-00008, Task Order No. 002. Its purpose is to provide information and data to assist the FTA in continually monitoring the grantee's technical capability and capacity to execute a project efficiently and effectively, and hence, whether or not the grantee continues to receive federal funds for project development.

This report covers the project management activities on the Permanent World Trade Center (WTC) Port Authority Trans-Hudson (PATH) Terminal (Hub) project, conducted by the Port Authority of New York and New Jersey (PANYNJ) as grantee and funded by the FTA's Lower Manhattan Recovery Office (LMRO).

## EXECUTIVE SUMMARY

*In the east bathtub, the Oculus Steel contractor was able to set an additional 20 rafter elements during July, an increase of 12 over the 8 rafters set during June, but still short of the target of 40 rafters per month.*

*Platform B continued to be the focus of activity for work in the west bathtub during July. Progress on the extension of the utility tunnel that crosses beneath the new platform and adjacent Tracks 2 and 3 was among the notable construction advances made during the month.*

## Project Description

The WTC PATH Hub Terminal serves the PATH electrified rail transit system in Lower Manhattan. The PATH Hub is an extensive underground complex of pedestrian corridors and train station facilities that will replace the original WTC PATH Terminal destroyed by terrorist attack on September 11, 2001.

## Construction Agreement (CA)

The CA was signed by the LMRO on April 25, 2006. A Revised and Restated Construction Agreement (RRCA) was executed on September 18, 2012. The RRCA establishes a Required Completion Date (RCD) of December 17, 2015, and commits \$2.872 billion in federal funding to the PATH Hub project. The RRCA establishes a not-to-exceed amount of \$3.995 billion for the project.

## Quarterly Progress Review Meeting (QPRM)

*A QPRM for the second quarter of 2014 has not been scheduled.*

## Design Activity

The designer continues to provide construction support services, including the review of contractor shop drawings and other submittals.

## Procurement Activity

World Trade Center Construction (WTCC) has completed all planned procurements for the PATH Hub project. However, Change Orders continue to be issued as necessary under the active construction contracts.

## Construction Activity

Construction of new Platform B *continued to advance* during the month. *The concrete floor slab and walls were placed* at the section of the utility tunnel passing under the platform *and Track 3*. Sections of the platform concrete structure were also placed during the month, and work on the adjacent Track 2 base slab *continued*. *The contractor also continued to install sections of precast concrete ducts over Track 3*.

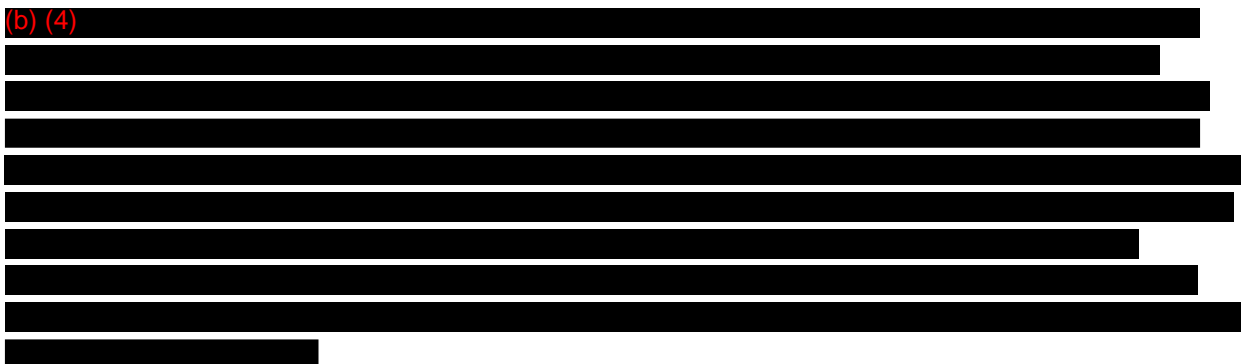
At the Transit Hall, *rafter erection continued along both the north and south sides of the structure*. However, *despite improved erection production during July, the contractor continued to encounter geometry control and welding issues, similar to those encountered during erection of previous oculus steel element groups*. *A total of 20 rafters were set during July*.

*At the emergency generator plant, WTCC is expediting the completion of the work and the commissioning of the systems that are required for its placement into service. Pacing this process is the completion of the diesel fuel delivery portion of the facility, both the piping necessary to deliver diesel fuel to the diesel fuel storage tanks and the moving of that fuel from the tanks to the emergency generator sets. Several contractors are involved in this process, including some of the contractors working for the developer of the tower in which this PATH Hub project equipment is housed.*

## Schedule

In July 2014, WTCC released Integrated Master Schedule (IMS) 74, (data date June 1, 2014),

(b) (4)



## Cost Data

WTCC submitted its monthly cost model revision on *July 31, 2014*. It shows that, based on the contract awards and estimates through *June 30, 2014*, WTCC's Estimate at Completion (EAC) for the federally funded PATH Hub project is just over \$3.7 billion, which is unchanged from the cost model revision submitted at the end of the prior month. WTCC reported total PATH Hub expenditures through *June 30, 2014*, to be more than \$2.88 billion, or 77.5 percent of the EAC. That total of PATH Hub expenditures includes an additional amount of \$18.4 million in PATH Hub expenditures over the total contained in the *June 30, 2014* report.

## Risk Management

To provide an improved project risk tool, the FTA, the PMOC, and WTCC completed the Project Execution Plan (PEP) in conjunction with the execution of the RRCA on September 18, 2012. As information on the impacts of Hurricane Sandy became available, the PMOC conducted PEP workshops in June 2013 to discuss and quantify the impacts to cost and schedule from the storm. The PMOC then reconciled the results of the workshops with WTCC, and the outcome of this effort was used to update the PEP. The PEP was finalized in February 2014 and recognized WTCC's eligibility for receiving partial release of risk retainage by achieving beneficial use of Platform A on February 25, 2014. *In July, the PMOC initiated a review of the 2013 PEP update in consideration of various project developments that have arisen during the intervening period.*

## Technical Capacity and Capability Review (TCCR)

The TCCR will be updated as necessary in conjunction with the update of the PEP.

## Project Management Plan (PMP)

The grantee is updating its PMP and now expects to submit the updated plan in *early August 2014*.

## Project Quality Assurance (QA)

*During July 2014, WTCC QA completed nine oversight audits that included observing the CM QA's field audits and performing its own audits of field construction activities. No corrective actions were identified by WTCC QA. The July 2014 audit total reflects the nine WTCC QA audit reports that were issued and received at the time this report was drafted.*

## Site Safety

The WTC PATH Hub project has established safety performance goals for its Total Case Incident Rate (TCIR) and Lost-Time Incident Rate (LTIR) of less than 5.0 and less than 2.0, respectively. In *June 2014*, the project *met* its goals: There were *two* recordable incidents and *no* lost-time incidents during the month, *resulting* in a TCIR of 2.61 and an LTIR of 0.0, based on 153,121 hours worked. In comparison, the *May 2014* incident totals were four recordable incidents and *three* lost-time incidents, resulting in a TCIR of 5.28 and an LTIR of 3.96, based on 151,476 hours worked. The *decrease* in incidents during *June* is attributable to an *enhanced focus on using safe work practices*. In reviewing the *June* safety performance, WTCC Safety continued its active role in managing worker safety, evaluating the causes of each incident, and *developing lessons learned*. *The July 2014 safety data for the project was not fully available at the time this report was drafted but is expected to be available after mid-August 2014.*

*During a July site visit by the New York City Fire Department (FDNY), two hot works activities were observed without fire guards present in the work area. Both contractors and fire guards were issued fines by the FDNY and the fire guards were sent home for the day.*

### Issues/Problems/Suggestions

The widespread regional damage caused by Hurricane Sandy in late October of 2012 caused a delay to the forecast completion of the PATH Hub project. (b) (4)

[REDACTED]

[REDACTED]

## MONITORING REPORT

### A. Project Description

The PATH Hub facility is an intermodal terminal serving the PATH electrified heavy rail transit system, which has a total of 13 PATH stations in New York and New Jersey. When completed, the PATH Hub will connect to 11 New York City Transit (NYCT) subway lines in Lower Manhattan. The PATH Hub will include a platform level, associated mezzanine and concourse levels called the PATH Hall, and a terminal building called the Transit Hall, or Oculus, with north-south and east-west pedestrian connections to the NYCT subways, the World Financial Center, and WTC above-grade site development. It will be a permanent replacement of the original WTC PATH Terminal complex destroyed by terrorist attack on September 11, 2001.

### B. Project Status

#### Construction Agreement

The CA was signed on April 25, 2006. An RRCA was executed on September 18, 2012. The RRCA established an RCD of December 17, 2015, and commits \$2.872 billion in federal funding to the PATH Hub project. It also includes an FTA-allowable not-to-exceed amount of \$3.995 billion. FTA approved WTCC's February 18, 2014 Recovery Plan, thereby establishing a revised RCD of December 31, 2016. Also included in the Recovery Plan was a change in WTCC's forecasted substantial completion date to December 31, 2015.

#### Quarterly Progress Review Meeting

*A QPRM for the second quarter of 2014 has not been scheduled.*

#### WTC Site Master Plan

WTCC's current site master plan is Master Plan Version 10, released October 1, 2010.

#### Environmental Compliance

(Reported on separately by FTA's LMRO.)

#### Design Support During Construction

The designer continued providing post-award design support services for the PATH Hub construction, including responding to contractor Requests for Information (RFIs) and providing design certifications for completed elements of construction. The designer also continues to prepare and issue addenda that incorporate multiple, issued RFI responses in which the designer authorized changes to the base design documents that bring those documents into conformance with the RFI responses.

#### Construction Status

*Oculus Steel: Favorable weather conditions and a limited second shift welding operation allowed the contractor to make significant progress on the erection of oculus steel during July.*



*The total number of rafters set in July was 20, which represented a significant increase over the 8 rafters set in June 2014. However, the planned pace of two rafters per day was not achieved despite the improved performance. Some of the issues encountered during the July erection process were: the need to replace a second erected purlin on the southern side of the oculus structure, the performance of repair work on a purlin-bearing top connection on the north side of the oculus to close out a Nonconformance Report issued by the PA Materials Engineering Unit, the limited laydown area for setting welding platform jigs needed to make rafter splice welds for the larger rafters, safety concerns related to crane operation that have thus far precluded the contractor's mobilization of an assist crawler crane, and general coordination of the contractor's work with the work of the Oculus Glass contractor in areas where both entities have positioned lifts for access to their respective work areas. In addition, the cycling of "RSTs" (which are the devices used to temporarily attach the rafters to the transition arches until permanent welds are made) has also emerged as a cause for the less than planned rafter setting rate. The following table summarizes the rafter erection progress during July:*

**Summary of Rafter Erection Progress (July 2014)**

	<b>Rafters Set</b>	<b>Purlin-to-Purlin Welds Completed</b>	<b>Rafter Base Welds Completed</b>	<b>Rafter Splice Welds Completed</b>
Total Qty. Req'd	114	110	114	32
Last Month	8	4	5	0
This Month	20	17	8	0
Total to Date	39	21	17	0
Number Remaining	75	89	97	32

*Oculus Glass: As currently planned, oculus glass panel installation will proceed after all of the steel rafters have been set by the Oculus Steel contractor, thereby ensuring that the steel structure will be in its final position when the installation of glass panels begins. During July, the glass contractor continued to attach glass panel support clips to the oculus steel upper portals at the north side of the oculus from the oculus center line (or "0 line") to the +7 line, which is the limit of the work area that has thus far been made available. Also during July, field conditions that could affect the glass panel installation have surfaced; specifically, there are some out-of-tolerance clear space openings between upper portals and some oculus steel fabrication welds that interfere with the glass panel clip installation because they were not ground smooth. WTCC and the designer are reviewing both of these conditions in an effort to develop solutions.*

*Oculus Skylight: The Oculus Skylight contractor, which is the same contractor as the Oculus Glass contractor, continued to advance the shop fabrication and assembly of skylight sections at multiple locations. Ultimately, all skylight sections will be completed at a facility located in Virginia and will be sent from there to the site when installation is ready to begin. Safe access for skylight installation will be provided by the contractor's planned installation of a hanging scaffold, which will be located just below the oculus roof line and will span from the eastern end of the oculus to the western end. At present, the contractor is proposing a revised method for attaching the hanging scaffold system to the oculus steel structure.*

Transit Hall Interior Stone: Under this contract, stone floor and wall finishes are to be furnished and installed throughout the Transit Hall side of the project, including at both of the grand staircases; the oculus floors at elevations 274 and 296; both levels of the north-south concourse; and various other associated stairs, passageways, and entryways. Phase 1 installation, consisting of the stone flooring at the southern end of the lower level of the north-south concourse, was essentially completed during May. Stone fabrication is *ongoing and is following the same phasing sequence as the expected installation phasing*. A portion of the stone for the grand staircase treads, risers, and PATH Hall mezzanine floor east of the fare control line is currently on-site *and being installed*. Stone for the wall at the north end of the grand staircase was released for fabrication in June but is yet to be received on-site. Stone shop drawings for various other areas, such as balconies and the Dey Street entrance to the Transit Hall, are currently being reviewed by the designer.

PATH Hall Construction (PHC): During July, platform construction activities continued at Platform B with the installation of additional sections of precast concrete smoke purge ducts over Track 3. The common elevator pit for the two elevators to be installed at the south end of the platform is started, but is also waiting for the removal of a temporary column from the elevator pit area. Work on the utility tunnel that passes under the platform and both of the adjacent tracks progressed during the month; rock excavation was completed, as was the placement of the tunnel floor and wall concrete. At the north end of the platform, rock excavation continued for the footings for shear wall #2 and for the underpinning of columns that must remain in place in that vicinity. Also during July, the fire alarm contractor, capitalizing on the weekend shutdown of Platform C, commenced temporary installation at that platform. The temporary fire alarm work is expected to be completed in six to eight weeks and thus will likely be finished by early September.

East Bathtub Mechanical, Electrical, Plumbing (MEP), and Fire Protection Work: During July, the emphasis was on advancing the work at the emergency generator plant and the fuel oil storage tank room, both of which are housed within the podium of Tower 3. The ability to supply diesel fuel from the storage tanks to the eight emergency diesel generators has been identified as a priority for the PATH Hub project. At the fuel oil tank room, the fire protection contractor made progress on installing a foam fire suppression system but had not yet charged the system or connected water supply lines to the system at month's end. Also, the installation of the fill and vent lines that will allow the delivery of fuel from tanker trucks to the below-grade tanks, which is under the control of the building developer's mechanical contractor, is yet to be completed. Another priority for this group of contractors is their work at the Transit Hall, where thus far only limited access has been provided for installation of necessary components, especially for those components that require installation at the roof level, such as exhaust fans, electrical power supply, lighting, and roof drainage leaders. Coordination of logistics and of the various trades continues to prove difficult, especially given the ongoing efforts of the Oculus Steel contractor to avoid additional schedule delay.

Primary Distribution Center (PDC) at Tower 1: As of the end of July, migration of electric loads for PATH Hub project from the Temporary Primary Distribution Center (TPDC) in the North Temporary Access (NTA) to the PDC in Tower 1 had not started. The process is a multi-step activity and requires the connection of feeders from the PDC to each of the six spot networks throughout the site, with five of those six spot networks supporting PATH Hub project electrical

*demand. WTCC is currently projecting that this migration will start mid-August, and that there will be an interim period of one to two weeks between each step.*

Vertical Circulation: During *July*, the contractor continued to install the escalators and elevators located in the Transit Hall at elevations 274, 296, and 306. The contractor also continued to work on the PATH Hub *project* escalators located in the *north-south concourse segments within the footprints* of Towers 2, 3, and 4. Priority is being giving to the elevators and escalators required for the opening of the lower level of the *north-south concourse* and PATH Platform B. Work on all ancillary fire alarms and sprinklers is ongoing. *A summary of the status of elevators and escalators on the project follows:*

Item	In Service	On-site/Under Construction	Not Yet On-site	Total
<i>Escalators</i>	8	29	10	47
<i>Elevators</i>	4	11	6	21

North-South Concourse: At elevation 274 of the north-south concourse, all the architectural work has been completed south of the *main floor of the oculus*. At elevation 296 of the north-south concourse, most of the storefront steel framing has been installed, and glass installations are following behind the steel framing work. Also at elevation 296, the contractor has installed rough-in for electrical, plumbing, and mechanical items along with some of the ceiling grid system. *At the lobbies of Towers 2 and 4, which is the street level access to the north-south concourse, MEP work is ongoing, but finish work has not begun. Work on the required elevators and escalators is also in progress.*

Telecom *Work*: During the month of *July*, room TH-083 *was prepared to receive equipment*. This is a vital room for the telecom system backbone. Also in *July*, *additional* telecom equipment *and associated wiring* were installed in room PL-077, which *is also essential* to the telecom system. *Telecom room TH-028 has received its equipment and is ready to be energized.*

Commissioning: WTCC is forecasting a number of key milestone in-service events for the PATH Hub project to occur in the fourth quarter of 2014. Among those project elements are the Emergency Diesel Generator Plant, the lower level of the north-south concourse, the south projection fan plant, the Emergency Chiller Plant, and the below-grade corridors and staircases serving PATH Hub equipment spaces within the podiums of Tower 2 and Tower 4. In most cases, the event being worked toward is the placement into service of a portion of the project element and not the full project element. Punch list work for the South Mezzanine, East-West Connector, and Platform A remains ongoing at present.

Central Fan Plant: Air Handling Unit (AHU)-6 and AHU-7 were both *energized* in June but have not yet been commissioned. *AHU-5A and AHU-5B were energized in July. At these units, piping and insulation are completed, as well as the insulation of the duct system. Fire alarm wiring, terminations, and interfacing at the Variable Frequency Drives (VFDs) were completed for AHU-6 and AHU-7. Fire alarm and Building Automatic Temperature Control (BATC) work is ongoing throughout the Central Fan Plant. AHU-6 and AHU-7 are projected to be the first to*

come online and are intended to serve the Hub project back-of-house equipment rooms and associated access corridors that are located within the podiums of Tower 2 and Tower 4.

### Construction Logistics

The WTCC Office of Program Logistics (OPL) continued biweekly logistics and coordination meetings to facilitate construction progress and the sharing of access, egress, and work zones among all contractors on-site. The oculus steel contractor is exploring options for alternative routes for delivery of oculus steel to the site, since the New York City Department of Design and Construction project on Broadway is expected to breach the intersection at Fulton Street later in 2014. The Memorial Museum opened to the public on May 21, 2014. The Memorial Plaza no longer has restricted access. All of the perimeter fencing has been removed, and unimpeded access to the plaza is now available to all visitors. Visitors to the recently opened Memorial Museum are being temporarily routed to the museum entrance pavilion via the Memorial Plaza. *The sidewalk on Church Street adjacent to Tower 4 was opened for public access during July.*

### Interagency Coordination

OPL continued its coordination of site construction and logistics among the many project stakeholders, including contractors, construction managers, tenants, insurance firms, PATH operations, and the Port Authority Police Department.

### Community Relations

OPL continued to distribute construction alerts, updates, and monthly construction progress newsletters to the community and stakeholders.

### C. Schedule

WTCC released IMS 74 in May 2014, with a data date of *June 1, 2014*. (b) (4)

(b) (4) WTCC achieved Platform A beneficial use on February 25, 2014, which is approximately two months later than the IMS 70 projected date of December 31, 2013. Although the construction of the west bathtub platforms remains critical for substantial completion (b) (4)

(b) (4)  
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(b) (4)  
(b) (4)

The following table summarizes the 90-day look-ahead for significant activities:

Significant Activity	Action by
Central Fan Plant Online	WTCC
Migrate PATH Hub Electrical Loads from the TPDC at the NTA to the PDC at Tower 1	WTCC
Start of Oculus Glazing Panel Installation	WTCC
Erect/Bolt/Weld Oculus Steel Rafters and Purlins	WTCC

#### D. Cost Data

The RRCA commits \$2.872 billion in federal funding to the PATH Hub project and includes an FTA-allowable not-to-exceed amount of \$3.995 billion.

On October 18, 2012, the Port Authority Board re-authorized the WTC PATH Hub project, at an estimated total project cost range of \$3.74 billion to \$3.995 billion. This re-authorization provided for an increase in the budget from approximately \$3.4 billion to slightly more than \$3.7 billion.

The \$3.7 billion budget reflects the updated engineer's estimates for all packages in the completed procurement plan and includes the PATH Hub project's share of the common infrastructure projects, such as Retail, the Central Chiller Plant, the Common Electrical System, and site-wide operational support elements. WTCC continues to update the cost allocations that are assigned to the PATH Hub project.

Although it was the opinion of the PMOC that the budget established after the October 18, 2012 project re-authorization by the Port Authority Board would not provide WTCC with adequate funding to complete the project given the impacts of Hurricane Sandy, WTCC has advised that the costs related to Hurricane Sandy are being funded from a separate operating account set up by PANYNJ for Hurricane Sandy and will not impact WTCC's current EAC of \$3.7 billion.

The following table summarizes the latest available EAC (WTCC's forecast) and expenditures as of June 30, 2014:

Description	EAC (WTCC's Forecast) (in millions)	Expenditures (in millions)
Construction	\$2,810	\$2,245
Program Management and Design	695	641
Contingency	(b) (4) E	(b) (4)
Total	(b) (4)	(b) (4)

WTCC submitted its monthly cost model revision on *July 31, 2014*. It shows that, based on the contract awards and estimates through *June 30, 2014*, WTCC's EAC for the federally funded PATH Hub project is just over \$3.7 billion, which is unchanged from the cost model revision submitted at the end of the prior month.

WTCC reported total PATH Hub expenditures through *June 30, 2014*, of more than *\$2.88 billion*, or 77.5 percent of the EAC. That total includes *\$18.4 million* more in PATH Hub expenditures than the total contained in the May 30, 2014 report. Over the last 12 months, the average project expenditure per month has been slightly more than \$26.0 million. That monthly expenditure is below the monthly burn rate of *\$46.5 million* that would be necessary to support the substantial completion date of December 2015.

For the first *six* months of 2014, project expenditures have been \$28 million, \$17 million, \$28 million, \$29 million, \$24 million, and *\$18 million*, respectively, in January, February, March, April, May, and June. *It should be noted that the June value understates the actual project expenditure because it incorporates a downward adjustment of \$6.04 million for soft costs that had been incorrectly charged to the project in prior periods. Those costs were allocated to other stakeholders during June skewing the Hub project expenditure value.*

#### E. Risk Management

The PMOC conducted a contingency assessment workshop in August 2011 to facilitate the completion of the PEP and the RRCA. WTCC and the PMOC reviewed the results of the cost and schedule risk models. Results from this workshop and subsequent analyses were used to develop the executed RRCA and PEP. To provide an improved project risk tool, the FTA, the PMOC, and WTCC completed the PEP in conjunction with the execution of the RRCA on September 18, 2012.

As information on the impacts of Hurricane Sandy became available, the PMOC conducted PEP workshops in June 2013 to discuss and quantify the hurricane's impacts on cost and schedule. The PMOC then reconciled the workshop results with WTCC, and the outcome of this effort was used to update the PEP. *In July 2014, the PMOC began assessing the impacts on the project critical path of oculus steel delays.*

#### F. Technical Capacity and Capability Review

The FTA uses the PEP to measure WTCC's technical capability and capacity.

#### Project Management Plan (PMP)

WTCC is updating its PMP and now expects it to be completed by *early August 2014*. An update to WTCC's Operations Management Plan, a PMP sub-plan, *remained outstanding at the end of the month*. WTCC previously provided a draft Construction Phase Force Account Plan and Justification, and in June, the PMOC issued a spot report recommending the acceptance of the Construction Phase Force Account Plan and Justification.

## Project Organization

WTCC continues to update consultant and contractor staff assignments across project areas to address staffing needs as the project advances.

## Project Quality Assurance

*During July 2014, WTCC QA completed nine oversight audits that included observing the CM QA's field audits and performing its own audits of field construction activities. No corrective actions were identified by WTCC QA. The July 2014 audit total reflects the nine WTCC QA audit reports that were issued and received at the time this report was drafted.*

## G. Site Safety and Security Review

The PATH Hub project has established safety performance goals for its TCIR and LTIR of less than 5.0 and less than 2.0, respectively. In *June* 2014, the project *met* its goals as there were *two* recordable incidents and *zero* lost-time incidents, resulting in a TCIR of 2.61 and an LTIR of 0, based on 153,121 hours worked. In comparison, the *May* 2014 incident totals were four recordable incidents and *three* lost-time incidents, *resulting* in a TCIR of 5.28 and an LTIR of 3.96, based on 151,476 hours worked. The *decrease* in incidents during *June* is attributable to an *enhanced focus on using safe work practices*. In reviewing the *June* safety performance, WTCC Safety continued its active role in managing worker safety, evaluating the causes of each of the incidents, *and developing lessons learned*. The *July 2014 safety data for the project was not fully available at the time this report was being drafted but is expected to be available after mid-August 2014*.

*During a site visit by the New York City Fire Department (FDNY), two hot works activities were observed without fire guards in the work area. Both contractors and fire guards were issued fines by the FDNY and the fire guards were sent home for the day.*

## H. Issues/Problems/Suggestions

The widespread regional damage caused by Hurricane Sandy in late October 2012 caused a delay to the forecast completion of the PATH Hub project. (b) (4)

(b) (4)

Construction of the oculus steel structure *in the east bathtub made better progress in July in comparison to June, but continued to lag behind targeted monthly goals. Difficulties with geometry control and site logistics, combined with the large amount of welding required as each oculus steel rafter is erected, to further delay the planned completion of the oculus steel work. As a result, the project's critical path has been re-assessed and the east bathtub has overtaken the west bathtub as the controlling work area for the overall completion date.*

End of report. Appendix follows.