

Visit Report 7th of October 2016: East Side Access

By: Jules Hazeleger

In the morning of Thursday, the 7th of October, the participants of the study tour visited the East Side Access project site, a multi-billion metro-project in the heart of Manhattan. The project creates a brand-new metro line from the heart of Manhattan – below Grand Central station – underneath the East River to Long Island and will, once in operation, transport over 160,000 commuters every day from either side of the water to the other. The line will separate the gigantic number of commuters entering and leaving Manhattan during rush hour into more groups and will result in a 40-minute time-saving for those living in close vicinity of the metro stations.

During the excursion, the group was first welcomed at the sixth floor of a high-rise building in the heart of Manhattan. During a kick-off presentation, we were informed about the facts and figures of the astonishing project. Hearing about the total costs of \$10.2 billion (original estimates equalled 'just' \$4.3 billion), a peak demand of more than 2,600 construction workers a day and a construction time span of more than a decade, the participants were triggered for the rest of the excursion.

The project does contain of 4 sub-projects; the boring of more than 6 miles of tunnels on the Manhattan side (1), the rehabilitation of the existing 63rd Street Tunnel underneath Roosevelt Island and the East River (2), the Harold Yards on Long Island and its new 2-mile connection to the 63rd Street Tunnel (3) and the systems (4) which are spread out over the total project area (fire extinguishers, communication wires etc.). All sub-projects faced major challenges in the densely populated city of New York. The connection of the new line to current lines and structures in the east while not interfering with their current operations formed one of those. Furthermore, logistics formed a major problem; Manhattan did not provide the space required to stall and transport all materials needed for the construction of this project. Therefore, all materials were transported via the newly created and rehabilitated tunnel to Manhattan.

Albeit many other interesting facts can be named about this project, the focus for the remainder of this visit report will be the Manhattan side, especially the new concourse and caverns of the station under Grand Central terminal, as this formed the second part of this excursion. After a brief safety instruction and after everyone had put on their safety boots, helmets, jackets and glasses, the group descended the staircases to the lower levels. One walked through the huge concourse – once a train yard – and descended even further to, at the deepest point, 160 feet (approximately 50 meters) under the ground, under the huge skyscrapers of New York. This point was located in two immense hallways with the length of the Empire State Building that will, in the close future, form the entrance of the metros from Long Island through a total of eight tunnels. The excavation had taken several years and, once completed, three contractors will have had skilled workers at a depth of 50 meter in the bedrock to create this masterpiece. All contractors face and have faced several problems of which the drainage of groundwater, the transportation of concrete to and excavated material from this depth and the selection of skilled labour formed just a few. Some other interesting facts:

- All workers received additional Vitamin D as they worked for hours without sunlight
- The design was and is re-evaluated after the recent Hoboken train crash
- Part of the new terminal under Grand Central station was excavated through the use of dynamite. During the explosions, over 40 independent companies monitored the surrounding buildings for vibrations.

The project, its grandeur and the problems and solutions arising during an expedition of this kind have amazed all participants. One phrase of the tour guides summarized the excursion best: with the right amount of dreams and a matching budget, everything can be achieved in New York City.