



Going Driverless: an Update on the Cairo Monorail System

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Currently under construction in Egypt is a two-line monorail rapid transit system, which, when completed, will be the longest driverless monorail system in the world. The completion of the Cairo Monorail will create the first public transportation links from the New Administrative Capital and 6th of October City to the Cairo metropolitan area, facilitating the movement of residents and visitors of Greater Cairo and reducing the usage of private cars, leading to a reduction in CO2 emissions. The Cairo Monorail project is poised to dramatically shift transportation in the region in a way that is fast, safe, and environmentally friendly.

Construction on the project began in September of 2020. When completed, the Cairo Monorail system will consist of two lines. The first line—the New Administrative Capital Monorail Transportation System (East)—consists of 22 stations and one depot across an approximately 54-km length and will connect the New Administrative City with East Cairo. The second line—the 6th of October City Monorail Transportation System (West)—consists of 13 stations and one depot and will connect 6th of October City with Giza. According to Waleed Abdel-Fattah, President of MENA region for Hill International, there has been significant progress on the civil works and construction for both lines—approximately 70 percent for the East line and 50 percent for the West line.

With the groundwork laid, the project is now focused on completing the 35 stations as well as the depot facilities. This includes installing mechanical and electrical systems for the stations and facilities. Abdel-Fattah says that, for these systems, the large majority of the necessary equipment has been delivered, which means progress is being made towards the installation of traction power and wayside equipment along the lines. Additionally, more than 43 trains have already been delivered and are awaiting final assembly and commissioning. Abdel-Fattah notes that the overall progress on installing these systems is approximately 37 percent.

Now, coming out of Cairo from the East, progress on the monorail system is visible. With the majority of civil work—outside of the stations—being completed, the system is coming to life with

columns and beams extending skyward and systems ready to be installed. Abdel-Fattah says that, with work progressing on the stations and systems installations, testing and commissioning will soon begin for the project, which puts the project “in a good place” with the stations being the only remaining hurdle. However, in getting to this point, the project has had to contend with issues stemming from current economic conditions regarding Egyptian currency, etc. Despite these potential challenges, Abdel-Fattah points out that the decision to import equipment prior to installation has paid dividends when compared to other projects in the region. By procuring the necessary equipment early in the process, the project was able to avoid any significant challenges stemming from economic issues.

In addition to serving as the Project Manager for the Cairo Monorail project, Hill International also handled reviewing the design. According to Abdel-Fattah, building such an ambitious project has not been without its challenges, and, as the project manager, Hill International has had to rely on their extensive experience in the region to manage and sequence the work on the Cairo Monorail project. In a crowded and often congested place like Cairo, the movement of materials can often pose a significant logistical challenge. To overcome these logistical challenges, Hill International’s team relied on a process of inspection and coordination between project teams and shareholders. This included using smart project controls and management for monitoring and reporting. Additionally, with a project length of nearly 100-km, Abdel-Fattah points out that staffing has been a consistent point of emphasis for the project. This requires allocating staffing in a way that works in conjunction with the logistical planning of materials, ensuring that the right staff is available at the right place and time.

With the final hurdles being planned for and overcome, the Cairo Monorail project is set to transform public transit in the region and provide a benchmark for further monorail development through the region and neighboring countries. Requiring a very small footprint and able to negotiate congested urban areas with an alignment that “minimizes costly land [taking] and disruption to traffic” compared to traditional rail-based transit solutions, Abdel-Fattah believes that there is a significant opportunity for further monorail development across Egypt and other major cities across Africa and the Middle East. Abdel-Fattah further believes that this potential expansion of monorail projects throughout the region will not only provide socioeconomic benefits such as increased mobility, but it will also stimulate the Real Estate sector. With the potential of Transit Oriented Development (TOD), the completion of the Cairo Monorail System and further development represents a “huge potential to increase the density of mixed-use developments in close proximity to transit stations.” This will both increase ridership and revenue for the monorail system as well as raising property values along the corridor.