



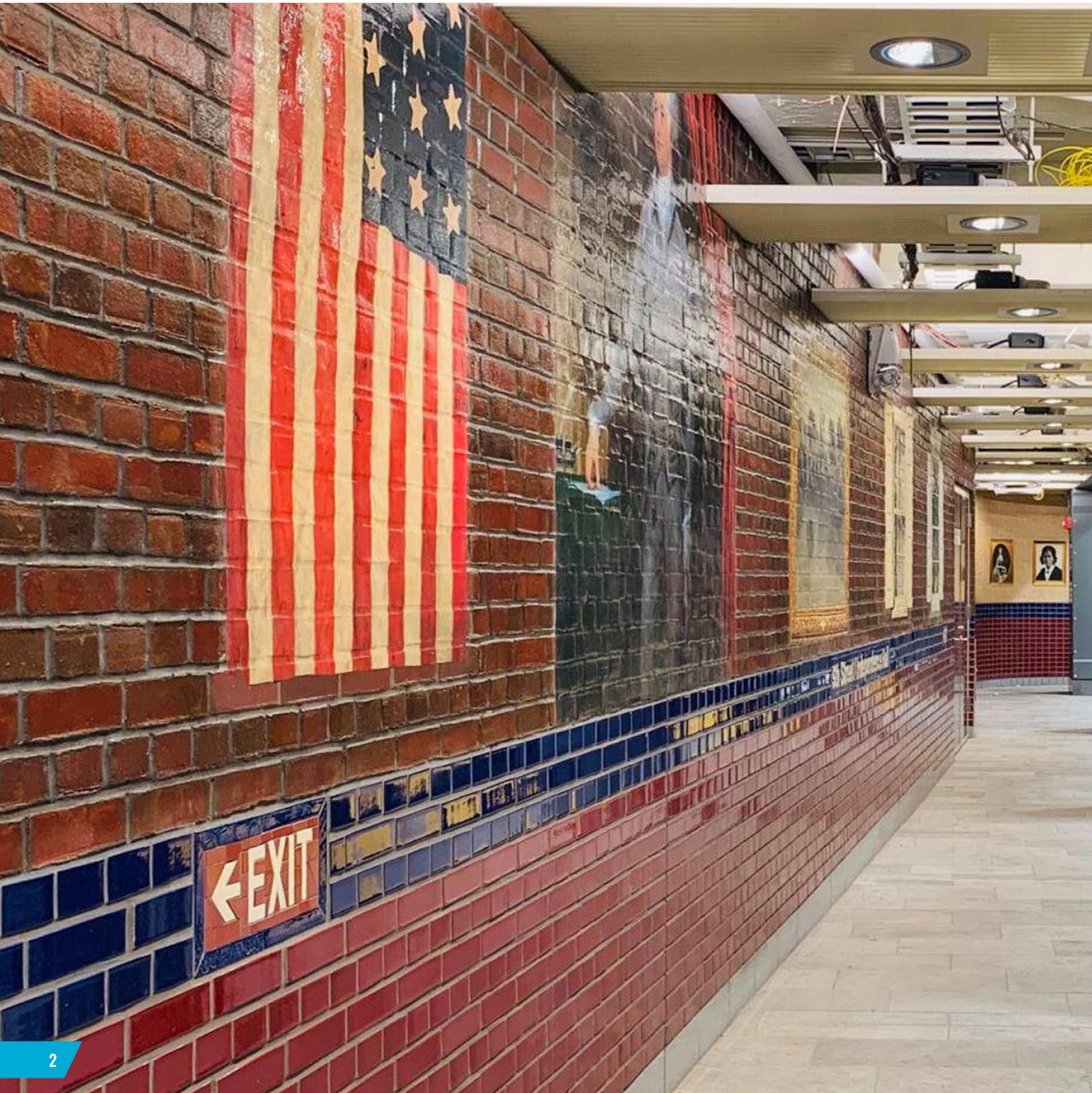
Southeastern Pennsylvania Transportation Authority (SEPTA) Project Spotlight



Globally Proven Construction Solutions

Southeastern Pennsylvania Transportation Authority (SEPTA)

Jessica Liddell – Mosaic Artist, Bella Mosaic Art
John Giungo – Contractor, DM Sabia & Co. Inc.
Joe Lawless – Distributor, Emser Tile
LATICRETE Manufacturing Plant – Bethany, CT



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John Giungo –
DM Sabia & Co. Inc. Project Executive



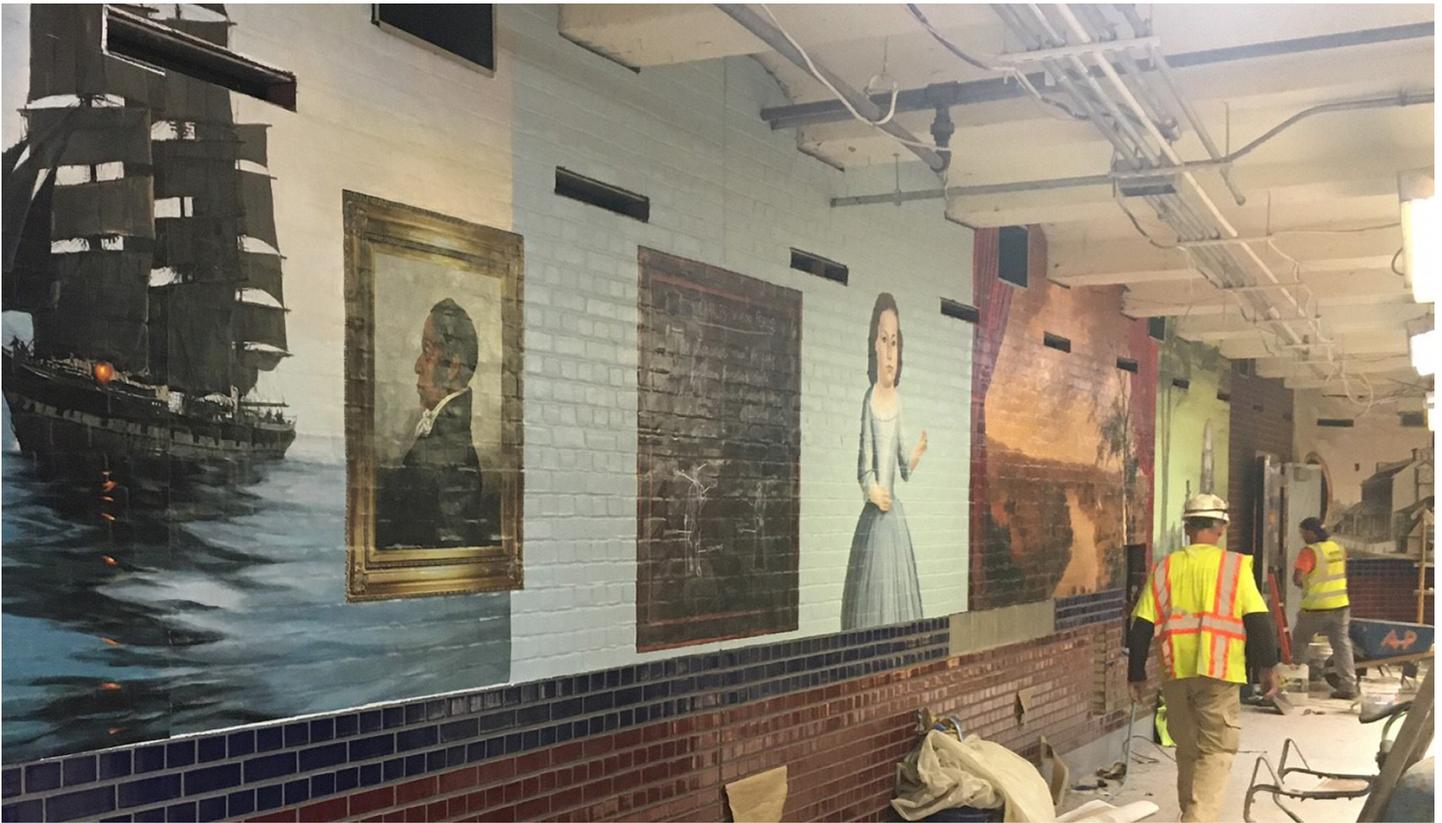
The Situation

Originally opened in 1908, the 5th Street/Independence Hall Station, served by The Southeastern Pennsylvania Transportation Authority (SEPTA)'s Market-Frankford Line, is an iconic subway terminal in the heart of Philadelphia's Historic District. The terminal provides access to some of the most notable landmarks in the nation such as Independence Hall, the Liberty Bell, the National Constitution Center, the National Museum of American Jewish History and the Philadelphia Bourse. With the last renovation of the 5th Street/Independence Hall Station taking place in 1976, SEPTA's goal was to further transform the 68,000-square-foot (6,317 m²) space into more of a modern transportation hub while also captivating the rich history in which the station serves.

The new renovation required the removal of all of the existing wall finishes on the structural concrete and existing masonry walls to make room for the new architectural design. In addition, the project entailed a complete restoration of the building's infrastructure, mitigation of the water infiltration and a complete repair of the structural cracks and spalls from years of neglect. The masonry aspect of the project included new wall layouts using concrete masonry units (CMU) and alterations to existing concrete walls to allow for new thin-brick and full-bed brick, mosaic tile and granite.

Once construction started, SEPTA's construction manager, AP Construction, brought in DM Sabia & Co. Inc. to handle the masonry renovation and new masonry construction. Despite delays and long lead times the construction industry was facing, DM Sabia's team strategically curated a team of local Philadelphia professionals that could get the project completed successfully while on a major time crunch. Knowing they needed best-in-class masonry setting materials and products that could withstand the harsh temperature fluctuations, intense impact and vandalism, the team selected LATICRETE as their chosen manufacturer.

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The Challenges

- **Tight Turnaround Time:** The main challenge was the fact that the team was responsible for renovating the train station in the middle of the COVID-19 pandemic while it continued to be a fully functioning mass transit terminal. Originally with a 32-week lead time for masonry materials, DM Sabia & Co. Inc. needed the products expedited. The urgency of the masonry schedule required rethinking how decisions would be made and diligent collaboration of all parties to get the station completed on time.
- **High Visibility:** As a mass transit station within the nation's sixth-largest city that services the nation's most historic landmarks, thousands of residents and tourists utilize the terminal daily. The most important element of the project was designing a long-standing space that captured the historic look and heritage of the area while bringing it up to date for the modern commuter.
- **Harsh Conditions:** With the last renovation having taken place in 1976, the station had experienced decades-worth of damage from constant use, vandalism, intense pressure-washing and moisture problems caused by Philadelphia's fluctuating temperatures. As a result of this excessive wear and tear, deconstructing and leveling out the concrete walls tattered from years of neglect added an extra component to the overall project.

A LATICRETE Solution

It was obvious that the immense challenges DM Sabia's team of professionals were facing in order to successfully renovate the station required high-performance setting materials. Luckily, this was a problem that was easily solved thanks to the high-caliber

products and services LATICRETE offers – and the team jumped in with all hands on deck.

Knowing the implementation of only the highest-performance of grout and setting materials could help ensure a long-lasting end result that could be enjoyed by passengers for decades to come, the LATICRETE team worked with distributor Emser Tile to successfully fast-forward the production of two completely new products: LATICRETE® 3701 Lite Mortar and SPECTRALOCK® 1. Not to mention, the product order encompassed more than 1,000 buckets of SPECTRALOCK 1 alone, which would remain the company's largest order of SPECTRALOCK 1 for years to come.

Since both 3701 Lite Mortar and SPECTRALOCK 1 had not been fully introduced to the market at this point, the LATICRETE team attended various construction meetings where they performed on-site demonstrations and training. The technical services team also remained on-call around the clock, working after-hours to help approve designs and streamline any unforeseen obstacles when deconstruction began.

Once the teams deconstructed the existing walls of the terminal, 3701 Lite Mortar was applied, which is the industry's first lightweight, rapid mortar that offers high performance characteristics and enhanced durability. The 3701 Lite Mortar formula is composed of carefully selected polymers, Portland cement and lightweight aggregates. It does not require the use of a latex admixture, only water, and contains no respirable crystalline silica levels that exceed the OSHA action level*. The 3701 Lite Mortar has excellent performance in vertical and overhead applications, such as concrete repairs or wall renders, making it the ideal solution for the 5th Street/Independence Hall Station. As an added bonus, its lightweight feature makes it easier and safer to transport and handle on the job site.

After the interior walls were prepped and leveled out, the new SPECTRALOCK 1, a pre-mixed, stain-proof grout with the compressive

strength performance of epoxy grout was employed to help further accelerate the overall installation of the thin brick and mosaic tile. SPECTRALOCK 1 offers superior compressive strength at 3,500 psi (24.1 MPa), the ability to be submerged and an extremely fast cure rate so that customers can complete durable projects in less time than ever before. SPECTRALOCK 1 is simple to maintain and use, safe to use with no epoxy resins and is offered in a wide variety of colors to match any design.

In addition to SPECTRALOCK 1 grout, the glazed brick and mosaic wall tile within the station were installed utilizing 254 Platinum, an ultimate one-step, polymer fortified, thin-set mortar for interior and exterior installations. Providing optimum adhesion, 254 Platinum offers incredible bond strength to concrete and has a long open time in a smooth, creamy formula.

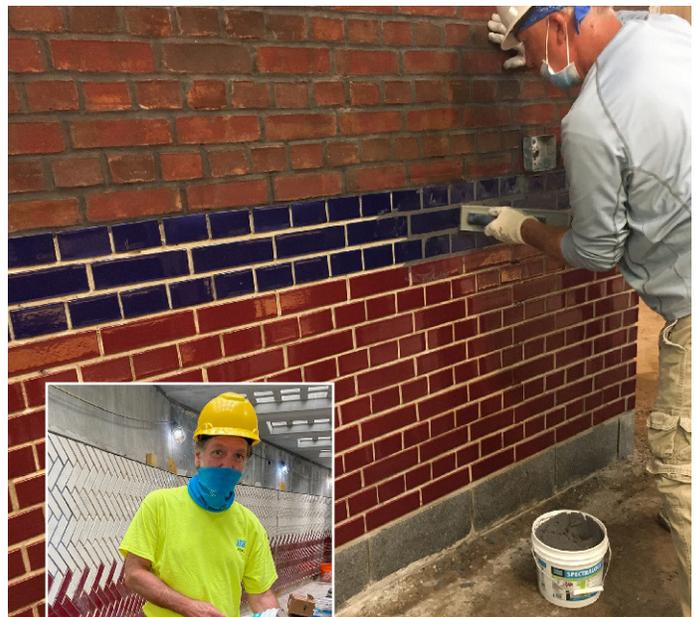
“From our industry-leading solutions to our technical service support and everything in between, this project came together tremendously and showcased our team’s ability to be resilient even under pressure and challenging circumstances,” said Brian McMahon, LATICRETE Assistant Regional Sales Manager.

The Outcome

Used by more international tourists than any other station in the SEPTA system, the newly renovated 5th Street/Independence Hall Station terminal has been celebrated as a premier modern transportation hub that successfully pays homage to the history of the city in which it serves.

“The job went off without a hitch. The value of the choices made on this project allowed the city of Philadelphia to receive an everlasting, artistic train terminal at the heart of some of the nation’s most iconic landmarks,” concluded Giungo.

Included in the award-winning design by Converse Winkler Architecture LLC and Burns Engineering, the new brick walls in the station showcased mosaic tile from Bella Mosaic Art, who was commissioned to produce 12 identification signs and eight exit signs that were integrated into the brick layout. Kbonk Arts collaborated with DM Sabia in the replication of the ‘5th Street Independence Hall’ insignias, which sat in the middle of the commissioned historical artwork, “Portal” by Philadelphia artist Tom Judd that lines the station platform walls.



* OSHA action level set forth in OSHA's Respirable Crystalline Silica (RCS) standard for construction, 29 CFR 1926.1153, as certified by an independent laboratory to be below the OSHA action level for respirable crystalline silica – see www.laticrete.com/silica



TRACK MAINTENANCE ROOM

5th Street / Independence

