



Stalco and LKMA top out 18,000 s/f MBAC headquarters; Project team includes Nelson & Pope and TDM Consulting Engineers

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Mastic Beach, NY General contractor Stalco Construction and architect, site engineer, and construction manager L.K. McLean Associates' (LKMA) celebrated the topping-out of the new Mastic Beach Ambulance Co. (MBAC) headquarters. Topping-out is a construction tradition that marks the completion of a building's structural frame. The new facility will be located at 343 Main St. (formerly Neighborhood Rd.).

"The two-story, 18,000 s/f new headquarters building will house five drive-through vehicle bays, instead of only three one-way bays in the current facility, allowing for a more efficient emergency response and equipment maintenance operations. In addition, the drive-through design of the bays will further improve the efficiency and safety of operations by allowing the company to respond out of the building onto both Main St. and Diana Dr. The new building will accommodate up to 15 vehicles and will feature more comfortable EMT volunteer housing, equipment storage, and decontamination facilities," said Stalco Construction's president, Alan Nahmias.

"In the pre-design phase, the client developed a very specific functional program that had to be accommodated within a set budget. The local political leadership also insisted on the new building's design being visually attractive and fitting well into the surrounding residential neighborhood. Our project team not only has achieved both the functional and aesthetic requirements, but also has developed a design that will cost less to build than the originally planned budget," said LKMA associate Christopher Dwyer.

The project's design, construction, and land acquisition were financed through the Brookhaven town board-approved \$11 million bond resolution in 2016.

The Mastic Beach Ambulance District covers an area of 11.8 square miles, including Fire Island, and stretches from Moriches Inlet to Wavecrest Dr. The MBAC was founded in 1948, as part of the Mastic Beach Fire Department, from which it separated in 1987.

Its current facility was completed in 1990.

Mastic Beach Ambulance Co. (MBAC) headquarters,
343 Main Street - Mastic Beach, NY

The company currently has 60 active riding volunteers and approximately 30 life members and associate volunteers who do not actively respond to EMS alarms, but assist the company in other ways. The Company's leadership consists of a seven-member Board of Directors, three company Chiefs, three Captains, and two administrative officers. All officers and directors are volunteers. Each year of the last ten years, the Company has experienced an average of a 5% increase in call volume, currently totaling approximately 2,600 alarm calls annually.

In addition to LKMA and Stalco, the project team includes mechanical, electrical, and plumbing (MEP) engineer Nelson & Pope; and structural engineer TDM Consulting Engineers.

The New Building – Architecture and Functionality

The new, two-story structure will total 18,000 s/f. It will be located on a 1.2-acre site that will include new access driveways, an 18,000 s/f parking lot, green areas landscaped with low-maintenance grass and shrubs, exterior lighting, a flag pole, and signage. Construction crews will install new drainage and sanitary systems, and build new water and electrical connections to the building.

"The LKMA architectural and engineering team designed the new building based on the input from the Ambulance Company leadership and volunteers. The design focuses on the safety and comfort of the personnel and the public and conforms to the recently adopted International Building Codes of New York State for life safety, mechanical, electrical, plumbing, and fire protection systems," said LKMA senior architect Joseph Catropa, AIA.

The company hosts a vibrant youth squad, monthly training sessions for members, and a variety of public classes, including first aid, mental health first aid, and CPR. The new facility will allow it to greatly expand interactions with the public and to become a hub for public safety in the community.

"The new headquarters will be constructed as a steel-frame structure erected on a 12,000 s/f concrete slab-on-grade foundation. Both the architectural design elements and exterior materials – HardieShingle cementitious board siding, cultured stone accents, a second floor porch, a partial hip roof with fiberglass shingles, gables, and single-family home-style windows and doors – reflect the residential character of the neighborhood, preserving its architectural consistency," added Stalco Project Manager Erik Rappel. "The second floor structure will be steel bar joists, metal floor decking, and poured-concrete floor. The roof structure will be steel framing with a metal deck."

Despite its stylistic residential references, the design incorporates only non-combustible materials, such as light-gauge metal exterior and interior wall systems with fire-rated gypsum board walls, concrete floors, steel internal stairs, fiber-reinforced plastic (FRP) exterior doors, and insulated steel doors. Complying with the current New York State building codes, the structure was designed to meet environmental efficiency requirements similar to those of the LEED system, although the building will not apply for the official LEED certification. The entire new facility will be accessible and fully ADA-compliant.

“The interior finishes, selected for longevity and low maintenance, will include conventional materials such as epoxy sealant-finished concrete floors, painted gypsum walls, and vinyl composite tile (VCT) and porcelain tile flooring,” said Stalco’s Construction Superintendent Michael Marchese.

The 11,902 s/f first floor will house a large apparatus bay with adjacent decontamination, oxygen storage, and washer and dryer rooms; medical supplies storage room; locker room; bunk rooms; offices; lounge; and restrooms. This floor also houses an elevator and three stairs connecting to the building’s second floor.

The primary functional space of the new facility is the large, 5,764 s/f apparatus bay than can accommodate 15 vehicles. The current home of the MBAC has only a three-bay garage capable of housing three vehicles, which must be backed into the garage. The new facility will have five drive-through bays capable of housing ten vehicles. The drive-through bays afford the personnel the ability to drive ambulances responding to emergency calls from both sides of the building. They also eliminate the need to back vehicles into a garage, a potentially dangerous procedure that is prone to causing both property damage and risk to personnel due to the limited sight lines in an ambulance.

The storage rooms provide ample space to house medical equipment and restock supplies for ambulances, with easy access off of the apparatus room. The locker area provides a location for volunteer and paid staff to store equipment used for response on site. EMS personnel are required to wear a variety of safety gear including boots, safety jackets, and vests as well as personal medical equipment such as stethoscopes. Having locker space in the new facility will allow staff to keep potentially contaminated articles out of their personal vehicles and homes, increasing their safety and the safety of their families. The MBAC’s current facility provides no room for such amenities, which increases the risk of spreading contamination.

The bunk rooms and restrooms with showers are located on the west side of the first floor. They will be used by on-duty volunteer crews who will sleep or rest in the building while awaiting the alarm. During many standby events, volunteers are required to stay in-house for extended periods of time, necessitating sleeping facilities. It is important to keep required staff on hand and well rested any time that travel is excessively dangerous or restricted, such as during hurricanes or large winter storms.

One example of these circumstances was during the landfall of Superstorm Sandy in 2012. The MBAC needed to keep four complete ambulance crews in-house during this storm, and at its present facility this meant people were sleeping on air mattresses and floors. During the Sandy event, the Company had all of its apparatus out responding to EMS alarms, assisting with evacuations, and providing rehabilitation for the Mastic Beach Fire Department during their response to multiple working structure fires. It responded to at least 36 separate calls for medical assistance in the first 24 hours after Sandy made landfall. Having proper sleeping facilities will reduce strain and provide adequate rest for the volunteers and staff during future large-scale emergencies.

The 563 s/f lounge and two offices totaling 400 square feet will occupy the north side of the floor.

The lounge is the primary room where standby crews will be housed while awaiting alarm calls. The ground floor offices will provide locations for staff files, employee time clocks, member mailboxes, and other administrative uses. The lounge will be outfitted like a typical employee break room area, with a small refrigerator, microwave, etc. During past power outages and major emergencies, the Company has made its current lounge available to the public, so that they could charge electronics and take advantage of the facility's backup generator. The new headquarters will also be equipped with a backup generator.

The 6,006 s/f second floor will house a lobby, a large training room, chiefs' and captains' offices, an administrative staff desk, a boardroom, restrooms, and an outdoor patio.

The most important space of the second floor is the 1,522 s/f training room on the south side. This room will be used to provide classes both internally to volunteer EMS workers and to the public. The default configuration for this room will be for one half to be set up as a classroom for training new EMTs, providing department trainings and to continue the practice of bringing valuable trainings to the public. The other half will be a practical skills classroom where EMT students, youth squad and members of the public can learn life-saving skills such as CPR. The room will feature a movable wall that will allow for different configurations and size options.

The north side of the second floor houses the offices and boardroom. The offices include space to house medical records as well as work spaces for the leadership that runs the day-to-day operations of the MBAC. The lobby of the second floor houses restrooms and a full-size kitchen to serve hosted events, training sessions, and, potentially, evacuated residents in emergency situations.

The apparatus bay section of the building does not have a second floor, which allowed the designers to create an additional outdoor space on its roof. The property this building is located on doesn't have a large amount of space available for outdoor needs, so for little cost we thought we could have some space out on the roof with secondary egress provided by the stair on the east side.