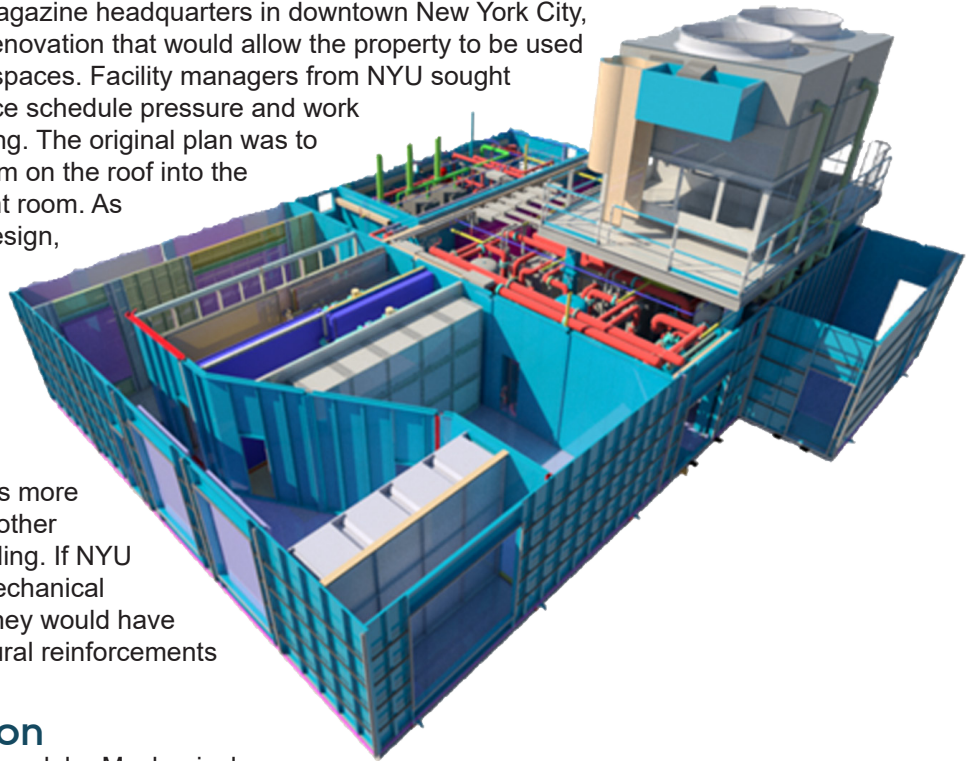




# Project Highlights

NYU purchased Forbes Magazine headquarters in downtown New York City, with plans of a complete renovation that would allow the property to be used for classrooms and office spaces. Facility managers from NYU sought a solution that would reduce schedule pressure and work well with the current building. The original plan was to convert the employee's gym on the roof into the new mechanical equipment room. As they moved through the design, they realized they had structural issues and would need to add steel to handle the additional equipment. NYU needed the boiler system online to provide heat during the renovation. This option was more cost effective than adding other temporary heat to the building. If NYU had chosen to build the mechanical room the traditional way, they would have had to wait until the structural reinforcements were finished.

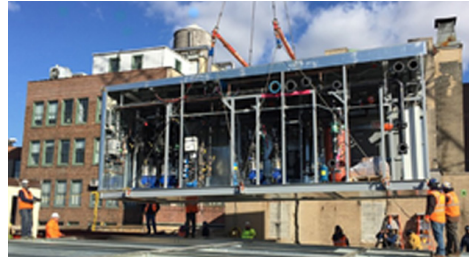


## The Solution

NYU decided to explore a modular Mechanical Penthouse solution from TMI Climate Solutions instead of the rooftop mechanical equipment room. The TMI Solution provided a Modular Mechanical Penthouse consisting of 4,500 MBH total from boilers required for building heat during renovations, combined with a 105,000 cfm Air Handling Unit, 460 tons of cooling, and all piping, electrical, controls and structural commodities. Prefabricated and tested at TMI's facility, the mechanical penthouse took only 11 weeks for fabrication to site and less than two days to install."

## Technical Scope of Supply

| Chiller System                     | Boiler System                      | Air Handling Unit         | Structural/Piping                                       |
|------------------------------------|------------------------------------|---------------------------|---|
| 2 x 230 Ton Modular Chillers       | 3 x 1,500 MBH Boilers              | 105,000 CFM               | Cooling Tower Support                                   |
| ChW & CW Pumps                     | Boiler & HW Distribution Pumps     | TMI Fan Array™            | Full Penthouse Mechanical Piping                        |
| Expansion Tank/Air Separator       | Expansion Tank/Air Separator       | Chilled & Hot Water Coils | TMI No Thru Metal Construction                          |
| 2 Cooling Tower Cells              | Air Intake Louver and Exhaust Duct | Flow Measuring Probes     | 4" Foam Insulation Roof and Floors; 3" Walls Insulation |
| Full Electrical and Plant Controls | Boiler Life Safety Panel           | Filters, Dampers, Louvers | 12" Structural Steel Base Framing                       |



## Why NYU Forbes Chose Modular vs Field Construction

Delivery Schedule 11 Weeks from start of fabrication to shipment meant owner could meet their needs for heat during renovation. Ease of Installation The Modular Solution was installed over a weekend. Minimal Disruption to Site The rooftop installation meant minimal interference with other trades involved in renovations. Cost Savings Total installed cost benefits versus other options that were explored.

## The Results

The TMI Modular Mechanical Penthouse, shipped in fifteen modular sections, was installed over the course of a weekend to minimize disruption to the site and reduce impact to the local street traffic. Each section was set into place on a structural steel base which was designed to equally distribute the weight of the penthouse, so that the structural integrity of the building and the mechanical

penthouse would be maintained. The single source approach by TMI allowed the general contractor to meet their mechanical room construction deadlines by managing labor, weather and installation risk through an ISO 9001:2008 quality controlled manufacturing process. TMI is also a NYC approved manufacturer, which is a requirement of NYC Department of Buildings to ensure quality standards. With these important certifications in place, combined a fixed upfront price for the solution, thorough documentation, and quality control testing throughout, the owner could rest assured that the overall project costs were being kept in budget.

## TMI Climate Solutions

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