



# How technology is helping to build a healing environment







## How technology is helping to build a healing environment at Norwood Hospital

Hospitals and health care facilities are intricate environments that serve a multitude of needs, so it's no surprise that the construction needs to take into account the increasingly complex design and building of these structures. To minimize disruptions, create predictable schedules and drive savings that go to direct care at the bedside, Suffolk leverages several innovative technologies on its health care projects of all sizes.

To provide a window into how these technologies work on the ground, we'll explore how Sitemetric, OpenSpace, and Assemble are enhancing efficiency and saving money on our project at Norwood Hospital in Norwood, MA. The facility will be the first newly constructed hospital in the area in more than 25 years, built on the existing footprint of the previous building — which closed due to severe flooding — and encompassing 400,000 square feet of clinical and administrative space.

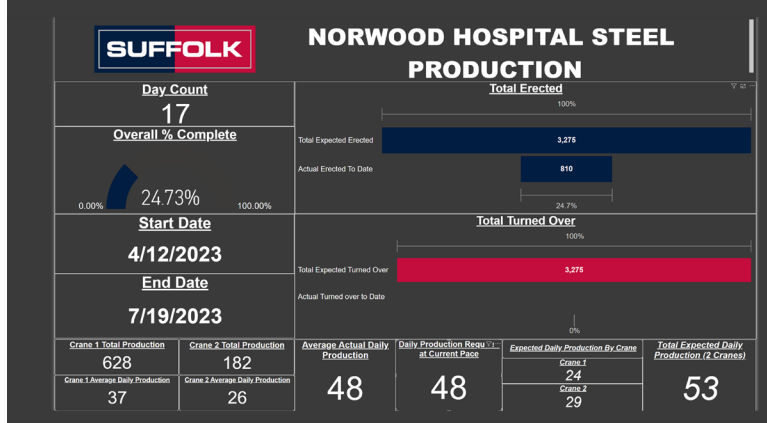
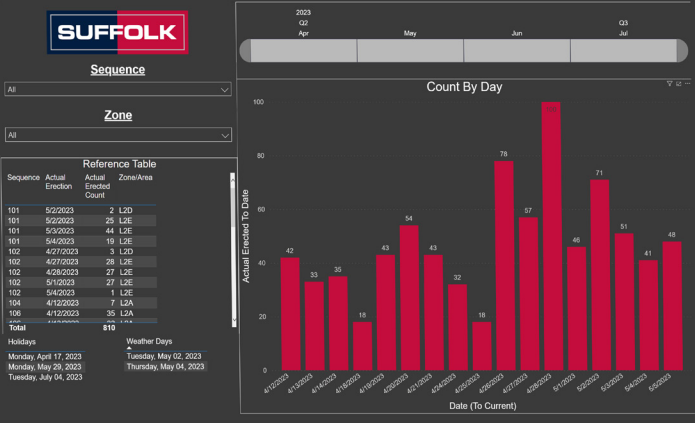


Demolition of the previous facility (July 2022)



The concrete frost wall construction (February 2023)





Assemble’s steel tracking on Norwood Hospital, with a daily installation count and expected versus actual production.

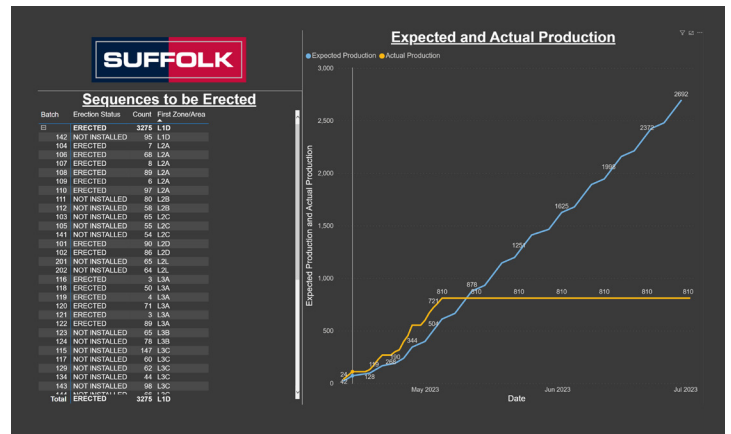
## Assemble

The Suffolk project team at 400 Summer Street, a 16-story laboratory building in Boston’s Seaport District, had streamlined their steel installation with Assemble, which connects BIM data to key construction workflows, including design reviews, model-based takeoff, change management, schedule management, work-in-place tracking and more. They shared their findings with the Norwood Hospital team, which began leveraging the platform on their structure’s steel installation. Assemble’s digital dashboard used the BIM data the team compiled to mark the steel delivery dates, erection sequences of the building, and the overall status and pieces complete.

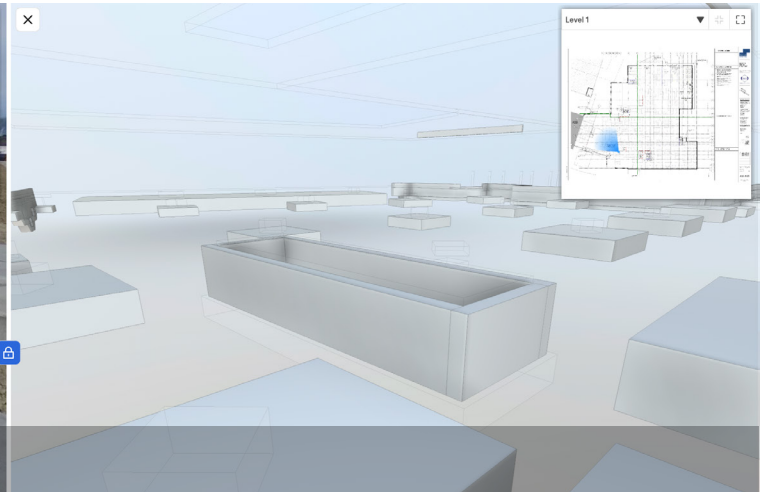
With the BIM model integrated into Assemble, the team can interactively go into the model, click a piece that is in process on site, and change the settings for installation date and status. That step turns the piece to yellow to signify its completion and updates the dashboard.

The dashboard provides percentage goals and schedule milestones, along with real-time updates to Norwood Hospital about the progress. Using Assemble in this fashion provides daily tracking to ensure alignment with the schedule, subcontractor accountability for agreed-upon productivity rates, time and materials tracking for change order work and instant feedback to the Norwood Hospital team on progress.

Overall, the Suffolk team can easily visualize production and ensure the schedule is on track for trades like steel, giving them better control over the project. Assemble’s capabilities may also serve the team in the curtainwall phase, since it counts by section and the team can isolate progress by floor. The team is projecting it will turn over steel about four weeks ahead of schedule; Assemble’s precise tracking has allowed the team to inform subsequent trades that they will mobilize early, allowing the project to take full advantage of the projected time savings.



The highly visual dashboard makes it easy for the Suffolk and Norwood Hospital teams to see progress and manage the steel installation scope.



## OpenSpace

Suffolk teams often leverage OpenSpace Track’s 360-degree photo capture to track overall progress on a project, and the Norwood Hospital team has leveraged the software’s artificial intelligence capabilities to measure the specific progress of concrete and foundations. A team member wears the OpenSpace hard hat camera, walks along the lines of what has been completed so far, then compares the OpenSpace Google Street View-type imagery against the construction drawings and BIM360 model for a full picture of what’s complete and what still needs to be done.

This tool then leverages artificial intelligence to estimate the percentage complete relative to the drawings. With the precise tracking OpenSpace provided, the team helped manage the labor needs on the project to ensure timely turnover of the foundations, which were completed exactly on schedule. Given the success of this approach on concrete and foundations, the team plans to use OpenSpace to track progress on interior walls, ceilings and MEP systems as well.

## Sitemetric

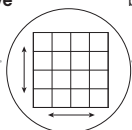
To maximize safety and productivity, the Suffolk team at Norwood Hospital uses a workforce tracking software called Sitemetric. The team installed sensors in different parts of the jobsite and provided RFID cards to all workers on site, so they can view times throughout the day where various trades are most productive and where they need to be, according to the schedule. The platform is also helpful in the event of an emergency, since the team can see where workers are and safely evacuate everyone on site. Sitemetric also has mass texting capabilities, which can notify all workers on or offsite of important site conditions such as weather, accidents, equipment to be moved or relocated, evacuations and more.

These technologies are a few of the platforms that Suffolk teams leverage on health care projects across the Northeast. In the case of Norwood Hospital, this bundle is helping to advance the seamless construction — on time and on budget — of a critical regional healing environment.

## By the numbers

**400,000**

Total square feet of **clinical and administrative space**

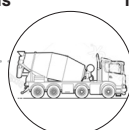


**4,000**

**Anticipated jobs** supported by new facility

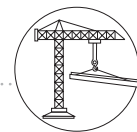
**3,314**

Total cubic yards poured for **footings and frost walls**



**286**

Top volume of cubic yards **poured in one day**



**3,275**

**Pieces of structural steel** to be erected in 90 days

**159**

**Highest number of steel members** erected in a single day