



HP SitePrint for MEP/HVAC

Brandt prints 1,136 points in a Data Center in just 5 hours, 5x faster than traditional processes



Highlights



cost reductions with a pay-per-use model



5x faster
230 points/h with text labels



reduces the risk of back injuries

Project background

- Description: Print the locations of bolt holes to place mechanical racks
- Name: Temple Data Center
- Project Size: 1,136 points over 50,000 ft²



Brandt (a division of Southland Company) is an MEP services contractor based in Texas. The division is a leading Mechanical, Electrical, and Plumbing contractor specializing in designing, installing, and maintaining integrated building systems. Their services include HVAC systems, electrical and lighting installations, plumbing, and energy solutions for commercial, industrial, and institutional projects.

Brandt traditionally relied on a one-person crew using an RTS and a prism pole to complete point layouts for their projects. To improve efficiency, they began exploring layout robots. Previously, Brandt relied on other suppliers of layout robots, but after experiencing concerns about cost, efficiency, and ease of use, the company turned to HP SitePrint seeking a better experience.

The Challenge

As an innovative company aware of the benefits of modern technology, Brandt was already convinced of the potential benefits of robotic layout tools. However, Brandt's current supplier charged a flat monthly subscription fee for the robot, they had to pay for the equipment even when it wasn't being used. The HP SitePrint pay-per-use model proved to be a perfect fit, allowing to pay only for what they print.

“Prior to investing in our HP SitePrint, some of our projects were presented with one of the HP competitors. With HP's pay-per-use, we have been able to cut costs dramatically.” noted Tanya Peddy, Virtual Field Technician Manager.



Additionally, many layout robot vendors use positioning devices that are not widely adopted in the construction industry, preventing Brandt from fully leveraging its existing investment in Total Stations. The lack of integration with Total Stations added another layer of challenges as personnel would need to be retrained to use the robotic systems.

Brandt needed a solution that would offer the efficiency of robotics with a pricing structure that better matched their operations and integrated with their existing equipment.

The Solution

Brandt began evaluating HP SitePrint to address concerns regarding cost, efficiency, and ease of use presented by competitors' robotic layout solutions. Brandt implemented HP SitePrint across multiple job sites, and HP SitePrint quickly became a core part of their workflow.

A two-day training program to certify all Brandt employees as HP SitePrint authorized operators combined with the team's internal CAD and Revit expertise enabled a smooth transition. “With in-depth training from HP and our expertise in Total Stations we were able to seamlessly integrate the HP SitePrint into our current workflow. This allowed us to provide our field teams with a safer, faster and accurate layout,” Tanya Peddy, Virtual Field Technician Manager



“The implementation of the HP SitePrint has been effortless thanks to the flexibility of the setup, easy to use plugin tools, responsive customer support and unlimited access to training resources. The HP plugin has also proven to be a very user-friendly tool. We have been able to provide BIM updates within minutes and upload directly to the portal, enabling our field operator to make real time corrections.” – Tanya Peddy, Virtual Field Technician Manager

She also praised HP for increasing independence. “The transition from the competitor to the HP on Temple Data Center allowed not only huge savings but more independence on the file creation side. Before, we were sending files to the other unit's VDC team and waiting for the file to be posted on their portal for import. With HP we immediately had full access to all the tools and training needed for file creation.”

HP SitePrint's integration with Total Stations enabled Brandt to seamlessly incorporate it into their existing workflow while maximizing the utilization of existing equipment. “Being able to use a Total Station is great because it is much lighter than other positioning devices” explained Ruben Reyes, Virtual Field Technician II. “With the HP, you have the option to use the prism pole. Which helps when you are setting up and dealing with obstacles in your way. It is also nice to have less to carry, a lot lighter vs other solutions where you have more to carry.”

The Results with HP SitePrint

Brandt's traditional approach of employing a one-person crew using an RTS and a prism pole to complete point layouts across integrated building systems was time-consuming, inefficient, and labor-intensive. Brandt chose HP SitePrint to improve safety measures (helping prevent knee and back injuries), increase speed, and take of advanced features including the utilization of different prism types during setup.

The Temple Data Center project required the team to print 1,136 points. With HP SitePrint and existing Total Stations, the team achieved a productivity of 230 points per hour. The technology's ease of use minimized disruptions and allowed teams to focus on other core project tasks, further improving efficiency. HP SitePrint's pay-per-use price structure eliminated the excess costs associated with robot downtime, providing Brandt with a more cost-effective solution than flat-fee competitor options. Using HP SitePrint, Brandt printed 1,136 points in 5 hours of print time (over 5 times faster than traditional manual methods).

- Total Cost Reduction: Brandt reduced costs compared to traditional manual processes by substantially reducing time requirements. When compared with the use of competitor's robotic tools, they were able to reduce costs with a pay-per-use pricing model. They were also able to reduce strain on workers, reducing costs due to absences and medical care related to knee and back injuries.
- Total Time Saved: 23 hours, which is over 5 times faster than the traditional process

“HP SitePrint's ability to adapt to unpredictable construction floors because of its printhead elevation was an unexpected bonus for the team. The HP Site Print will also go over small rocks and some debris, while other robots need to have a very clean area to operate,” Ruben shared. He also praised HP SitePrint's integrated obstacle avoidance sensors and time-of-flight camera that allows it to detect unexpected obstacles and react intelligently. “The HP Site Print is more self-aware of its surroundings and will stop itself near edges and won't go full speed at a steel column.”



Long Term Impact

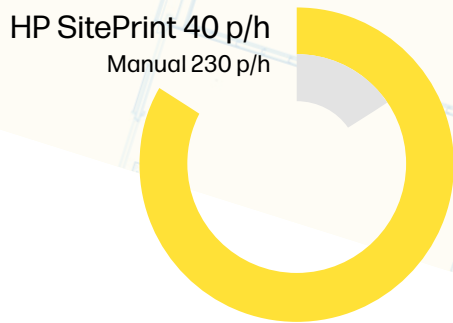
The Temple Data Center is one of four projects in which Brandt has implemented HP SitePrint for layout requirements for integrated building systems. The project clearly highlights how Brandt can continue to use HP SitePrint to adhere to a fast-paced schedule and meet employee safety goals.

HP's flexible pricing program helped Brandt avoid losses related to underutilization, and integration with Total Stations helped them maintain the use of existing investments and improve ease of use. Adopting HP SitePrint helped Brandt achieve enhanced productivity, improved safety, cost savings, and reduction of errors. With a dedicated team in place, the division anticipates the same advantages with continued use.

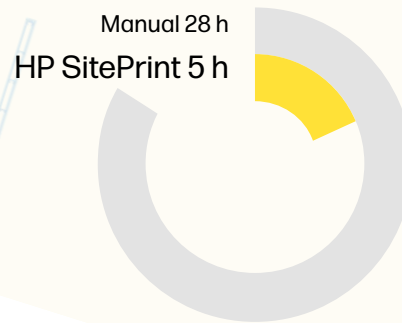
Comparative Analysis

As an innovative company focused on efficiency and employee safety, Brandt was seeking a robotic solution to improve their layout process. Using HP SitePrint enabled the company to meet productivity goals while the pay-per-use pricing structure allowed them to avoid financial losses. The Temple Data Center project clearly highlights the benefits of using HP SitePrint for layout needs in integrated building systems.

		Brandt at Temple Data Center	
		Manual	HP SitePrint
Job Data	Printed Floor Area (ft)	48,705 ft	
	Printed points	1,136 points	
Labor aspects	Layout Crew Size	1	1
Time	Total Time (h)	28 h	5 h
	Total Productivity (ft/hour)	40 p/h	230 p/h



Productivity growth
accelerated x6



5 Times faster

Contact HP to learn how HP SitePrint can improve your construction workflows.

Contact us

Learn more at www.hp.com/siteprint

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c09127133 February 2025

