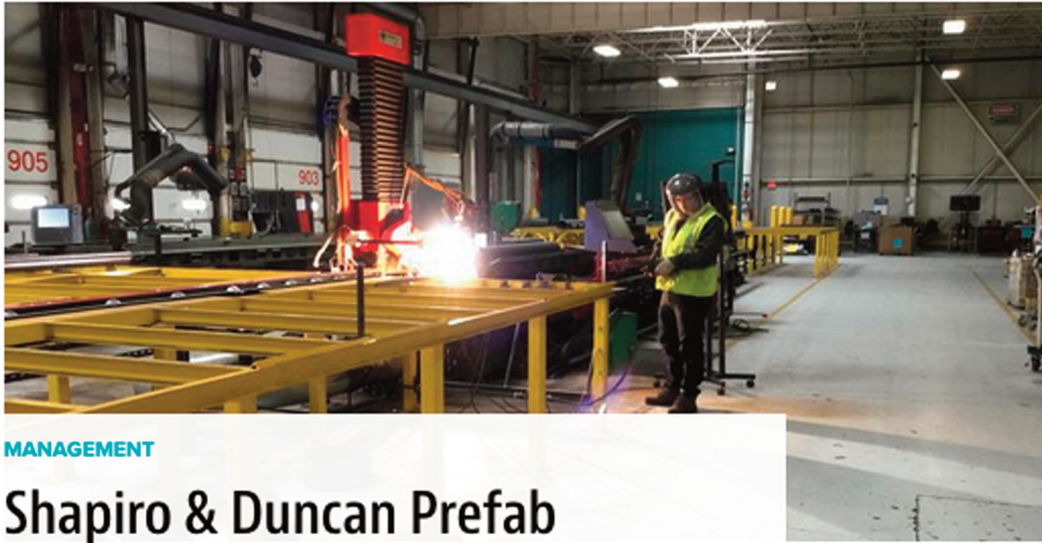


## CONTRACTOR.



### MANAGEMENT

# Shapiro & Duncan Prefab Facility - A Beacon for Better Production

The Plasma Pipe Cutting and Profiling machine in operation. Its addition has doubled the company's steel line capacity.

[John Mesenbrink](#) | May 22, 2019

LANDOVER, MD —Industry leading mechanical contractor Shapiro & Duncan is making waves with several projects and initiatives in its prefabrication facility that will enhance the company's capabilities, which includes multi-trade prefab work. Since 2002, Shapiro & Duncan has been involved in the prefabrication of piping assemblies with a 12,000-sq.-ft. leased facility in Beltsville, Md, but after realizing the company needed more space, in 2007, Shapiro & Duncan purchased a 52,000-sq.-ft. building in Landover to further its path to becoming an industry leader in prefab pipe assemblies.

"The prefabrication facility gives us a clear advantage in the market through a high level of quality, minimized impact on jobsite and reduced jobsite storage and manpower clutter.

We are making a huge upfront investment of intelligence in the planning, coordination and detailing of every project to ensure project success through offsite production; we are far more productive in our fab shop working in a safer controlled environment with the best tools and equipment," said Mark Drury, Vice President of Business Development, Shapiro & Duncan.

Last year, the company moved forward with multiple projects that will help Shapiro & Duncan, "work more efficiently to provide a better product for our client," added Drury.

(continued)

The first project Shapiro & Duncan completed was the construction of a 4,800-sq-ft. three-sided metal storage building, which is being used for storing finished prefab assemblies. “With racked shelving, we have doubled the area’s storage capacity and added the benefit of the items being under roof,” said Drury.

Inside the shop, another CNC Plasma Pipe Cutting and Profiling machine was added; this machine doubles the steel line capacity, as well as increasing the size of pipe to 48” and down to a 2” diameter pipe. The machine will cut and bevel straight, saddle, tee, multi-miter, lateral, multi-saddle, gusset slots, double miter, pipe to cone, bumpers and overlaps. Redoing its steel line, Shapiro & Duncan added an additional 150 feet of rail and another overhead crane, allowing for a well-supported assembly finishing area,” said Drury.

The replacement of the 20-year-old, tar-and-gravel roof was the next priority and Shapiro & Duncan chose a white TPO roof system over two layers of insulation and hardboard. The additional insulation improves winter heat retention and the white surface reflects the sun’s rays in the summer to keep the building cooler. While replacing the roof, four rooftop air handling units were replaced and four 25,000 cfm ventilation fans were added.



### **Skilled Trades**

With the reconfiguration, the company added an area for S&DYouniversity—a program which provides instruction across a wide range of knowledge and skill sets—to set up a versatile training area where the best trainers conduct weekly skills enhancement boot camps for five to 10 tradesmen at a time. All employees are expected to complete at least three hour per year of continuing education.

“At the fab shop we have set up an area as a boot camp where tradespeople will be brought in for a week or more of skills training specific to an identified need. This in-house instruction is provided by our own master tradespeople. Having the most highly skilled workforce is a distinct advantage—the

(continued)



production is more efficient, the quality is superior, execution is safer and rework is eliminated,” said Drury.

Additionally, the team stacked two sea containers and custom modified them to provide a multi-floor workspace for skills enhancement.

### **Committed to Sustainability**

The final project of 2018—with the help of Aurora Energy, a commercial solar project developer—was the installation of a rooftop solar PV farm, which was a significant step for the Shapiro & Duncan’s commitment to sustainability, and the prefab facility’s goal of be self-sufficient in its electrical supply. Going from a primarily coal-fired electrical energy supply to a solar energy supply, “Having the right team is critical to the success of any venture, and our rooftop solar team was top notch. They were extremely knowledgeable of the product, the installation and the process,” said Drury.



The 925 SunPower solar modules on a Panel Claw support system complete a 302 kW production capacity, which, over the course of a year, will provide power in excess of current consumption —approximately 105%—and will help draw quarterly checks through SREC’s purchased on the utility market and monthly credits directly from the electric utility.

In the current form, these panels feed into a Solar Edge power inversion and monitoring system, which is directly connected to the grid at a new dual direction electrical meter. The system has a 25-year lifetime guaranty and the initial capital investment will be recouped in less than six years. “Taking this step made sense as a company capital investment with a tremendous return, as well as

(continued)

doing the right thing for the planet by switching from coal power to sun power. As a company, we are looking to push the envelope, to serve the community and leave the world a better place. With a payback of approximately six years, this was a very smart investment by the company as a whole," said Drury.

The system went live on December 28, 2018 and is already making a positive impact on the environment. "To date, our change in energy source has saved 115,000 lbs. of CO<sub>2</sub> emissions and is the equivalent of 3,000 trees being planted," said Drury.

Moreover, in the center hallway of the shop, a wall of big screen monitors shows in detail the assembly production by task and individual tracking progress and effectiveness. "Now we have a monitor showing the solar PV production, as well, and now the whole team not only gets to see where we are in producing our assemblies, we can also monitor our electrical production as well," said Drury.

The prefabrication facility is a shining example of the company's commitment in future investments. "As we move forward, we will continue to invest in our people, our processes and our plant to ensure that we are always ready to take the next step," said Drury.

<https://www.contractormag.com/management/shapiro-duncan-prefab-facility-beacon-better-production>