

Category 5: Best Building Project – Specialty Contractor (\$2-\$6 million)
Specialty Contractor: Hunt Electric, Inc.
Project Name: TruStile Doors

Introduction

TruStile Doors started their high-end door manufacturing business in Denver in 1995 with a company motto of “Never Just a Door”, reflecting their commitment to quality, creativity, and shortest lead times in the industry. Based on these attributes, TruStile has been experiencing massive growth in the last decade. In 2019 after multiple expansions and acquisitions, TruStile found itself spread out amongst four buildings each comprising a different aspect of the manufacturing. TruStile set out to consolidate their operation to increase speed and efficiency by building a new world-class headquarters with manufacturing, offices, and spectacular showroom all under one roof. Understanding the complexity and varying scopes of work and coordination requirements, TruStile strategically chose a Design-Build project delivery method. With in-house Design-Build capabilities, along with a vast amount of expertise, Hunt Electric was selected to join the Team led by Ryan Companies (GC). This team “opened the door” to Design and Construction for TruStile’s flagship headquarters. Hunt’s dynamic “Never Just a Project” approach would ensure its success.

Solutions of Special Projects:

SPEED TO MARKET

Due to the speed-to-market desire, design started immediately in February 2019 with an expected Substantial Completion in January 2020 – 11 months from Design Start to Project Finish! Considering the compressed schedule, the Hunt Team relied on their high level of expertise, organization, communication, and flexibility. Hunt immediately started working to organize plans and prioritize answers to keep the design moving while supporting the construction schedule. Hunt helped keep the critical path schedule by adjusting underground feeders based on real-time coordination with TruStile’s Vendors. This mindset continued by finalizing floor box locations from TruStile’s Furniture Plan during concrete deck forming! As the building progressed, substantial building elements were added to which Hunt designed and constructed

“in stride”. These include the Mechanical/Boiler Building, Mezzanines, Dust Collection System and Plant Owner Equipment.

INTEGRATING COMPLEX SYSTEMS

Integrating all systems and scopes was the key to success. For team collaboration, Hunt developed a comprehensive 370-line item matrix identifying all trades scopes and responsibilities. To manage the Plant Equipment, Hunt created a matrix containing over 380-line items ensuring that all electrical aspects were accurate with international vendors. The COVID-19 pandemic then impacted this process forcing equipment changes and delays, which Hunt managed with a high level of organization and detail, to keep the project on schedule.

A custom Dust Collection System was incorporated to handle the byproduct of making doors 3-shifts per day. Hunt captured the complex details of over 750 control points, 150,000 feet of controls cabling, along with power for all equipment, which achieved TruStile’s end goal of a dust-free facility.

LOW-VOLTAGE SYSTEMS

Capitalizing on Hunt’s versatility, TruStile utilized Hunt to provide design and installations for all Low-Voltage Systems: Audio Visual, Security, Tele/Data, Sound Masking, Distributed Antenna Systems and Fire Alarm. Hunt’s expertise was applied working with TruStile’s management team to provide comprehensive systems in all offices, (20) conference rooms, (3) corporate training rooms and the main Plant. This provided TruStile with state-of-the-art systems and alleviated coordination errors typical for a project of this magnitude and complexity by utilizing one trusted, turn-key subcontractor.

Excellence in Project Executions and Management/Team Approach:

PLANT DESIGN/EXECUTION

Hunt’s versatility in designing the electrical one-line prior to equipment finalization allowed all the one-line to be installed underground which saved budget, alleviated future overhead conflicts, and saved space in the congested plant ceiling. A total of 10,400 amps of power spread out among (9) distribution centers, consisting of over 30,000 feet of underground conduit was

designed and installed in a very short duration, and allowed TruStile the desired future equipment flexibility.

To support the 300+ pieces of Plant Equipment, Hunt was tasked with designing an overhead power infrastructure that would be flexible, expandable, and still meet the aggressive speed to market. Using TruStile's preliminary plant layouts, Hunt designed an extensive overhead power cable tray system to meet these goals. Once the Plant Equipment layout was finalized, over eight miles of cable tray and cord drops were installed, each with a specific location for future equipment. To eliminate downtime during critical transfers from the existing facility, all drops were outfitted with both the cord cap and plug so that equipment could be powered up immediately. This forethought, flexibility, and creativity kept TruStile on schedule and meeting production goals as the plant was brought online.

VALUE ENGINEERING AND BUDGET

As with all Design-Build Projects, maintaining Budget and offering Value Engineering was critical and Hunt's expertise kept costs under control. Extensive lighting VE packages were proposed for cost savings while still achieving specific photometric layouts unique to each aspect of the project. Multiple A/V collaboration sessions and workshops were held with TruStile IT and end users to ensure the system met their exact needs in a cost-effective manner.

Collaboration prevented budgetary surprises as the team made educated cost decisions throughout each step of the process while holding each other accountable to the lead times and installation deadlines.

Construction Innovation/State of the Art Advancement:

TECHNOLOGY

From the onset, Hunt utilized the latest in construction design software solutions. BIM Modeling performed during the Design was utilized by Hunt throughout the installation. All plant equipment power drops were designed and relayed to the field utilizing Trimble Survey Points laid out utilizing GPS technology, leading to a quick and accurate installation of all (300) points prior to equipment move-in.

LIGHTING CONTROL

Hunt's innovative Lighting Control System utilized a wireless scheme focused on energy savings but also the safety of plant personnel. With the large footprint of the plant floor, the traditional method of using localized lighting relay panels would have increased costs by increasing wiring. Hunt solved this problem by designing distributed wirelessly controlled relay packs located in each lighting zone. This innovation reduced costs, improved the schedule, and increased end-user flexibility as the relay packs are smartphone programmable. Detailed photometric plans were reviewed with equipment layouts to ensure all critical areas had adequate lighting.

Environmental/Safety:

ENVIRONMENT & ENERGY SAVING

This project was located on a brownfield site and with the improvements made, the project was entered into Colorado's voluntary cleanup and redevelopment program.

Energy savings and reducing the environmental impact were built into Hunt's design from the beginning. To encourage electric vehicle use, Car Charging Stations were installed. To capitalize on the large rooftop footprint, a 1500 KW Solar Panel System was installed. Energy usage and reuse for this manufacturing plant was addressed by a BioMass Boiler which turned TruStile's dust waste into thermal energy for the plant. Overall, the energy savings and energy-creating measures put into place will reduce its carbon footprint by more than 25,000 tons annually – the equivalent of taking 4,900 cars off the road. These energy saving practices will save an estimated \$400,000 per year in waste costs and \$335,000 per year in energy costs.

HUNT ELECTRIC SAFETY

Safety is a culture at Hunt Electric. Zero lost time injuries occurred at TruStile. Along with safely sequencing work, daily crew planning ensured all employees understood the hazards of each step of work. Due to the 35' high lift work, employees were specially trained and supervised utilizing Method of Procedures including fall protection details. Once occupied, coordination with TruStile's Operators regarding NFPA70E for lockout tagout and energizing of

equipment was a key to success. With forethought, planning, communication and execution, safety is our culture and built into everything we do.

Excellence in Client Service and/or Contribution to Community:

CLIENT TESTIMONIAL

The Owner-GC-Sub relationship on this project was unparalleled. As stated by Nick Torgusson, Senior Project Manager, Ryan Companies: “The Hunt Team has been a proactive, positive, and organized partner on our design-build project in Denver, CO. Their team is well integrated between estimating, design, and execution, which has resulted in accurate budgeting, quick decision making and effective solutions. They have proven to be a leader among our larger design team and subcontractor teams. From early budgeting and design on through construction, they are accountable, honest, and deliver results. They’ve taken the time to get to know our client and their needs to ensure that their design and work supports the vision for the overall project.”

Hunt was proud to partner with a Denver-born and based company in a non-traditional market for major manufacturing. With TruStile’s growth and success, this facility will allow TruStile’s goal to double in size over the next 5 to 7 years with a \$22 million increase in local business activity and more than \$19 million of additional wages for Colorado households. At full capacity, this facility will create an additional 200 jobs.

SUMMARY

In summary, the TruStile Manufacturing project was the perfect showcase of what Design-Build and Hunt Electric is capable of. Hard work, planning, flexibility, teamwork, and trust leads to speed, quality, and an amazing end result. This can only happen when there is a trusted Design-Build Team and Ownership relationship. Hunt Electric was proud to be leading the way to provide the services this project needed.









