CITY THEATRICAL
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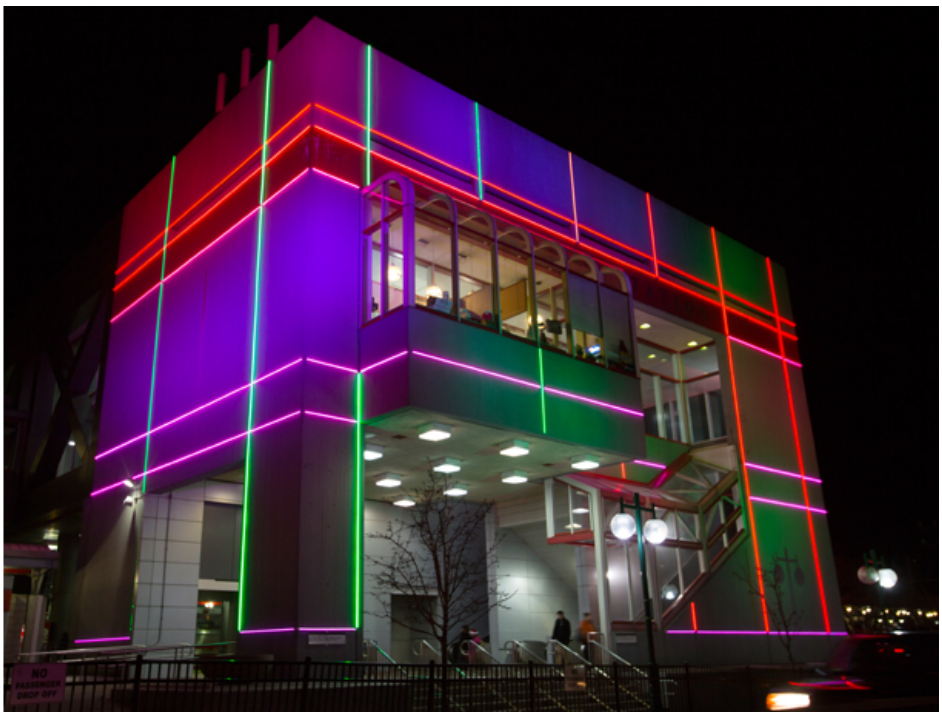
SHoW DMX VERO NET® USED TO LIGHT UP STAMFORD TRAIN STATION



"Wouldn't it be great if someone made an affordable weatherproof wireless DMX transmitter and receiver...in America". Jamie remembered seeing a preview of it in a City Theatrical Newsletter and thought, "That's it... this is what we need."

Stamford Train Station

Conceived by: Jamie Burnett; Joy Wulke, visual artist and glass sculptor; Sandy Garnett, visual Artist; Steve Hamelin of Supertech.

Installation crew: Ben Haverkampf, Rich Burkam and Jamie Burnett. with support from Sandy Garnett.

System design: Jamie Burnett and Steve Hamelin.

Proposal Design and Prep: Sandy Garnett, Joy Wulke

Equipment and LED Neon Prep: Supertech crew; Tony Stubbs, Todd Paskin

LED Neon Supplier: Green LED Lighting Solutions LLC

Key City of Stamford officials: Anthony Bosco, consultant city of Stamford; Laure Aubuchon, Director of Economic Development city of Stamford; Rod Frantz Representing the Department of Economic and Community Development (DECD); Connecticut Office of the Arts (COA)

Photos: T. Charles Erickson and Jamie Burnett

If you are driving up the east coast from New York City to Boston it's impossible to miss the bold new lighting on the Stamford, Connecticut train station. The story behind this installation is part of a larger story that is taking place all over the world: LED architectural lighting controlled by wireless DMX. Every municipality wants to be involved with the growing trend of revitalizing their central cities with new lighting, controlled in new ways.

The project began when the Connecticut Office of the Arts put out a request for proposals for “City Canvases”, a onetime initiative bringing mural-based public art into downtown spaces throughout the state of Connecticut. The initiative was aimed to enhance public spaces through the visual arts and to connect the urban regions of Connecticut with a statewide place making initiative. Approximately 10 cities throughout the state were eligible for funding for the execution of mural-based artworks by Connecticut artists.

Stamford was one of the ten cities listed on the RFP and Stamford put out it's own request targeting the Stamford Transportation Center. The original proposal had a $300,000 budget, with half coming from the City of Stamford, that would have allowed the artists to install LED cove lighting in four of the escalators. The curved translucent ceilings would have lent themselves perfectly to a changing wash of light. The plan was to make each escalator interactive with the moving passengers and the oncoming trains to the corresponding platform. This would have been accomplished by using the station’s own cameras run through detection software. Eventually, the budget was cut by half, and this allowed the artists to accomplish only the main goal of lighting the facade of the building.

Jamie Burnett has been living and working in Connecticut for many years as a designer and owner of his own electrical contracting business, Luminous Environments, which specializes in the design and installation of theater and studio lighting. Jamie is also involved with various local theater companies and arts organizations and is a founding member of Projects for a New Millennium, founded by Joy Wulke.

Over the past 12 years Projects for a New Millennium has produced four epic productions in Stony Creek Quarry fusing science and art in a huge visual epic. More recently, Projects for a New Millennium has done similar projects on a smaller scale on building facades. Joy noticed the proposal request for the city of Stamford through the Connecticut Office of the Arts, brought it to the Jamie’s attention and he said, “Let’s go for it.” The proposal mentioned that artists should want to partner up with other artists or equipment providers. Joy sought out Sandy Garnett, a visual artist, who had attended the walk thru. Jamie brought in Steve Hamelin of Supertech. Jamie and Steve have worked together for over 15 years on turnkey lighting system renovation and installations all over Connecticut. Jamie and Steve had just been working in Stamford on a TV station and Jamie asked Steve to take a look at the train station. Jamie, Joy, Steve and Sandy all met at the train station and brainstormed ides for this project. This is when “Team Light Wrangler” was born.

The building’s design lent itself to the use of bright horizontal and vertical strips, with washes of color overlaid on them. The team looked at other areas of the station to deal with but they kept coming back to the prominent façade which can be seen for almost a mile in either direction from Interstate 95. The newly restricted budget also focused the team’s concentration on this area. Steve and Jamie knew it was probably the only thing that could be accomplished in a practical sense. This part of the building is a huge concrete block with little detail. Unlit, you wouldn’t even notice it as its massive gray walls blend perfectly into the darkness.

The building’s only details were its rustic 1 1/2" wide vertical and horizontal grooves formed into the concrete as a design accent. These were prominent (and not very precisely formed) close up but almost invisible from the highway. The team suggested that this would look great in neon and decided to work with the architecture.

Steve was able to get samples of an RGB product that was almost indistinguishable from actual neon, even at close scrutiny. No pixels are evident. The team tested a small piece and came up with methods of attachment. They knew they needed wire ways to be hidden and the recessed grooves were going to be the wire ways. The flexible silicone encapsulated LED strings were set into an aluminum channel for perfectly straight runs. They first riveted this channel to 16’ pieces of anodized aluminum 1 ½” wide flat stock to perfectly cover the concrete grooves and create a wire way to power the other horizontal lines.

Jamie knew the building would still disappear under the neon if left unlit from the outside so he proposed that they wash light it with Philips Color Kinetics ColorBlast 12 Powercore® fixtures. The wash lighting from the outside would be more subtle but would make it look like the building was glowing from within or even that the neon light somehow spilled onto the building surface. The team would not have to precisely light the framed squares as the neon would cut and frame the light naturally.

In Jamie's mind, without the use of LEDs there would have been no other way to accomplish this job. Any other method would be far too maintenance heavy, expensive and power hungry.

The team's first time constraint was with the September 21, 2012 deadline for a preview event. There was no way to get the installation complete by then. They were able to install the east façade and get it running manually just for the press event that night. After that, the team had another four weeks to get the remainder of the installation complete. The team pre-fabbed the 16' lengths of aluminum channel and flat stock at Supertech. They also precut and wired the ends of LED neon. Supertech also prewired eight 24" x 24" weatherproof junction boxes with LED power supplies and RGB DMX controllers and opto splitters. Rich Burkam, a member of the installation crew, and Jamie spent two weeks in a 65' boom lift installing the channel assemblies with a concrete fastener every 18", at the same time installing weatherproof cables in the grooves because it could not be pulled later. Eight junction boxes were installed on the roof and ran the feeder cables through the slots at the roof wall base to each vertical groove. There was only enough room for a max of five SJ cables to run down the grooves with drop off points along the way to the bottom. They could only power 50' max of LED neon at a time so they used about 40 RGB controllers. All the segments in one vertical or horizontal line each have the same address so each line works as one.

To light the faces of the building, light stands were built across the street and next to the highway on the roof of the shuttle and bus center. The roof consisted of 2' x 2' x 2" concrete slabs on roof membrane. The stands were made up of 1 1/2" pipe in soccer goal fashion set on square boom bases. The bases were heavily weighted with a third base acting as ballast behind. Conveniently, they were able to feed up and out the side of a roof hatch directly from a power room for their conduit. They used six ColorBlasts per stand and four stands total.

The west side and corner of the building had its own challenges as they had to move out from the sidewalk into the busy street paralleling the building with police supervision. The side of the building was over a grassy knoll. Thanks to Lynn Ladder and Scaffolding, they installed a window washer type rig to be able to reach that whole side. The fourth ColorBlast stand ended up in the grassy knoll, still goalpost style but this time with the posts buried 4' in the ground in concrete. They were able to run conduit underground to the building and feed into an existing unused conduit right to a panel. The existing conduit had been used for facade lighting long since removed.

When first scouting the building Jamie identified the biggest challenge as integrating the system together. They had to get DMX from the lower roof ColorBlast installation to the control boxes on the upper roof so the system could run from one controller in the lower power room. Jamie has photos of a torturous route through the underground walkway above 100' of finished ceilings past a Subway sandwich shop and the police substation, fishing around a skylight, pulling around and near an elevator shaft, and going up through a nasty chase to the 4th floor and piggybacking other cables passing through a break room and snaking by the nasty looking AT&T cell tower equipment installation, and conduiting through another concrete wall to the roof. This could be accomplished with Ethernet cable exposed, but with no guarantee that someone doing some other installation in the future would not cut or remove the wire along with the mess of other seemingly random wires in the bowels of the building.

Jamie thought to himself, "Wouldn't it be great if someone made an affordable weatherproof wireless DMX transmitter and receiver…….in America", Jamie remembered seeing a preview of it in a City Theatrical Newsletter and thought, "That's it... this is what we need." In fact there was no other

choice. It would work out cheaper and more reliably than the alternative of the long and arduous cable run. The team was able to use it on a temp basis for the soft opening and install it permanently on each roof with line of sight. It has worked flawlessly since the installation. Jamie and Steve chose to use City Theatrical's SHoW DMX Vero® because they have used SHoW DMX products before successfully. Jamie was worried that the AT&T cell tower array mounted 15 feet higher might cause some problems but the equipment has been working flawlessly. Jamie stated that the Vero was actually the least worrisome part of the entire installation. He said, "Great, we can buy something that we are sure is going to work. Now we just have to make everything else work."

This installation has been a huge hit in the Stamford area and indeed for anyone driving to any part of New England up or down I-95 where it can be seen for a long stretch in both directions. Most of the time people are sitting in slow moving traffic and this installation certainly brightens up their commute. Stamford's stated goal was to, as the "Gateway to New England", present a revitalized downtown, and they feel this installation has put them on the map. The city officials feel that this big visual change presents the city in a very positive light. There are future ideas that tie in with this installation to bring a pathway of lighting into the town from the train station, creating a virtual walkway of light.

Equipment list:

24- Philips Color Kinetics ColorBlast 12 Powercore LED fixtures
2- Data enabler Pro
1- Pharos Controller DMX one universe
2- City Theatrical SHoW DMX Vero Net Transceiver (one set as transmitter, one as receiver)
1400 Feet LED Neon Flex
40- RGB Neon Flex controllers
1- 8 Channel Pathway Connectivity DMX Opto Splitter

JAMIE BURNETT is a graduate of Carnegie Mellon University in Theater Production Design. His Connecticut area resume includes tenure as Master Electrician at Long Wharf Theater followed by Technical Director/Lighting Designer for the Educational Center for the Arts in the 80s and 90s, designing 100s of productions in the Arts Hall and the Little Theater. He is a consultant, designer, special events planner, and film/video Gaffer as well as a licensed electrical contractor. He has designed and production-managed numerous festivals and events throughout the New Haven area, in addition to contributing his lighting designs to numerous theater and dance companies over the years. With Projects for a New Millennium, he was Producer/Lighting Designer/Production Manager for the smash hits Terra Continuum (1999) and 2001's Terra Lumina, and 2005's Terra Mirabila the grand multimedia extravaganzas performed in the Stony Creek Granite Quarry. He also designed PNM's Branford Luminata last October lighting the

town hall on the Branford Green. As resident Set and Lighting Designer for the Elm Shakespeare Company for the past 15 years he designed last summer’s production of Holiday and The Imaginary Invalid and this summers lighting for The Winters Tale in Edgerton Park New Haven. Jamie owns his own electrical contracting and special event business, Luminous Environments LLC, specializing in consulting, design and installation of theater and studio lighting systems and will wire your house as well.