



All Photos by William A. Price



Havre de Grace, is a city in Hardford County, Maryland, situated at the mouth of the Susquehanna River and the head of Chesapeake Bay. Designer William A. Price, III gave us a look at the project to bring DMX-controlled light into the streets of this small, but historic town.

CTI: What were the general parameters and design needs for the project?

William: The project consists of installing DMX controlled, inground, RGB LED uplights for the trees along Washington and St. John Streets in Havre de Grace, MD. The project is being implemented in two phases with phase one, the 16 trees along two blocks of Washington Street, having been completed in December, 2015 in time for the City's holiday celebrations. Phase two, which will extend the lighted area along St. John Street, will be completed in the spring of 2016. Each tree is lit with two fixtures supplied with power and data via underground conduits. Given the distributed nature of the installation, and the desire for control from the visitor's center a block away from any of the lighting, the decision was made to use **wireless DMX** rather than having to dig up the sidewalk and grounds of the visitor's center to connect to the underground conduit system.

Designer – William A. Price, III
Systems Integrator – Mark Fink
Project Manager – Brendon Vierra
Electrical Contractor – Rodney Swam, Mergler Electric

CTI: How did you lay out the design?

William: Layout was determined by comparing the existing conduit system with the new fixture locations and determining how we would overlay DMX control on the existing infrastructure which feeds street lighting and temporary use outlet boxes with a minimum of additional work required by the installing Electrical Contractor. This also required confirming the rating of the insulation on the DMX cabling to be used as it would have to be run in the same conduit with the 120V power. Because the conduits do not connect from block to block our solution was to use one transmitter but multiple receivers. We also used wired optosplitters to protect individual DMX runs once the signal was converted from RF to wired. We then measured distances from the Visitor's Center to the light poles where we expected to install the SHoW DMX Vero transceivers (100' and 300' with line of sight to the transmitter location) **(cont.)**

and used a test pair of **SHoW Baby** transceivers with various antennas to test signal strength using the **SHoW Baby**'s built-in indicators. The standard omnidirectional antennas provided adequate (2-3 dots) signal, even at 300', but we chose to improve reliability by opting for a combination of the **8dBi Panel antenna** at the transmitter location and the **10dBi Yagi antennas** on the light poles supporting the receivers.



CTI: Were there specific design, budget, or physical constraints that you had to work within?

William: The system was constrained by the existing conduit infrastructure, mounting locations limited to existing light poles, and the need to balance all material costs vs installation costs.

CTI: Why did you want to use SHoW DMX Vero in this case?

William: **SHoW DMX** solved the issue of needing multiple "DMX runs" from one central location where conduit access was not practical within the scope of the project budget and schedule.

CTI: Where did you mount the Transmitter and Receivers?

William: The transmitter is mounted outside the Visitor's Center on a brick wall. The receivers are mounted to light poles with stainless-steel band clamps.

CTI: What settings did you use on the equipment?

William: Adaptive Spread Spectrum Frequency Hopping, SHoW ID 201

CTI: What was your overall experience in working with SHoW DMX Vero on your production?

William: The **SHoW DMX** equipment functioned exactly as expected. Not a terribly sexy answer, but certainly preferable to the all too frequent surprises we find in this industry.

CTI: Would you have done anything differently in hindsight?

William: Not that I can think of.

William A. Price III is the Vice President for AKT3 and was Director of Systems for Barbizon Lighting. At Barbizon he designed and installed lighting for The Newseum, The Studio Theatre and Theatre J in Washington DC. He also has designed turn key entertainment systems from Puerto Rico to Pennsylvania. As a free-lance Lighting and Set designer Bill has designed for the Olney Theatre, the Baltimore Choral Arts Society, Phoenix Festival Theatre, the Milburn Stone Theatre and the Kennedy Center. Most recently Bill received the 2013 BroadwayWorld Baltimore Awards "Best Lighting Design" for "Spring Awakenings". He also has directed several shows for area theatres including the Phoenix Festival Theatre and Bayside Theatre. He a member of the USITT eSET Council an education organization of the entertainment industry and Chair of the Havre de Grace Opera House Foundation. He holds a Master's of Fine Arts in from the University of Maryland and resides in Havre de Grace Maryland.

