

Westy's Garden Lanes – 40 Lanes, Garden City, ID

Replace Bowland with BES-X Ultimate

Touch Screens, add 5 POS, replace Monitors with Customer-Bought LG.

New Server, update 2 front desk and 1 back office

Day 1 – Monday, November 14, 2016 – We unloaded tools into Meeting Room provided by the Center for tools and equipment storage.



Truck arrived and we unloaded.



We built all New Monitor Pairs onto the Monitor Frames provided by QAMF.

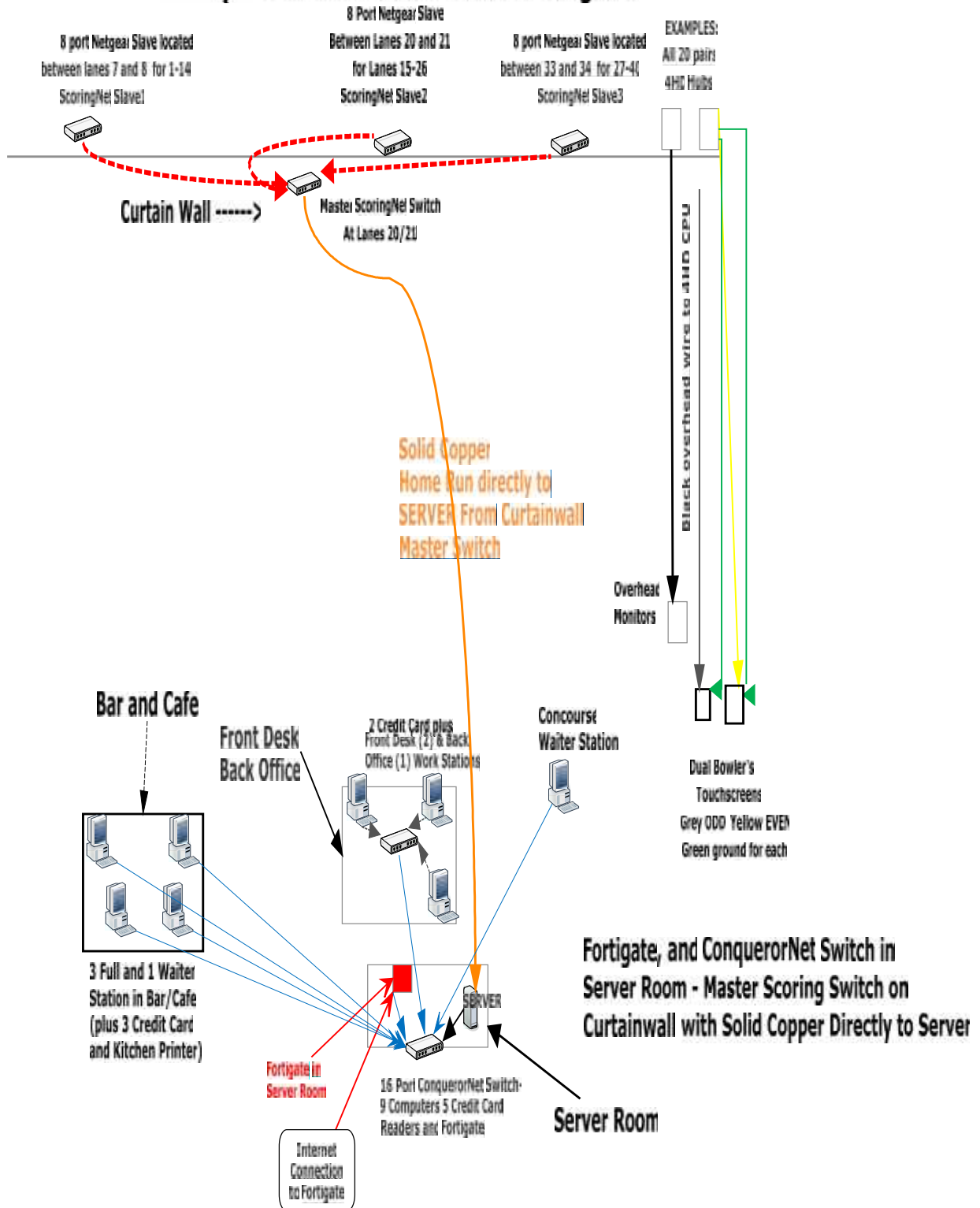


We wired entire curtain wall with Network Switches (3 Slaves and 1 Master), and ran all network Cat5 to 4 HD Hub locations across the 40 lanes.

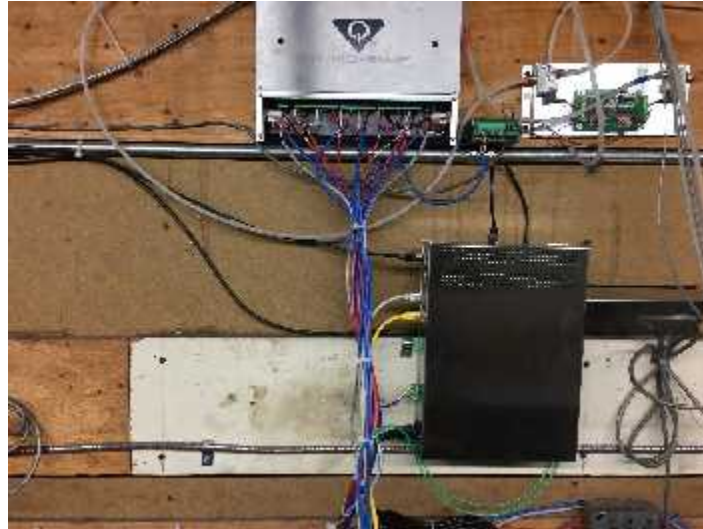


We loosely tied the Network Cat5 Cables and will do Final Wire Tie-Up later. We wired the locations of all the new computers (2 Bar, 1 Café, and 2 Waiter Stations). We began installing the 5 new computers plus the new Server. 2 New computers and Server are in place beside the old system. We found the direction of the wiring of the Bowland System and will dismantle in reverse-order and keep one Front Desk on Bowland as we transfer over to BES-X on the other. Daily Hours: 9 (me) + 24 (high-skilled) + 8 (labor) = 41. Job Hours: 9 + 24 + 8 = 41. Here is the Network Diagram for this center:

Westy's Garden Lanes Network Diagram



Day 2 – Tuesday, November 15, 2016 – We changed-over lanes 1-4 onto the New System. We ran new underground wire to Touchscreen locations and to T-Vision, using the old wire to pull-in the new, thus removing the old wire. We ran new Overhead Wire for CPU, again, using the old LCOM Wire to VDB's to pull-in the new CPU Cat5 wires. We replaced the Six Boxes with F-Boxes and wired. We installed 4HD Hubs and wired and tied-up new wiring neatly.



We installed New Pin Solenoids on the A-2 Pinsetters and wired them to the F-Box and to the Pinsetter Electrical Box. We got the 24 Volts for the NPS coil from the low voltage terminal strip inside the Pinsetter Electrical Box on terminals 6 and 9. We wired the 208 Volt input for the NPS to the High Voltage Terminal Strip on terminals E and H. On the F-Box side, we ran the 4 wires to the F-Box (2-conductor from terminals 6 and 9, and 2-conductor from NPS), and wired one wire from each 2-conductor to the F-Box, and butt-connected the other wire from each. This provides 208 V to NPS all the time and activates only when the F-Box makes the 24 V circuit to the NPS solenoid.



We replaced the old TV's with the new Flatscreen units that we built onto mounting plates yesterday, and wired them completely. We leveled the new units and set them at the same height off the approach with turnbuckles, and covered chains with Chain Cover material.



We removed the old Fly Bowler's Terminals and replaced with new Touchscreen terminals and wired them completely.





We put one of the two Front Desk Terminals onto the new system, connecting it to the new ConquerorNet switch in the Server Room. We have the Server and this one front desk computer on the new system currently – with all the rest on the old system. We were sent no Hardware Key for the Server, so, although everything is proper wired for the new system, the Server can't be recognized. We have internet to the server. I called Nicole and Mike Randesi. Nicole is sending me a Hardware Key overnight. When it comes tomorrow, I will install and call Mike to update the one front desk computer on the new system, so that we can fire-up the completed lanes and upload, configure, and test. We built all the remaining computers to be ready to simply plug them into the new system when the time comes. We wired all the pre-built Monitors with Power Cables plus the Extension Cords bought by the Bowling Center (at our request - since the power cables provided with the Customer-Bought Monitors, don't reach the Customer's Power Outlets in the ceiling), and with HDMI Cables from the CPU to the Monitors. The Bar and Café can't be changed over until the Trainer (Chris Moyer) gets here, because the employees need to know how to price and use the new system. So we built all of the new computers in our tool room and placed one of the Bar computers and one of the Bar Wait Stations next to the units we will be replacing.



We built the rest in our Tool Room, that are ready to Plug and Play, since all wiring is run.



Daily Hours: $9 + 24 + 8 = 41$. Job Hours: $18 + 48 + 16 = 82$.

Day 3 – Wednesday, November 16, 2016 – We installed Lanes 5-10 as described above. The Hardware Key came in as scheduled at 8:30 AM. We installed and called Mike Randesi. Mike upgraded the software on the Front Desk Terminal that we are using for controlling the new BES-X equipment. We set Lane Setup configuration for each of lanes 1-10 (the 4 we did yesterday plus the 6 we did today), with CPU serial Number, checked Intercom box, English Touchscreens, LG-COM Monitors, 2-up/2-Down, and Brunswick A-2 with NPS/T-Vision/Fbox.

All lanes were recognized, and displayed message Upload to Lanes. We Reinitialized lanes 1-10 and all came up to BES Screen in about 50 minutes. We set Pinspotter Parameters on all 10

lanes and sent to lanes. All came back up in BES screens just fine. We turned-on each lane and adjusted Camera Parameters and sent to Cameras. We then bowled on all 10 lanes checking for Pinspotter Power on and off, Proper Cycling, Proper Pin-count, New Pin Solenoid Function for Strikes and for 10th Frame Fill Balls, 2nd Ball function (if Scoring is waiting for a 1st ball and Pinsetter is in 2nd ball there should be no score input), and Foul Cycle. All worked fine on all lanes – except on Lane 8 where the 2nd Ball Wires were reversed in the F-Box. We switched and it worked fine. The first 10 lanes installed are all up and running fine.



Daily Hours: $8 + 21 + 7 = 36$. Job Hours: $26 + 69 + 23 = 118$.

Day 4 – Thursday, November 17, 2016 – We installed Lanes 11-16 as described above. All came up fine. We checked for all functions as described above. Three lanes needed a slight adjustment in the location of the New Pin Solenoid for proper Strike Smart Cycle/One Ball Games/10th Frame Reset, but otherwise all functions worked perfectly. We adjusted the solenoids in question, and all lanes are all working properly now for all functions. Chris Moyer (Trainer) arrived and we turned-on the Concourse Wait Station POS.



This station was already wired to the new Conqueror Network, since it was an additional station. We couldn't swap out ANY of the other 4 existing Stations in the Bar/Café until Chris got here. The Bar/Café Staff told us that disconnecting even one of the existing Stations causes big problems, so we waited. The new Wait Station on the Concourse is up and running, so Chris can train people on a POS. We will swap-out all other four Bar and Café stations at 5:30 AM on Saturday, and we have this one up and running to train on for now.



Lanes 11-16 Uploading

We finished wiring all remaining Monitor Pairs with HDMI Cables, Power Cords and Turnbuckles for adjusting height.



Daily Hours: $8 + 21 + 0 = 29$. Job Hours: $34 + 90 + 23 = 147$.

Day 5 – Friday, November 18, 2016 – We installed Lanes 17-20 and 37-40 today. The old system terminated on both ends and started at lanes 20 and 21. So, when we reached lane 20 in replacing the old system, we needed to move to lane 40 and work toward lane 21 to keep the old system working on Front Desk Terminal #1, while Front Desk Terminal #2 adds the completed installs. We tested these new 8 lanes completely and all functions are working properly. Lanes 1-20, and 37-40 are on the new system. Lanes 21-36 are on the old system.



The Center decided to swap-out the Café/Bar Computers on Monday after we are finished the Main 40 Lanes of scoring. We have 16 lanes left to install, so we will do 8 lanes on Tomorrow – on Saturday – and the final 8 lanes on Sunday. Then we will swap out the Bar/Café on Monday and do final Wire Dress-Out on the Curtain Wall and at each Computer Terminal location. We had to Re-do the Lane Setup for all of the lanes we had finished, after Richmond upgraded software. Daily Hours: $8 + 21 + 0 = 29$. Job Hours: $42 + 111 + 23 = 176$.

Day 6 – We installed 8 lanes - lanes 29-32 in record (for us) time, since the Center has a big Tournament on Special Olympics Kids at 1 PM. We came in early and had all installed – ready for Reinitializing, by 10 AM. All lanes came up perfectly after Reinitialize by 11 AM. We loaded Pinsetter Parameters and all came back up fine. We adjusted all Cameras and sent to Cameras. We tested all 8 lanes for all functions and all worked great (2 lanes needed a minor adjustment in the New Pin Solenoid). We were finished by 11:30 AM for their 1 PM Tournament. We were fortunate that nearly everything worked on the first try, needing no extra time to run-down issues. Daily Hours: $7 + 15 + 0 = 22$. Job Hours: $49 + 126 + 23 = 198$.

Day 7 – We installed lanes 21-28. They all came up fine (again with 2 lanes needing a slight adjustment to the New Pin Solenoid (about 1/8" closer to Detector like the others that needed adjustment)).



All 40 lanes are installed.



We will come in tomorrow to install/test Bar/Café Computers (which are ready to Plug and Play), install Infra-Red controls to Monitors, do final Dress-Out Tie-Up of all wires, and pack tools. Daily Hours: $7 + 15 + 0 = 22$. Job Hours: $56 + 141 + 23 = 220$.

We went in on Monday to tie-up wires and install the Bar/Café Computers. All good. We installed Infra-Red to monitors and tested – didn't work. I called Martin Vera. I had Monitor Selection in Lane Setup set for LG COM and it needed to be LG to work via Infra-Red. I changed

all and uploaded. All worked fine. We tested intercom and needed to load Web Cam Drivers manually. Video Intercom worked fine. We loaded tools and drove home.

5.5 Man Hours per lane – 11 Man Hours per pair.