



# Fremont Street Experience

*The Largest Video Screen in the World*

Las Vegas' historic downtown is home to an unbelievably immersive video experience, built around the largest single video screen in the world. Each year, millions of people visit this four-block pedestrian mall to shop, enjoy concerts, ride the zipline – and witness the stunning digital light shows overhead.

Federal Heath was selected to install a total digital canopy upgrade in 2019. The installation required working high above the ground to fit custom-built panels into tight spaces, adjacent to dense pedestrian traffic and ongoing public events.

## Highlights

- » Installation 90 feet above a pedestrian mall
- » Working around visitors, events and a zipline
- » 1,000+ custom-fit panels, each 6 x 24 feet
- » Total canopy 4 city blocks long

## Scope

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It's one thing to see flat digital displays in large formats – on scoreboards or even buildings. But imagine such displays replacing the sky above four city blocks. Imagine them configured as a curved barrel vault canopy. Now you have Fremont Street Experience, nearly 3 acres of contiguous digital pixels arching 90 feet above the ground.

The original Viva Vision canopy was created in 1995 with incandescent bulbs. Advances in LED technology made upgrades possible in 2004 and again in 2019. Most recently, more than 1,000 panels were custom manufactured by Watchfire Signs and installed by Federal Heath in time to welcome the 2020 New Year.

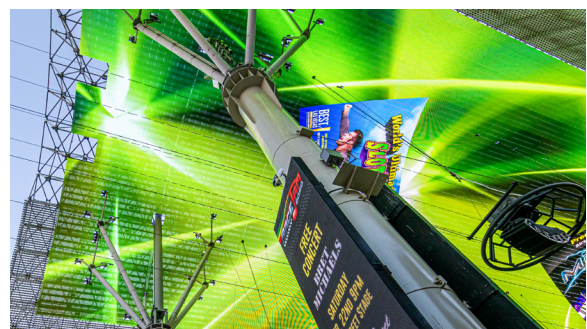
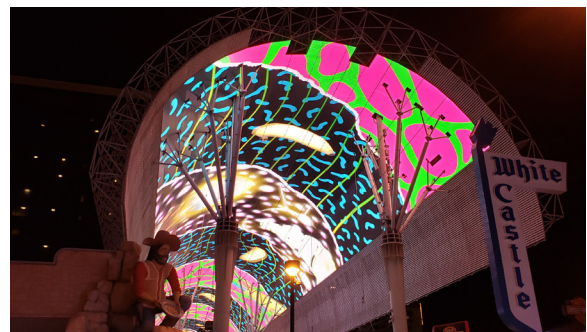
## Challenges

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Fremont Street Experience attracts millions of visitors each year, a bustling business of daily commerce and special events that continued in full swing during our six months of installation. Working during off-peak hours helped, but we were still responsible for maintaining a safe environment for 24/7 pedestrian traffic from move-in to move-out.

Just moving equipment, tools or materials between the yard and job site was a big job, one reason we chose to compress the work into four long days each week when possible. The heat was another challenge for crews who were working in direct sunlight far above the ground.

The space between the canopy and ground was cluttered with obstacles to work around, including a zipline, speakers and the “finger” structures that topped off 16 supporting columns.





## A Typical Installation Day

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- » Midnight – Crews meet at the yard to prep materials and equipment
- » 12:30 a.m. – Leave the yard
- » 1:20 a.m. – On the job site
- » 2:00 a.m. – Actively working
- » 6:00 a.m. – “Lunch”
- » 10:30 a.m. – Leave the job site
- » 11:30 a.m. or later – Leave the yard

## Process

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*The yard.* Workdays started about midnight at a yard several blocks from Fremont Street Experience, where equipment, tools, and the massive digital panels were stored. Panel shipments were timed to bring inventory at the right time, in the right order. Each day ended with hauling off old panels and empty crates from the yard shortly before noon.

*The setup.* The caravan of trucks, lifts, crane, trailers, and crews going to and from the job site was quite a sight. At the job site, we began by outfitting heavy equipment with protective boots and marking off the work area from tourists. One of our senior project managers oversaw work progress in person.

*The basics.* Just getting crews into the canopy infrastructure was painstaking – a half hour to ride the lift, climb into position across 3-inch tubes, and tie off for safety. Old panels were unbolted and dropped down by hoist as ground crews prepared new ones to be lifted.

*The details.* Each panel required its own combination of hoist and sheaves to properly lift it past aerial obstructions and maneuver it into position. One installation crew handled precise fitting around the supportive “finger” structures while another handled the broader canopy work, all subject to daily quality inspections.

Working from one end of the street to the other, we replaced 1,054 panels one by one.



## Outcome

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The newest Viva Vision is equipped with 4.9 million LEDs, creating a 16.3 million pixel display that covers 130,000 square feet. The finished product is seven times brighter and four times sharper than the previous version, making it vivid even during daylight hours.

The barrel vault design is unique, covering the sky above the lengthy pedestrian mall with unlimited opportunities for light-enabled experiences that draw visitors from far and wide. Content is controlled by centralized software.

The unique scope and nature of this job has given it a special place in the history of Federal Heath – and certainly in the future travels of millions to Fremont Street Experience.