



PROJECT PORTFOLIO - TRANSIT SYSTEMS

Seattle Center Monorail Braking System Upgrade

Seattle, Washington



ORIGINALLY BUILT TO SHOWCASE AMERICAN INNOVATION FOR THE 1962 WORLD'S FAIR, THE SEATTLE CENTER MONORAIL IS THE OLDEST AND MOST FAMOUS OF ALL U.S. MONORAIL SYSTEMS. AFTER PERFORMING RELIABLY FOR MORE THAN 43 YEARS, THE AGING SYSTEM WAS IN NEED OF AN UPGRADE PROGRAM TO MAINTAIN COMPLIANCE WITH TODAY'S PERFORMANCE STANDARDS. SCHWAGER DAVIS, INC. HAS BEEN PROVIDING ESSENTIAL SOLUTIONS EVER SINCE.

SEATTLE CENTER MONORAIL REPAIR AND REHABILITATION



The Seattle Center Monorail in Washington State is the oldest operational monorail in the United States. Originally built to showcase American transportation innovation for the 1962 World's Fair, the Alweg-designed system has since continued to operate as a downtown Seattle people mover and tourist attraction throughout five decades..

Although the monorail had undergone numerous upgrades and renovations over the years, in 2005 it was still operating in its original configuration as a driver-controlled, manually-operated system with few modern automated safety features.

In early 2006, Schwager Davis, Inc. was contracted to review potential system safety hazards and to provide a solution to lower the g-forces of the existing emergency braking system. At the time, the emergency braking system stopped the trains too abruptly when applied, and was known to present a potential safety hazard.

SDI provided a two-phase solution. Phase I involved analysis of the existing overly-abrupt emergency brakes and working with the owner's control system integrator to provide a solution for the brakes along with measures to enable the semi-automated controls to provide a method of monitoring the operator's speed and station approach performance.

Phase II entailed the fabrication and installation of all equipment and devices necessary to achieve code-compliant braking and stopping forces. SDI designed measures that would allow the existing brakes to be utilized while minimizing the amount of new parts and keeping the spare parts inventory near previous levels.

Upon approval of the renovation design, SDI fabricated and procured the necessary parts to modify 16 brake assemblies for the two trains. All work on the brake assemblies were performed at SDI's fabrication plant in San Jose, California. SDI field crews then installed the modified brake assemblies on site in Seattle.

The contract was performed on schedule, within budget and to the full satisfaction of the client.

