

Jacob E. Manch Elementary Las Vegas, NV



School districts across the United States are increasingly under pressure to manage capital construction and operating costs. When new or remodel construction is needed, many face numerous hurdles, including rapid student population growth requiring larger facilities, and limited funding from local tax levies to pay for building development, along with energy costs to provide a conducive learning environment.

When Clark County School District (Las Vegas, NV) began to plan a new elementary school with a tight budget and construction schedule, project architects SSA Architecture of Las Vegas recommended incorporating structural insulated panels, SIPs, in all exterior walls and roofs for a more efficient and systematic approach to the building's structure.









PROJECT PROFILE

Education

PROJECT DETAILS

Premier Distributor Shell Building Systems Sebastopol, CA

Architect SSA Architecture Las Vegas, NV

Contractor Martin Harris Construction Las Vegas, NV

Project Size 68,000 Sq. Ft., Single Story

Premier SIPS Used 6" Walls, 10" Roof, 6" Interior Partition

"This was the fastest form of construction we have ever used, we have built with CMU, Steel, Wood framing, you name it and these SIPs were the best thing we have ever experienced on a job of this magnitude."

- Martin Harris Construction

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Prior to SIPs, contractor had allocated 12 men for the electrical installation, ended up needing only 3 and reduced their original bid by over \$950,000.

The Jacob E. Manch Elementary School is a replacement for an existing building originally constructed in 1963. During the preliminary design stages, the architects determined that materials customarily used in the district—primarily concrete masonry units (CMUs) and tilt-up concrete panels—would not be cost feasible within the approved \$20M budget. In addition, with rapidly rising energy costs, the school district was looking for a solution that would reduce heating and cooling demands.

The Premier SIPS Solution

Energy Efficient & Cost Effective: Reduce heating and cooling costs by 60% for significant operational savings, which can be directed back into the school's operational budget

Healthy: Superior indoor air quality with reduced infiltration of outside pollutants, which can benefit those with respiratory ailments

Comfortable: Warmer in the winter, cooler in the summer, ideal controlled indoor environments for students and teachers

Easy to Operate: Tight building envelope reduces HVAC mechanical equipment sizes and related heating and cooling over the life of each building

Environmentally Responsible: SIPS produce 30% less job-site waste than traditional construction

LEED Points: Up to 23 valuable environmental design points through the standard in green certification, LEED for Schools

BENEFITS PROVIDED BY SIPS

COST SAVINGS

Saved approximately one million dollars in direct construction costs

SPEEDY CONSTRUCTION

Reduced the framing schedule from a typical 118-220 days to 45 days (a nearly 80% time savings)

REDUCED HVAC REQUIREMENTS

Reduced HVAC requirements by approximately half, providing both initial capital savings and lower annual heating and cooling bills

REDUCED WASTE

Decreased construction materials waste and resulting disposal fees and environmental impacts

REDUCED INTERIOR NOISE

Reduced interior noise coming from nearby Nellis Air Force Base



