



AFC FIELD REPORT: Green HCF-90® Cable



CALIFORNIA CONTRACTOR MEETS MEDICAL CENTER'S SCHEDULE WITH GREEN HCF-90® CABLE

A tight construction schedule was the dominant factor in the use of more than 900,000 feet of green HCF-90® Health Care Facilities Cable at Valley Children's Hospital in Madera, California. This \$170 million, 216-bed hospital was the third-largest construction contract in the state in 1997.

"Armored cable also reduced total installed wiring cost significantly," said Monty Clifton of Rex Moore Electrical Contractors & Engineers, Sacramento. Clifton found his crews could install armored cable in much less time than required by rigid con-

duit with conductors (wires) pulled through. The pre-wired armored cable, manufactured by AFC Cable Systems, helped Rex Moore Electrical adhere to a tight schedule and budget limits with no sacrifice to safety and reliability.

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The 615,000 square-foot medical center was built on the bluffs overlooking the San Joaquin River, situated to conveniently treat nearly one million children in a ten-

county area. As the successor to the Valley Children's Hospital that opened in 1952 in Fresno, the new facility will consolidate 28 buildings and 1,700 employees under one roof.

The original hospital has cared for about 1.5 million children in its nearly half-century of community service. Affiliated with the University of California's School of Medicine at San Francisco, Valley Children's conducts a three-year pediatric residency program. It is an independent, not-for-profit hospital that accepts patients regardless of diagnosis or ability to pay.

One major benefit of the new

facility will be that parents will be able to stay with their hospitalized children, said Cris Monahan-Bremer, Valley Children's director of marketing communications. The new hospital will have 158 private rooms, each with a bathroom and sofa bed. The present facility has 77 rooms, with as many as three patients per room and little sleeping space for parents.

The architectural firm on the project was HKS Associates of Dallas, which has completed 250 health-care projects and is a recognized leader in the field, according to Monahan-Bremer. They designed the three-story building so that only two stories are visible from the front. This is intended to make it seem less imposing or threatening to children as they arrive. Pastel colors on the interior and exterior and a tower design that evokes castles were incorporated to help children feel comfortable. The design theme is "Our Universe," with each area illustrating a different region. The cafeteria, on the garden level, features an undersea theme.

McCarthy & Company, the general contractor, and over 20 subcontractors employed over 350 people to erect the building. The electrical contractor chose cable clad in flexible steel, rather than aluminum, for strength and protection. Once installed, the aluminum protection would be more than sufficient, Clifton explained. But, he said, if someone rolls a cart over the cable during installation, or if the facility manager moves cable during expansion or renovation, the steel



Contractors reduced wiring time by installing HCF-90 in place of pipe and wire.

provides superior protection.

The Rex Moore crew installed rigid pipe from the electrical closet to strategically placed branch junction boxes, then ran flexible armored cable from the junction boxes to outlets, usually less than 100 feet. Clifton estimates that this use of armored cable in place of pipe-and-wire reduced wiring time significantly.

“The armored cable is so much easier than pipe-and-wire,” Clifton said.

Striped green with a patented process for easy identification, HCF-90® cable is specifically designed for buildings or any application that requires an isolated or dedicated ground. The armor and

bond wire combination and separate, green grounding conductor meet the requirements of NEC® Section 517-13 Patient Care Areas. It may be used for branch circuits and feeders not only in hospitals, but also in nursing homes, outpatient facilities, dental offices, clinics, and medical centers. It can be installed under raised floors, above suspended ceilings, and in other environmental air-handling spaces approved for Type AC cable.

“The armored cable is so much easier than pipe-and-wire,” Clifton said. “You’re not forced to measure, bend, cut, and install rigid conduit, and you have more flexibility in crew assignments because your employees can simply lay the cable in open race-

ways.”

Clifton said the armored cable also benefits building owners and tenants when they refurbish or reconfigure because it is much easier to move than permanently installed, rigid pipe. Valley Children's Hospital has been designed for expansion from its opening-day total of 615,000 square feet to more than one million square feet. Based on experience, the hospital is likely to take advantage of the ease-of-renovation benefits of armored cable: Its current facility is the result of ten separate expansions over the last half-century from 42 to 191 beds.

“The advantages of armored cable are just being explored,” Clifton said. “With its time and money savings, use of this alternative to rigid conduit-and-wire is bound to expand.”

IMPORTANT!

NEC 2002 - Article Number Changes For Type MC & Type AC Cables

	NEC 1999	NEC 2002
Type MC	334	330
Type AC	333	320

For these and other code change updates, visit us on the web at:

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