Revised state seismic regulations prompted the construction of a technologically advanced replacement facility at El Camino Hospital, Mountain View, Calif., which is designed to support patients and families, create operational efficiencies and adapt to future needs. The new building can withstand earthquakes and earth-shaking changes to clinical or operational practices.

The urgent care area of El Camino Hospital’s emergency department denotes comfortable efficiency.
Supportive environment
KMD Architects, San Francisco, designed the low-profile facility with a gently curved front that “reaches out to the communi-
ty,” says Nancy Jones, design director with Novato, Calif., interior planning and design firm Millican Jones.

The exterior curve is echoed in the main lobby’s ceiling and flooring patterns. Curves and elongated arcs throughout the building—down corridors, in architectural gestures above nurse stations, along the top of patient room casework—add a touch of nature to the high-tech patient care environment.

Technology and innovation
El Camino Hospital bills itself as “The Hospital of Silicon Val-
ley,” and Popular Science magazine dubbed it the “most advanced facility ever.” Automated robots deliver supplies in the building, patients can register using biometric scanners, and patient beds in the critical care environments can translate common hospital phrases (such as “What is your pain level?”) into 24 languages, aming many other sophisticat-
ed clinical and communication systems in use at the hospital.

Rob Matthew, AIA, LEED AP, EDAC, principal and direc-
tor for health care facilities, KMD, says the hospital’s high-tech equipment and operations were integrated into the building design with- out compromising the layout. For example, the corridors did not have to be widened to accommodate the delivery robots, a welcome change from just a few years ago when code officials consulted by KMD indicated this type of equipment would require a separate path marked off beyond the standard corridor clearance.

According to Ken King, the hospital’s chief administrative services officer, patients now recognize the same technological infrastructure they have at home, at work and at their local coffeehouse.

Accommodating change
To create an environment in which technology and innova-
tion will continue to thrive, the project team worked to design a building that can accommodate future change. They explored a number of structural alternatives with engineers from the San Francis-
co Bay area offices of Thornton Tomasetti. The decision to use a moment frame system rather than a braced frame gives the hospital open bays that can be modified more easily.

A braced frame has a lower first cost, but King says the moment frame will pay for itself.

Digital display convey hospital’s message
El Camino Hospital uses an integrated digital communica-
tions platform with electronic art, messaging, wayfinding and scheduling systems that work together to engage, soothe and inform patients, visitors and staff.

Electronic artist Charles Woodman’s “American Diorama” is installed in the surgical waiting room and the critical care unit family respite area. This 45-minute audio-visual presentation syn-
chronizes images and sounds from across the United States, from Cape Cod to California, across five screens. With its artistry and measured pace, the piece is meant as a calming diversion for people in these two high-stress areas of the hospital.

Between each 45-minute presentation, the hospital may broad-
cast its own videos of announcements, events or physicians dis-
cussing their latest research.

This type of messaging is also incorporated into the digital art-
work system by Roundtree Visuals, Emeryville, Calif., built into the hospital’s public elevator lobbies. These pieces feature nature images and inspirational quotes that hospital staffs can enter into a central control panel and schedule to appear throughout the day. They may also add announcements and mar-
keting or branding messages.

The reams of paper tossed on public and staff bulletin boards have been consolidated on digital billboards—five for community announcements, one for human resources and education mes-
sages and one for donor and volunteer recognition. These serve to celebrate accomplishments, inform people about upcoming events and educate them on health and hospi-
tal-related issues.

The digital wayfinding kiosks have interactive, three-dimensional mapping animation. They are linked to the hospital’s scheduling system for instant updates of meeting, class and event times and locations.

A digital display next to each meet-
ing room in the hos-
pital’s conference center lists all activi-
ties taking place in that room during the day. These, too, are centrally controlled and can be updated automatically.

From art to infor-
mation, the entire system is designed to convey the hospital’s message clearly and beauti-

From top to bottom: A surgery waiting area on the second floor features “American Diorama,” a 45-minute digital art piece.

A digital nature wall display in the third-floor elevator lobby, which fea-
tures a view to the roof bamboo garden.
and attractive views. The seriousness of the hospital’s critical care unit detracts from their care. Patient rooms are designed to distract from their athletes and attractiveness.

Matthew, who credits the MEP engineering work of Mazzetti Nash Lipsey Burch (M-NLB), San Francisco, and the commitment of hospital leaders. The hospital also was designed with a number of operational efficiencies to leverage the capital investment in the new building. Inpatient and outpatient radiology are consolidated, with separate entries and circulation routes for emergency, inpatient and outpatient care.

This design saves on the duplication of space, equipment and highly-trained staff. The patient units are bridged by a number of patient rooms that can be served from nurse stations in either of the connective units, allowing the size of a unit to flex. Distributed support spaces reduce walking distances for nurses. Walking distances also were reduced by placing patient bathrooms along the outside corridor of the units. “You don’t have that vestibule to walk past, six or seven or six feet or so, every time you come and go,” Matthew explains. This layout also improves visibility into the patient rooms from the decentralized nurse stations. These are located across from the patient rooms to keep patient information from being visible over nurses’ shoulders and to enable nurses to face the corridor as they work, rather than turn their backs to it. “There’s an innate level of anxiety when strangers are behind your back,” says Matthew.

Even the public spaces of the hospital are designed for flexibility of use. A lobby is worked into the lobby floor pattern to be used for walking meditation in the evening or at night. The demonstration kitchen adjacent to the hospital dining area can be closed off to create a private dining room.

Significant accomplishment Kings calls the new facility El Camino Hospital’s “most significant accomplishment since the original opening in 1961.” The forward-thinking design is made to serve the community for years to come, whatever the years may bring. HFM

SPEC SHEET

**PRINCIPAL DESIGN MATERIALS**

- Carpet: Bentley Prince Street Inc. and Mohawk Industries
- Carpet tiles: Mohawk Industries and Tandus Corp.
- Ceilings: Armstrong World Industries Inc., Diversico and USG Corp.
- Curtainwall framing: Walters & Wolf Inc.
- Door hardware: Assa Abloy, Door Controls International Inc., Overhead Door Corp.,’s Horton Automatics div. and Yale Security Inc.
- Doors: VT Industries Inc.
- Plumbing accessories: Delta
- Plumbing fixtures: Danbras, Delfield Co. and Zum Industries
- Restroom panels: Fargo Inc.
- Signage: Haskel Architecture
- Signage tiles: Apavisa Porcelanico, Caesar Ceramics USA Inc., Casa dolce casa, Ceramica Cisa, Crossville Inc., Daltile, Emser tile, Environm ents Corporation Ragnarsdottir USA Inc.
- **PERSONAL FURNISHINGS**
  - Cafeteria seating: Design Within Reach
  - Conference tables: West Coast Industries Inc.
  - Cafework: Mid Canada Millwork and Millwork Mfg.
  - Conference tables: Balfour Inc., Coalesse, Herman Miller Inc. and Nervtex.
  - Critical care patient beds: Stryker, Flexus and shelving: Balfour Inc. and Herman Miller Inc.
  - Desks: Coalesse, Crossville, Cumberland Furniture, Giger International Inc.
  - Hospital beds and Nightstands: MDC
  - Office desks: Giger International Inc. and Herman Miller Inc.
  - Office seating: Akilesco, Herman Miller Inc. and Paramus Inc.
  - Patient beds: Hollon
  - Patient room bed: Parners by Puget Sound Patient room bed: Standard, JST Furniture Corp. and Wisconsin Medical Equipment: Patient medical procedures boards (customs): Peter Pepper Products Inc.
  - Woodworking: Mission Bell Mill.
  - **MEDICAL EQUIPMENT**
    - Magnetic resonance imaging, computed tomography and positron emission tomography-computed tomography scanners: Siemens Corp.
    - Nurse call: Raindance-Borg interfaced with Vocera Communications Inc.
    - Operating room boom: Getinge Group and Stryker
    - Patient lights: Getinge Group
    - Air handling units: Hunter Building management system, fire safety and security: Siemens Corp. and Chielons: Ingersoll Rand
    - Electrical equipment: Schneider Electric
    - Elevators: Otis Elevator Co. and Kone
    - Caterpillar: Kitchen equipment: Garland Group, Getah Industries, Hibriten, Holland Refrigeration and Wells Bloomfield
    - Palm scanners: Fujitsu

**FINDING THE WAY**

The first floor main entrance features a wayfinding-patterned marble floor and information desks.

**CRITICAL COMFORT**

The seriousness of the hospital’s critical care unit detracts from their athletes and attractiveness. Matthew, who credits the MEP engineering work of Mazzetti Nash Lipsey Burch (M-NLB), San Francisco, and the commitment of hospital leaders. To make updates even easier, the hospital’s operating rooms and special procedure rooms are designed as “plug-and-play” environments that can be taken off the hospital’s building as needed. “The building makes it less stressful because you are inevitably doing because of technology and obsolescence,” he says.

This garden is the focal point of the main lobby and respite area. This garden is accessible at ground level off the hospital’s dining area. A terrace garden and meditation garden are also available to patients, visitors and staff.

Another courtyard garden serves as a visual buffer between patient units. This garden is designed to help people relax as they enter the units; it also provides a wayfinding cue.

Where a direct connection to nature was not possible, the designers emulated one. In the hospital’s below-grade dining room, styled nature scenes on glass panels by Cheryl Gordon of ICA Architecture and Decor, San Francisco are backed with a gradually brightening sunrise effect that repeats roughly every 20 minutes. As Jamie Millican of interior planning and design firm Millican Jones explains, “It’s a gesture of hope.”

**Nature enhances patient and staff comfort**

**ABOVE** A ground-level garden court and respite area brings visitors in touch with natural elements.

**BELOW** A third-floor greater desk in the corridor to the critical care unit provides a view of the courtyard.