

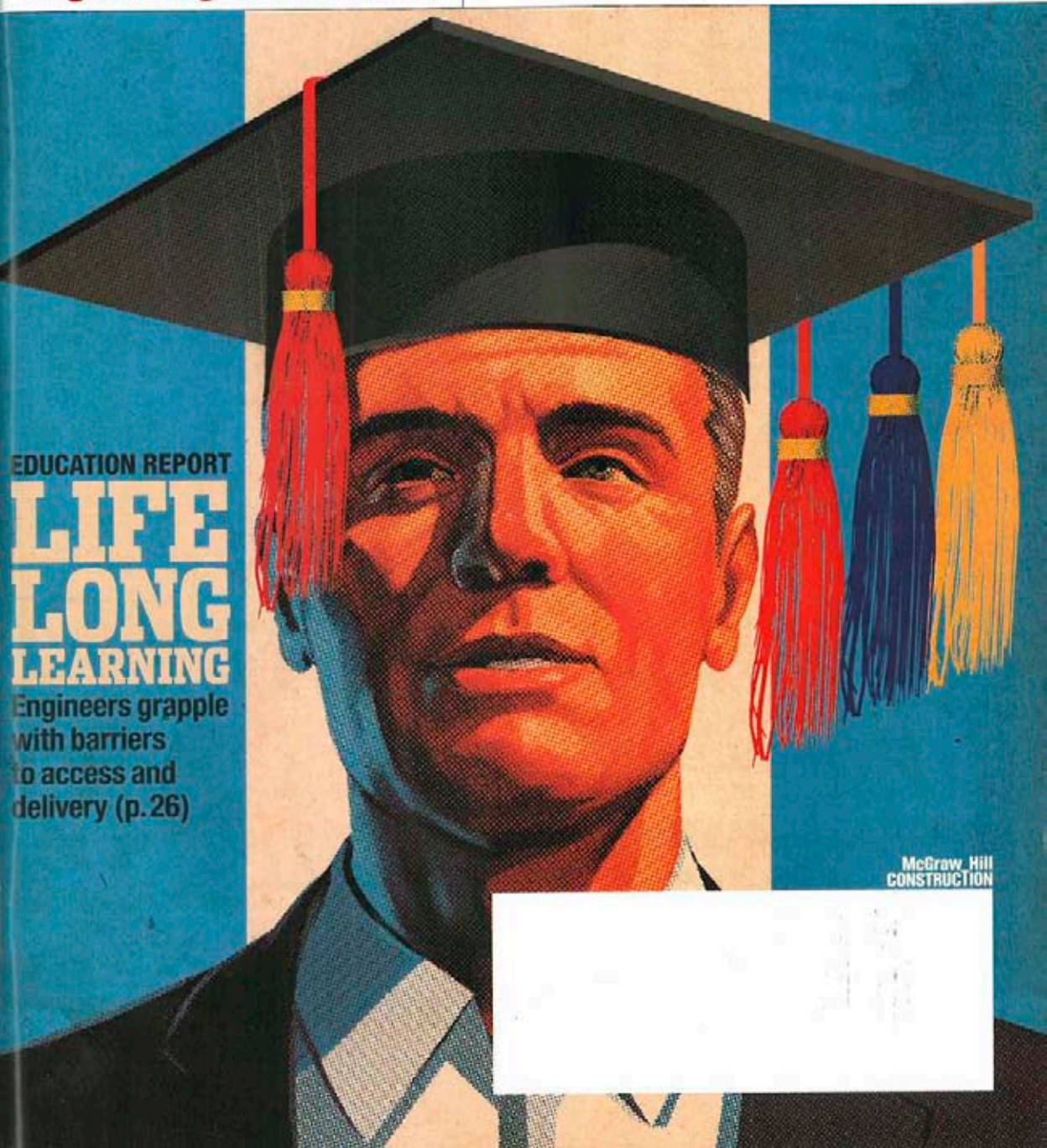
ENR

Engineering News-Record

Mountain States

SPECIAL REGIONAL COVERAGE
STARTS ON
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COLORADO, IDAHO, UTAH, WYOMING



EDUCATION REPORT

LIFE LONG LEARNING

Engineers grapple with barriers to access and delivery (p.26)

McGraw Hill
CONSTRUCTION



BEST SPORTS/ENTERTAINMENT

Omaha's Gateway Ballpark

Held in Omaha, Neb., for the past 60 years, the Men's College World Series of Baseball now has a new home at TD Ameritrade Park. The 24,000-seat stadium is designed to enhance the city's entertainment quarter, serving as a gateway to Omaha's downtown and as a catalyst for future development.

"The project designers and builders showed true teamwork, co-locating to meet the compressed, 28-month schedule for knitting this complex design into the downtown urban fabric in time for the 2011 series," says Bruce Carpenter, project principal architect, HDR Architecture.

The ballpark is located near the riverfront on a former railroad yard. Active Union Pacific railroad tracks cross the stadium site near the pedestrian/ticket plaza. The railroad crossing was amended to maintain safety while providing a level of aesthetic design to satisfy all of the project's stakeholders.

The stadium's contemporary architecture features variegated brick mixed with clear and translucent glass at the street level. Carpenter says the stadium's design enhances the shared experiences of the student-athlete, fan and community. Natural light brightens enclosed spaces on the stadium concourse, while openings between structures on the concourse connect visually with the city. Glass is used extensively on the upper levels, allowing patrons in the highest seats to share the downtown experience.

The grandstand required 3,000 tons of structural steel. Trusses cantilever 35 ft to support the upper precast seating bowl, and tapered steel beams cantilever out for the roof canopy. The design team worked closely to achieve the complicated geometries for these can-

tilevers; however, most of the steel frame was erected before architectural drawings were complete, complicating the process.

Unique exiting requirements for the suite level require patrons to re-enter the building before leaving the ballpark. The team met with city code officials and the fire marshal to do 3D fire and smoke modeling and timed egress analyses.

TD Ameritrade Park
Omaha, Neb.

KEY PLAYERS

Owner/Developer: Metropolitan Entertainment and Convention Authority

Architect: HDR Architecture Inc., Omaha, Neb.

General Contractor: Kiewit Building Group, Omaha, Neb.

Civil Engineer: Lamp, Rynearson & Associates, Omaha, Neb.

Structural Engineer: Thornton Tomasetti, Kansas City, Mo.

MEP Engineer: M-E Engineers Inc., Colorado Springs, Colo.

SUBMITTED BY:
HDR Architecture Inc.



Rome wasn't built in a day...but the LDS Jerusalem Set was designed, engineered, constructed and film shot, in less than 1 year! And it's more than three football fields in size!

aeurbia
architects and engineers

BEST LANDSCAPE/HARDSCAPE

Revisiting Ancient History

The Church of Jesus Christ of Latter-day Saints has created a permanent outdoor movie set to represent the city of Jerusalem during biblical times.

The set will be used to film several short movie segments about the life and teachings of Jesus Christ. The size of two football fields, the set is intended to last 20 years or more and creates a new standard for movie set design.

An innovative exterior wall assembly was created to simulate the ancient walls of Jerusalem.

The modular structural system allowed for standard wood construction with off-the-shelf components, and many of the elements were prefabricated to help with winter construction and accelerate

the schedule.

In the end, the scale, detail and construction quality give visitors the impression of walking through the ruins of an ancient city, complete with natural light and shadows to bring the experience to life.

"I couldn't be more pleased with the artistry, craftsmanship and cooperation demonstrated on this project by everyone who participated. There isn't anything like it anywhere in the world, and it was designed and constructed in a matter of months," says James M. Williams, project architect and engineer, AE URBIA.

"But as impressive as the set and its construction are, it's merely a backdrop for something much greater," he adds.

LDS Motion Picture Studio South – Jerusalem Set, Goshen, Utah

KEY PLAYERS

Owner/Developer: LDS Church MPS

CM/GC: LDS Church MPS, Provo, Utah

Architect: AE URBIA/J.M. Williams and Associates, Salt Lake City

Structural Engineer: AE URBIA/J.M. Williams and Associates, Salt Lake City

SUBMITTED BY:

AE URBIA/J.M. Williams and Associates



PHOTO COURTESY OF AE URBIA/J.M. WILLIAMS AND ASSOCIATES

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Casey Middle School: David Patterson

BEST INDUSTRIAL/MANUFACTURING

Riding on Green Design

The Quality Bicycle Products Co. wanted an energy-efficient, environmentally responsible warehouse and distribution facility that would also be a fun place to work. The result is a 95,000-sq-ft building constructed of tilt-up concrete with ground source heat, solar panels, specialty controls, reflective roof and paving surfaces, waterless urinals and other green features.

Natural light enters through large windows in the office area and via transom windows and skylights in the warehouse/distribution portion of the building. Subtle bicycle-themed elements complement the design, including a chain guard-inspired awning above the entryway and the random angles and spacing in the warehouse/dis-

tribution center walls that mimic the spokes of a bicycle wheel.

The use of tilt-up concrete was a major factor in meeting the building's thermal efficiency goals, says project architect James M. Williams, AE URBIA.

The concrete reduces air movement through the walls and eliminates the need for additional finish materials. The tilt-up construction qualified as a regional material and also has a high recycled content and low material waste factor.

Williams says the building is outperforming the energy model and putting the project on track for LEED-Platinum certification, proving a distribution facility can be attractive, interesting and sustainably designed.

Quality Bicycle Products

Odgen, Utah

KEY PLAYERS

Owner/Developer: Quality Bicycle Products

CM/GC: Tom Stuart Construction, North Salt Lake, Utah

Architect: AE URBIA/J.M. Williams and Associates Inc., Salt Lake City

SUBMITTED BY:

AE URBIA/J.M. Williams and Associates Inc.



BEST INTERIOR DESIGN/TENANT IMPROVEMENT

Modern Update Creates Design Model for Offices

Axis Architects designed a modern update for the interior of the historic First Security Building in Salt Lake City, maximizing the project's minimal resources and funds, says Pierre O. Langué, Axis design principal.

The existing building presented a design challenge, with its low ceilings, large interior columns and limited natural light. Axis responded by incorporating glass walls and doors to open up the space, allowing outside light to enter. Bamboo flooring was used as a wall finish to create warmth and highlight key areas. Simple tile and carpet patterns, along with minimal ornamentation and furniture, eliminate visual clutter and create openness.

Colors define separate work areas, including break rooms, cubicle spaces and waiting/lobby areas, while a reception desk built with cutting-edge fabrication reinforces a unique public space.

A recent mechanical upgrade shifted several HVAC units into the tenant space, where they were suspended from the floor structure at each level. Axis hid the units by strategically implementing a system of independent ceiling clouds at varying heights and sizes.

Close coordination among team members resulted in high construction quality and craftsmanship on this project, which will serve as a model for five other floors in the century-old downtown building.

First Security Building Office Remodel

Salt Lake City

KEY PLAYERS

Owner/Developer: City Creek Reserve Inc.

CM/GC: Duston Builders, Salt Lake City

Architect: Axis Architects, Salt Lake City

MEP Engineer: Van Boerum Frank and Associates, Salt Lake City

SUBMITTED BY:

Axis Architects

