

www.landscapeonline.com

April 2013  
Volume 29 Number 04

# LANDSCAPE ARCHITECT

A N D S P E C I F I E R N E W S

THE INDUSTRY TRADE MAGAZINE FOR COMMERCIAL LANDSCAPE SPECIFIERS NATIONWIDE!

**Find 59 World Premieres  
in this Issue**

World Premiere

For Details See Page 10



# A Grand Plaza for Anaheim Convention Center

Landscape Architect / Lead Design Consultant: RJM Design Group, Inc., San Juan Capistrano, Calif.

NIGHT PHOTOS: TOM PAIVA PHOTOGRAPHY WWW.TOMPAIVA.COM

Each pool level of the Mountain Fountain has several underwater up-lights that are the beginning of the "River of Lights." The walls of the "Mountain Fountain" are finished to represent geologic sedimentary layers. The fountain layout is based upon the Fibonacci mathematical sequence known as the "Golden Mean," commonly found in nature. The fountain's color-changing LEDs are in synch with the choreography of the in-grade uplights (Targetti Poulsen).

## Project Team

**Owner:**  
City of Anaheim: Anaheim Convention Center;  
Orange County Visitor and Convention Bureau

**Landscape Architect / Lead Design Consultant:**  
RJM Design Group, Inc.

**Architectural Lighting Design Consultant:**  
tk1sc, Irvine, Calif. (parent company of Studio K1)

**Civil Engineer:** Kreuzer Consulting Group

**Fountain Design Consultants:** CMS Collaborative

**Irrigation Consultant:** Water Concern

**Project Construction Management:**  
City of Anaheim, Department of Public Works

**Traffic Engineer:** Advantec Consulting Engineers

**Wayfinding and Signage:** Hunt Design

## Contractors

**General:** Environmental Construction, Inc.

**Electrical:** Rosendin Electric

**System Integration:** ELS

**Concrete:** J & M Concrete Contractors (Jezowski & Markel)

**Entry Marquee:** Yesco

**Transit Plaza Contractors**

**General:** GMC Engineering, Inc.

**Electrical:** MSL Electric, Inc.

**Concrete:** Trademark Concrete

## Vendors / Materials / Site Amenities

### Lighting Manufacturers

"River of Light" In-grade Uplights: Targetti Poulsen

Pedestrian Post Top Lights: Louis Poulsen

Palm Tree Ring Lighting: Hevi-Lite

Concealed Linear Lights at Benches: iLight

Concealed Linear Lights at Fountain: LED Linear

Color Changing Flood Lights at Entry Pylon: Color Kinetics

Low-Level Bollard Lights: Bega US

Custom Traffic Bollards: Cal Pipe

Control System: Electronic Theatre Controls (ETC)

### Site Furnishings

Anaheim Resort Area Signage and Banner Poles: South Coast  
Lighting

Precast Concrete Furnishings: Quickcrete Products Corp

Retractable Bollards: Cal Pipe

### Pavements

Interlocking Concrete Pavers: Acker-stone

Intecrete Concrete: J & M Concrete Contractors (Jezowski & Markel)

Asphalt "Street Print": IPC Integrated Paving Concepts



#### Right

LEDs are mounted on tree rings on the date palms (Phoenix dactylifera 'Medjool') that line both sides of the plaza. The LEDs (Hevi-Lite) accent the underside of the palm canopy, while the downward angled LEDs light the pedestrian ways and add that overall sense of security.



#### Above

The Ocean Fountain jets and lighting are operated by the same sophisticated system that controls the River of Lights (foreground). The uppermost pool of the Ocean Fountain contains 46 custom pipe jets with built-in color changing LEDs. The site's entire lighting design is LED, from the in-grade and fountain luminaires to the linear lighting integrated under the seat wall benches (iLight). The plaza requires only 16,000 watts of light, just over 0.1 watts per sq. ft.

**The Anaheim Convention Center Grand Plaza,** just across the street from Disneyland, is a premier outdoor event space with designed amenities that create a dynamic setting for guests and visitors to the convention center. The unveiling of the Grand Plaza took place with a ribbon cutting ceremony in January 2013. Located at the end of Convention Way, east of Harbor Boulevard, framed by the Convention Center to the west, Hilton Anaheim Hotel on the north and Anaheim Marriott Hotel on the south, the Grand Plaza is the new front door to the Anaheim Convention Center. The 100,000 square foot open air Grand Plaza provides additional outdoor spaces for events, creating lasting impression to the one million annual visitors to the Anaheim Convention Center.

The plaza design is representative of the agricultural roots of Anaheim and Orange County, and the Southern California landscape, complete with three

fountains, a "River-of-Light," Valencia orange trees, date palms and focal sculptural elements. Through the use of state-of-the-art energy-efficient lighting and control systems, the Grand Plaza is the go-to venue for an exciting, festive nighttime experience.

One of the major design challenges was finding a balance between pedestrian activity spaces and vehicular traffic, including public transit, private vehicles and fire/emergency and service/delivery vehicles. The removal of vehicular traffic from the plaza enriches the public's experience. The Grand Plaza in essence expands the convention venue to the outside, complete with areas for exhibit booths/tents; rest and reflection; utility for hot and cold concession stands; opportunities to hold street fairs and receptions; and a "stage" for live outdoor concerts and entertainment. The Grand Plaza is defined by four distinct areas: 1) The main Grand Plaza extends

from the Convention Center east on Convention Way, and is closed to vehicles at the traffic circle at Hotel Way; 2) North Palm Court was completed as part of the Convention Center expansion in 2000; 3) South Palm Court, which mirrors North Palm Court, is a transition area between the Grand Plaza and the Transit Plaza; and 4) Transit Plaza, located on the south side of the Convention Center with connection to West Street where bus, taxi and delivery service to the Convention Center and the Marriott Hotel is available, creates a more efficient transportation flow. The design concept for the Anaheim Convention Center Grand Plaza is based on the historic evolution of Anaheim. Fifty Bavarian families settled here in 1857. These were farmers and wine-making immigrants who considered the area their "home by the river." "Ana" is a reference to the Santa Ana River; "Heim" means "home" in German. To the Spanish-speaking neighbors

already established here, the settlement was known as Campo Alemán, i.e., "German field." When insect infestations destroyed the grape crops in the 1880s, the Germans shifted their focus to walnuts and citrus, most notable orange trees, for which the county was named. When Los Angeles and Orange County became connected to the continental railroad in 1886, Southern California oranges became a prized national cash crop.

The blue, meandering pavement pattern that connects the fountains at each end of the plaza is a metaphor for the Santa Ana River, flowing from the mountains to the sea. The "River of Light" paving pattern simulates the flow of water and the sparkle of light reflecting off its surface. Almost 300 individually controlled in-grade luminaires along the length of the plaza pulsate in sequence between each of the three fountain elements for a dazzling

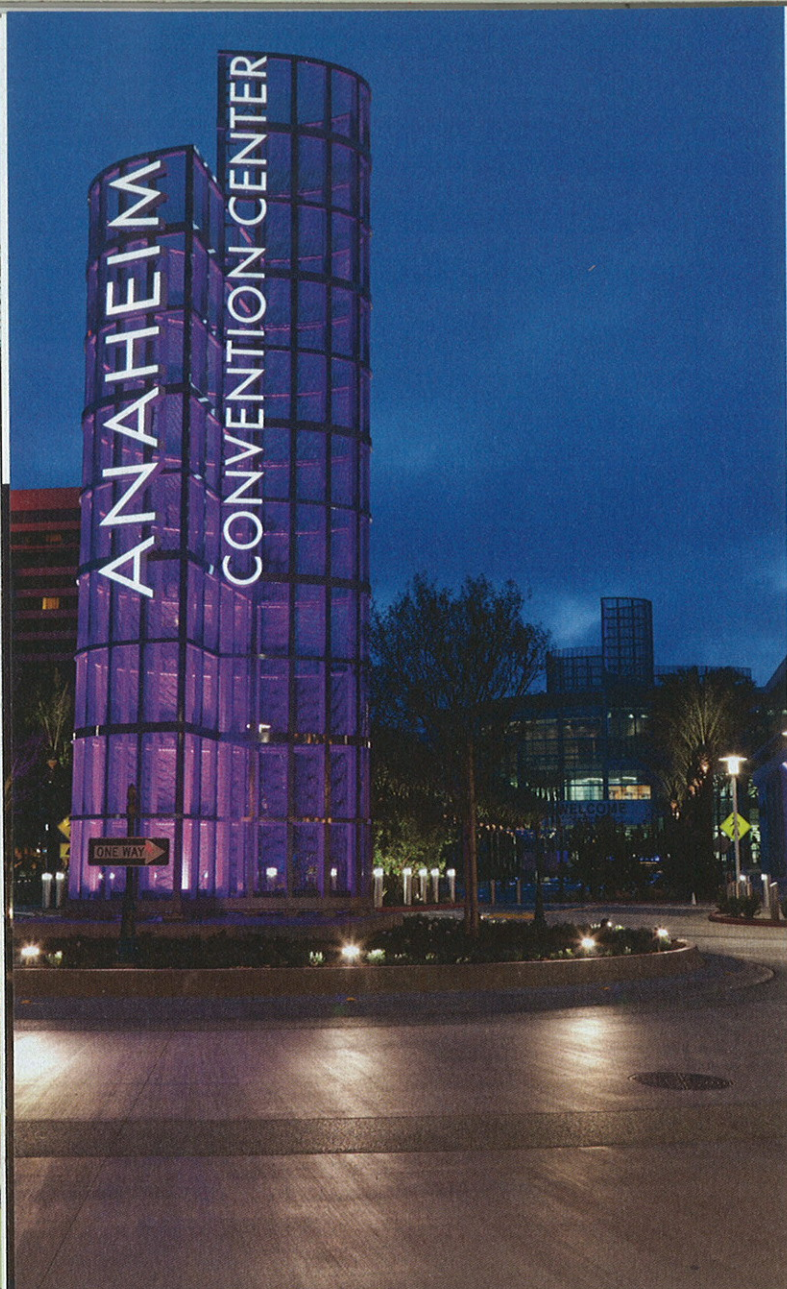
#### Top

LED pedestrian pole lights illuminate the paver walkway that flows between the parking garages, hotel and the Convention Center Building (right). The interlocking Acker-Stone 'Holland Stone' green and charcoal pavers (3-15/16" x 7-7/8" x 3-1/8") in a herringbone pattern were installed during a previous Convention Center building expansion.

#### Bottom

Low-level bollard lights and retractable bollards add safety to the traffic circle.





BEFORE

AFTER

#### Left

The 45-foot tall entry marquee tower (by Yesco) at the traffic circle, the east end the Anaheim Convention Center Grand Plaza, puts on a light show throughout the evening with six color-changing LED spot lights (Color Kinetics). The ribbed structure is wrapped by steel mesh to mimic the tower element on the Convention Center (background right, and also seen in adjoining daytime photo right).

#### Right

Four steel overhead palm-shaped arbors enclose the three basalt water columns and precast radius benches at the "Anaheim Fountain," and frame the Anaheim Convention Center.

light display. A different show can be programmed for presentation every half hour. The design team worked with Targetti/Poulsen to develop modified versions of their Icare and Phoenix DMX controllable RGB in-grade LED luminaires, and also with Electronic Theatre Controls to assemble the over 1,500 channels of control. The result is a landscape of light "flowing" organically from one fountain to the other.

Themed water features anchor each end of the Grand Plaza "river," with a smaller water feature at the central fountain plaza, creating a visual link between the Hilton and Marriott hotels. These water features are sculptural, focal elements, metaphors for Southern California mountain and beach landscapes. The Grand Plaza "Ocean Fountain," a reflection of the iconic tower on the convention center, is an impressive upward projection of water composed

of three cascading water levels. The fountain, just outside the convention center, has amphitheater seating for concerts, small venue events and just plain people watching. LED light strips under the poured-in-place amphitheater seat walls and at the fountains create a light shadow and soft light glow, emphasizing the form of the fountain and echoing the curvilinear forms of the convention center building. The "Ocean Fountain" lighting has a vast color-changing system that also controls the fountain pumps and jets.

The "Mountain Fountain" represents the Santa Ana peaks that can be viewed in the distance on axis with the Grand Plaza and Anaheim Stadium. The fountain walls that contain different pool levels are finished to represent geologic sedimentary layers. The fountain layout is based upon the Fibonacci mathematical sequence known as the "Golden

Mean," commonly found in nature. The cascading "Mountain Fountain" is the "source" for the plaza river and its color-changing light system is in synch with the choreography of the "River of Light."

The "Anaheim Fountain" is a central feature of the Grand Plaza, with four steel overhead palm-shaped arbors framing an abstract representation of the original town layout of the city of Anaheim. The fountain consists of three basalt rock water columns. The arbor structures change color as the light show dances along the "river."

At the east end of the Grand Plaza, the traffic circle is designed to relieve congestion on Convention Way and Hotel Way by allowing a more fluid traffic flow. The 45-foot entry

marquee tower at the traffic circle is a beacon that anchors the east end of the Grand Plaza. An internal color changing system illuminates and animates the tower to welcome visitors from around the world to the Anaheim Convention Center. The metal sculptural element in the center of the roundabout is a smaller-scale replica of the Convention Center Tower, yet provides a dramatic arrival statement. It serves as a "front door" sign, identifying the Anaheim Convention Center.

The Anaheim Convention Grand Plaza represents the most current use of architectural and landscape lighting design technology and sustainability. Lighting and electrical requirements were complex, requiring careful consideration of aesthetics, function, operations, maintenance and budget.

#### Before

Convention Way previously carried transit buses, taxis and passenger vehicles pass the front of the Convention Center and the adjacent hotels, creating major conflict between vehicles and pedestrian, especially during major conventions and shows.

#### After

The Grand Plaza, on axis with Anaheim Stadium and the Santa Ana Mountains in the distance, provides a more pedestrian-friendly space, while accommodating limited vehicular and transit circulation. The "river" of blue paving (a metaphor of the Santa Ana River) meanders through the plaza between the Ocean Fountain (foreground) and the Mountain Fountain.