

## Construction on Replacement Central Utility Plant Making Good Progress

Albert Rodriguez



The construction "footprint" for the new, modern and energy-efficient Central Utility Plant is delineated with construction barricades, as workers and heavy equipment prepare the site for the building's foundation. The current CUP on the right will remain in operation until it is demolished in 2014, after the new facility begins operation.

Although not a public building, the new replacement Central Utility Plant (CUP) will play a vital role in the modernization of Los Angeles International Airport (LAX). The new CUP's site is abuzz with heavy equipment and construction activity. The new state-of-the-art facility required the demolition of existing maintenance buildings and the relocation of a Los Angeles Department of Water & Power industrial station. As ongoing site development continues, the construction team -- comprised of Los Angeles World Airports (LAWA) and contractor engineers -- is closely working with the Federal Aviation Administration (FAA) to ensure construction does not impact operations of the adjacent FAA air traffic control tower.

Careful phasing and planning is critical to a project that has been likened to a heart transplant as LAX must continue day-to-day functions without interruption to its operations. Construction will grow in complexity as 100 miles of wire/cable, 35 miles of

electrical conduit and 8.7 miles of distribution and plant piping extending from the existing 50-year-old CUP are replaced. In order to locate the existing utility arteries, construction crews are conducting "pot-holing" (pin point excavation) to determine locations of the utility lines.

Some inconveniences are expected, such as intermittent vehicular lane closures. When completed, the \$438-million, four-story, 64,000-square-foot facility will enhance passenger comfort, reliability of utility service, and safety by providing additional capacity for air conditioning, heating and lighting of the airline terminals and other airport buildings. The new CUP is designed to meet all current air-quality regulations and will be nearly 25 percent more energy efficient in fuel consumption and 60 percent more efficient in producing chilled water -- thanks to a thermal energy storage tank with capacity for 1.6 million gallons of water and 15,500 ton-hours of cooling.

*continued on page 4*

### IN THIS ISSUE

#### Page 2

CTA Bridge  
Maintenance

Taxi Lane S Update

#### Page 3

New TBIT Update

People Factor:  
Construction Profile

#### Page 4

CUP continued

TBIT Update continued



## Pedestrian Bridges in Central Terminal Area Use Innovative Scaffolding System



Conor Roche

Left: Scaffolding on the pedestrian bridge between Parking Structure 2 and Terminal 2 allowed workers to repaint the structure without inconveniencing passengers and blocking roadways with lift equipment. Right: LAVA Maintenance Service Division personnel paint a side of the pedestrian bridge. (Left to right) Painter Bruce Pugh, Lead Painter Raul Medina, and Painter Hector Cortez.

Modernization of LAX's Central Terminal Area (CTA) continues with improvements to pedestrian bridges that connect the parking structures to the terminals. Travelers will soon see a much improved appearance as they make their way to their terminals or go to meet loved ones. LAVA Paint Shop crews recently completed painting the connecting bridge at Terminal 2 as part of a \$266,000 program that will eventually repaint and refresh the look of all seven CTA connecting pedestrian bridges.

Safety and operational concerns make this project challenging. LAVA crews developed an innovative scaffolding system that eliminates the need to block vehicular traffic and reduces the risk to workers that comes from elevating them on "cherry pickers" (hydraulic lift systems).

The new three-tiered scaffolding system allows workers secure and enclosed access to bridge roofs, sides and undersides without closing vehicle lanes below.

Up to six workers per shift are painstakingly sanding the old layers of paint, priming surfaces, and applying two coats of paint. Environmental issues are being addressed with a special cloth mesh that surrounds the scaffolding to capture dust produced by the work. Each bridge will take up to a month to complete. Although not as prominent as some of the other larger construction projects, the terminal bridge work is essential in improving the look and appearance of the CTA for travelers and visitors.

## Great Hall at Tom Bradley International Terminal Enters Third Phase

By Debbie Kao

The distinctive architectural design of gleaming, metallic arched waves continues to materialize amidst the LAX skyline as the new Tom Bradley International Terminal (TBIT) project achieves new milestones. The Great Hall (or core) of the \$1.545-billion project has entered the third phase of steel erection as giant 132-foot-tall curved steel trusses, designed to represent the aesthetic undulation of the Pacific Ocean, are set in place by heavy cranes. Inside the existing Great Hall, new dining and retail options and luxury airline lounges will bring a new level of passenger service, convenience and comfort that will characterize the new TBIT. The entire project will ultimately span 2,300 feet - longer than two naval aircraft carriers - and contain 45,000 tons of steel, enough to build five Eiffel Towers.

Construction on critical mechanical, electrical and plumbing infrastructure continues deep within the structure. Work in these areas will provide reliable, efficient heating and cooling, lighting, and improved passenger comfort.

Gate 134 on the north end is near completion with a majority of glass installed. Design elements incor-



Vantage Point Global/LAVA

An aerial view of the 1,531-foot span of the new Tom Bradley International Terminal Project looking to the south. The West Gates will be completed by late 2012 and will accommodate nine new-generation aircraft such as the Airbus A380 super jumbo jet and the Boeing 787 Dreamliner.

porating large glass paneling allow arriving passengers to get spectacular views of Los Angeles as they make their way to federal international arrivals inspection. The project will contain 310,758 square feet of glass, enough to create a window the size of 6.5 football fields. Gate 134 will be one of the first gates to go into operation

in 2012. The new TBIT will comprise 18 state-of-the-art contact gates, nine of which are designed to accommodate the largest passenger aircraft in service, such as the Airbus A380 super jumbo jet and the Boeing 787 Dreamliner.

*continued on page 4*

## Taxilane "S" Reaches New Milestone and Opens to Air Traffic

Aircraft taxiing and tarmac wait times for arriving flights improved significantly with the recent completion of the first phase of the \$175-million Taxilane S project. This project enhances the safe movement of aircraft and alleviates congestion on the ground during peak operational periods with a new 3,785-foot-long by 400-foot-wide Portland Cement Concrete paved strip.

The paved strip connects the north and south runway complexes via existing Taxiway B on the south and existing Taxiway E on the north. This augments Taxilane R further to the west, which provides the same function.

Construction of Taxiway S required relocation of fuel lines and other utilities, all grading, airfield signage and lighting, and constructing power and communications duct banks. Taxilane S was funded by FAA Airport Improvement Program funds, airport revenue bond proceeds, and airline rates and fees.

Phase two of the project is scheduled to be completed May 2012 and consists of construction of the aprons or borders of the taxilane adjacent to the new Tom Bradley International Terminal north and south concourses and just west of the Great Hall.

Albert Rodriguez



Taxilane S recently opened for aircraft operations, facilitating movement between the north and south runway complexes. The aprons or borders will be completed by early summer.

## Profile: Architect Sees Work on New TBIT as Career-Defining Project

For LAVA Architect David Kim, there is a deep connection to LAX that goes beyond his love for the challenging job as Project Manager for Glass and Roof enclosures of the new Tom Bradley International Terminal. Working at LAX is somewhat of a proud family tradition. His father was one of the founding members of Korean Air's cargo operations at LAX and now Kim is dedicated to improving this iconic airport for the benefit of generations to come. Kim coordinates the accuracy of design plans and documents between the designers and contractors.

He is a critical liaison between contractors, LAVA and airport tenants to ensure communication among the many parties involved in this complex project.

Kim started his career with the Los Angeles Public Works Department and worked on other important projects such as the L.A. City Emergency Operations Center and the new Los Angeles Police Department headquarters building. Work on these earlier projects has prepared Kim for the magnitude of the new TBIT project, which he sees as one of the highlights of his career.

"I take a lot of pride in my hometown airport and I'm really happy to be making a difference for the future," said Kim.

David Kim is a highly skilled LAVA architect who takes great pride in the modernization of LAX.

N/A





## Replacement Central Utility Plant update *(Continued from Page 1)*



Architectural Rendering of CUP

Architectural rendering depicts the future Central Utility Plant looking east.

Water will be cooled late at night when electricity rates are lowest. The chilled water can then be used to cool the terminals during the day when passenger traffic in the terminals is at its daily peak. This innovative design eliminates the need to use a 3,260-ton chiller during the day. When completed, the new CUP will have the capacity to:

- Pump 97.1 million gallons of water daily, enough to fill 5,000 average-size swimming pools
- Provide enough chilled water to cool 373,500 homes
- Provide enough hot water for use in and to heat 16,200 homes
- Generate enough electricity to power 9,100 homes. After the new CUP goes into service, the current facility will be demolished. Construction will continue through August 2014.

## Tom Bradley International Terminal Modernization *(Continued from Page 3)*



Vantage Point Global/LAWA

A closer look at the interior of the Great Hall of the new Tom Bradley International Terminal project shows the various levels that will contain future amenities for travelers such as dining, retail shopping and luxury airline lounges.

**PLEASE SEND  
COMMENTS,  
INQUIRIES AND  
SUGGESTIONS  
TO:**

[arodriguez@lawa.org](mailto:arodriguez@lawa.org) or  
Los Angeles  
International Airport

Public Relations Division  
Attn: Albert Rodriguez  
One World Way 9th floor  
Los Angeles, CA 90045

Among other exciting developments, the LAWA Art Oversight Committee reviewed proposals from several nominated Los Angeles-based artists whose commissioned work will be displayed within the new TBIT. As part of a city program that requires allocating one percent of all capital improvement costs to commission art in public places, these installations are designed to engage travelers and welcome visitors through a variety of themes and media.

Artworks will range from kinetic light installations and displays, to functional pieces integrated within the architecture, such as flooring and art glass.

The Great Hall and the boarding gates on the west side of the new concourses are expected to open late 2012 and the new gates on the east side will open by 2013. Airbus A380 super jumbo jets and Boeing 787 Dreamliner.

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities.