

NEWS

News Blurbs Now! (NBN)

Eberl Iron Works, Inc has received the 2015 Buffalo Niagara Business Ethics Award in the small business category, for companies with 50 or fewer employees. "Business ethics are literally in our DNA," said John Eberl. The third-generation leaders, John and Nora Eberl accepted the award during a May 14 luncheon. Eberl manufacturing includes custom metal fabrication, Unistrut metal framing products, traffic safety products, rooftop support systems, & systems installation. The annual BNBEA event raises community awareness of ethical behavior & pays tribute to companies that consistently demonstrate ethical conduct in everything they do.



ISA will be conducting tours over the next year starting in September at Col Ward Pumping Station, Calspan, Buffalo State College Technology Building, MA Life, and Steuben Foods. Look for more information in future newsletters!

Picone Construction has been included on Buffalo Business First's list of WNY Top Contractors and has been nominated for Brick by Brick Awards for the categories of Best Sports Complex and Best Restoration. Lately, they have completed renovations/relocation of Plato's Closet and a 4000 square foot fitness build-out at the Maple Ayer Plaza. Both projects are located in Amherst with Lauer-Manguso and Associates Architects being the Architect of Record.



Prince Rubber & Plastics Co Inc is looking to fill positions in Rubber/Plastic Fabrication and Quality Control. Resumes may be sent to prospectsep2011@gmail.com.

Nice Architects has designed an 86 square foot self sustaining, portable house that lets residents live off the grid anywhere in the world. Dubbed the Ecocapsule, it includes a kitchenette, shower, toilet, folding bed, and counter and storage spaces. The shelter is powered by a wind turbine, solar cells, and a battery. It also includes a rainwater filtration system. Tiny home, camping RV, micro-sized hotel, or temporary shelter in disaster zones...where else to use?

Cornell University will be home to the tallest passive-house high-rise once completed in 2017. At 270 feet tall and 270,000 square feet, the tower will house over 500 students and staff while using 60% less energy than a typical high-rise.

The Navy is seeking professional engineers in WNY up to age 42 for the Navy Reserve Officer Program. More info is available from ESB!

A pocket-sized drone, inspired by origami and weighing about 1.3 ounces, automatically unfolds itself from its trapezoid shape and takes flight within a fraction of a second. The drones could be deployed in disaster zones where they could be used to make contact with survivors and take photos of damaged areas. Future designs will hopefully be strong enough to resist a crash impact.

In support of the National Commission for the Certification of Crane Operators' policy of providing calculators for certain CCO written exams, Manitowoc Cranes has agreed to provide 10,000 calculators for candidates' use. Thanks!



If you like "Where's Waldo" then you might want to check out the work of China's "Human Chameleon". He paints his clothes and body, sometimes for up to 10 hours, to match the scene behind him. Check out his artistic talent at www.liubolinart.com/index.php?a=picture and try to guess how much patience Liu Bolin truly possesses. You will be wowed!

The Panama Canal expansion has reached an important milestone as it is prepped for stress testing. In June, water flowed for the first time into some of the new locks to test this key part of the multi-billion dollar expansion project, which began nearly a decade ago. You can see photos from the project, and even view live webcam feed, at pancanal.com.

We need your news blurbs NOW! We want to know about your recent projects, awards, hires, promotions, patents, new products, partnerships, open houses, tours, and anything else you'd like to share. Send your news to ESB1894@gmail.com.

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TECHNICAL ARTICLE

A Different Big Bang Theory

Having long kept details of its explosives capabilities under wraps, a team of Los Alamos National Laboratory scientists is now rolling out a collaborative project to defeat explosives threats through enhanced detection technologies. "We're aiming to create a collaboration of strategic public and private partners focused on the innovations in and education about explosives detection technologies," said the program manager for Global Security Emerging Threats. "Through the Los Alamos Collaboration for Explosives Detection (LACED) online portal and related collaborations, we can provide essential expertise in some extremely specialized fields," she said.

The LACED site serves as a virtual gateway to world-class expertise and capabilities designed to counter all types of explosives threats, predominantly through enhanced detection capabilities. The site went public online in January and is beginning to attract attention among specialty audiences. "We are addressing global security threats with a really clear, simple strategy," said the manager. "First, we emphasize explosives science; that is the core of everything we do. We anticipate and affect the outcome to our advantage, ensuring that the threats never come to fruition. We detect, minimizing loss of life from immediate threats. And we mitigate and neutralize to counter damage from explosives." The explosives detection collaborative is made up of 57 scientific experts, spanning 18 technical divisions at Los Alamos. Ranging across 11 unique fields of expertise, these scientists have published more than 100 explosive-detection-related publications.

And what, besides making the windows rattle in Los Alamos County, do these experts do? Among other things, they provide training, with specific know-how on nearly anything that can explode. For the US military, there's a homemade explosives situational awareness class that includes replica villages with mock improvised explosive devices (IED's) to

provide realistic training before warfighters encounter the real thing. Another course, the Homemade Explosives for Explosive Ordnance Disposal Technicians class, is focused in even more detail on homemade explosives and includes training in the safety, sensitivity, and performance of these devices, as well as their synthesis and manufacturing methods. From the chemistry of the ingredients, through the nuances of triggering devices, the trainers seek to ensure military personnel get home safely from their deployments.

Detection, of course, is key to safety in this field. Los Alamos scientists and engineers have a long history of developing detection technologies for every conceivable type of explosive under a variety of scenarios. Detection methods range from trace and signature characterization to bulk detection and new methods that address homemade or esoteric explosives. From advanced image analysis, exquisite surveillance technologies, remote detection, and spectroscopy to find trace quantities of explosive vapors and residues, a whole range of high-tech tools is on hand, some new and some fundamentally enhanced from their original forms. And the new collaboration seeks to put these tools in the hands of the people who will need them the most. "Our emphasis with this project is on partnering with both industry and government to develop lifesaving technologies using the unique capabilities of the Laboratory," said the program's manager. "We are closely tied with many US government agencies involved in explosives and detection, and we have partnerships with industry on explosives detection technologies, and it is this work we seek to expand," she said.

Organizations wishing to coordinate with the LACED program can visit <http://laced.lanl.gov> or reach experts at laced@lanl.gov for more information. This article is reprinted courtesy of Los Alamos National Laboratory, can be found at <http://www.lanl.gov/source/discover/news-release-archive/2015/February/02.11-explosives-detection-expertise.php>, and the media contact is Nancy Ambrosiano (nwa@lanl.gov).

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CALENDAR OF EVENTS

07-07-15		Value of Real-World Tests and Engine Performance	
07-13-15	6pm	Committee Meetings	To Be Determined
07-20 to 07-24		Automated Vehicles Symposium	Ann Arbor, Michigan
07-22-15	7pm	ESB Annual Scholarship Run	Buffalo Harbor State Park
07-25-15		Amtrak Train Day. See May issue.	Dick Road, Depew
08-04-15		ESB/Beam Golf Tournament	Chestnut Hills Country Club, Darien
08-13-15		Turnkey Laser Systems for Part Marking and Batch Processing	
09-14-15	6pm	Ways and Means Meeting	2555 Walden Ave, Buffalo (Wendt Corp)
10-22-15		Past President Dinner	To Be Determined



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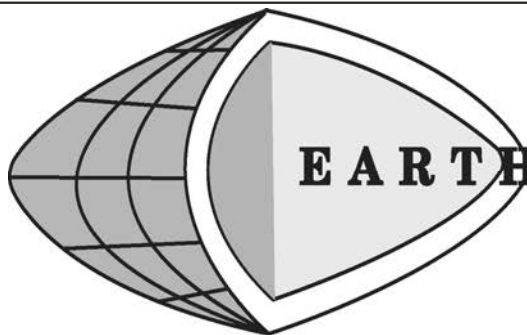
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TECHNICAL ARTICLE

Porsche Design Tower Takes Elevation to Another Level

By Scott Judy

A complex, groundbreaking automated car elevator system, situated in the center of the \$560-million, 60-story Porsche Design Tower project in Sunny Isles Beach, Fla., is raising the bar on "sky garage" technology, and taking its builders on a memorable journey as contractors and engineers make accommodations for the massive system. By combining high-speed- and freight-elevator concepts as part of what is believed to be the first such system for carrying cars and human passengers, the highly programmed, patented design may one day influence the development of similar projects.

For now, though, the system - which enables residents to park their cars in their attached garages - is presenting a towering engineering and construction challenge. "These are the most complicated elevator systems I've ever seen," says Rob Bailey, president of Chicago-based Mid-American Elevator, and the man charged with delivering the first-of-its-kind system. Bailey, a 35-year industry veteran, also provided elevators for NASA's massive Vehicle Assembly Building at Kennedy Space Center. "In a lot of ways, we're reinventing elevator technology. We're doing things that have never been done," he says.

The 'Dezervator'

Credit for the concept, all parties agree, goes to Gil Dezer, the president of Dezer Development who initiated the Porsche-branded project. While working with Porsche Design Group, Dezer, an avowed Porsche enthusiast, saw a mechanical parking system in Germany and decided he wanted to include something similar in his Sunny Isles project.

"We were always pushing the cool factor," Dezer says. Although it helped him differentiate his condominium for marketing purposes, it's not just a gimmick, he notes. "There's a real mathematical equation" behind it, he says. "I'm taking [parking] space that I typically give away for free and selling it because it's adjacent to the unit" for the same cost per square foot. In addition to being a moneymaker, though, Dezer asserts that the scheme improves upon high-rise luxury residential design. It incorporates the single-family-home garage concept by providing greater security, privacy and ease of use for residents.

Dezer has patented the "Dezervator" system and plans to use it on future projects. Significantly complicating its design was Dezer's

insistence that residents be able to ride up with their cars - at a rate of 800 ft per minute - a scenario that raised numerous safety concerns. (A similar sky-garage system in Singapore doesn't permit people to ride along with the cars.)

Here's how it works: Cars are registered and equipped with radio-frequency identification (RFID) tags, which inform the system where to deliver the car. Residents drive onto a turntable that spins to align with one of two "entry-exit lanes." Once positioned, an 8,000-lb-capacity "shuttle" - supplied by Palis of Germany, a mechanical parking equipment manufacturer - deploys underneath the vehicle, lifting it up by about 2 in. and carries it into the elevator cabin. Then the elevator spins to align the car with its parking space. Along the way, a range of sensors and scanners closely monitor the operation.

A series of motion detectors positioned in the entry-exit rooms, elevator cabins and garages ensure the areas are clear of people before a vehicle is moved into place. Also, two ceiling-mounted scanners in the back of the elevator car will detect an open automobile door, which is forbidden by the automated system. If a door opens during transit, for instance, the elevator automatically stops and returns the car to the first level.

Additionally, VESDA devices that detect gas leakage and fumes are included in the elevators and all 150 garages, along with carbon-monoxide detectors in the garages that sense if a car is turned on. Fire-suppression systems are installed in the elevator cars, and the garages - most of which feature a 1.5-in.-thick glass wall partition - are built to achieve a two-hour fire rating.

The numerous sensors are largely the result of an extensive back-and-forth between Mid-American Elevator, general contractor Coastal Construction Group and Underwriters Laboratories (UL), which was hired in 2013 to review and ultimately certify the system as safe. "We've been playing these what-if games for the last two years now, answering the analysis of UL," says Ed Fallin, vice president and project executive with Coastal. Once UL is satisfied with the system's safety measures - all components of the system have been used previously in other applications, says UL - the company can certify it to the Miami-Dade County's elevator agency.

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TECHNICAL ARTICLE

Water Resource Management Modeling by Marlene Simons

Water resource management involves numerous and often distinct areas such as hydrology, engineering, economics, public policy, chemistry, ecology, and agriculture, among others. It is a multi-disciplinary field, each with its own set of challenges and, in turn, its own set of computer models. Jonathan Goodall's mission is "to take all these models from different groups and somehow glue them together." The National Science Foundation (NSF) funded scientist, and associate professor of civil and environmental engineering at the University of Virginia, is working to design an integrated computer modeling system that will seamlessly connect all the different models, enabling everyone involved in the water resources field to see the big picture.

He says, "We want to be able to look at connections across the systems. For example, if you grow corn for ethanol for fuel, there are economic, water quality, and agricultural aspects. How do you look at the issues and problems holistically?" In doing so, "it will make the models we use to address water resources challenges more accurate and more robust," he says. "There are a lot of current water challenges that require sophisticated computational models."

Goodall lists, among others, the Chesapeake Bay and the Gulf of Mexico where fertilizer runoff has created dead zones; Southern California which faces water shortages resulting from an over allocation of the Colorado River and depleted groundwater resources; and floods along rivers in the Midwest which prompted difficult decisions about releasing water through levees and flooding lands to avoid significant downstream flooding of cities, such as New Orleans.

"Models are used by water resource engineers every day to make predictions, such as when will a river crest following a heavy rain storm or how long until a city's water supply runs dry during a period of drought," he adds. "One of the problems with our current models is that they often consider only isolated parts of the water cycle. Our work argues that when you look at all the pieces together, you will come up with a more comprehensive picture that will result in more accurate predictions."

One challenge with bridging models of different systems is that one system might be more dynamic than another. In water resources, water movement in the atmosphere is more dynamic than water movement in deep aquifers. Another challenge is semantic differences which can be complex, since variables in models may have slight differences in units or dimensions that, if not properly handled, can cause major problems when linking the models together.

Goodall and his team are applying the work specifically to the challenge of modeling water and nutrient transport within watersheds. "The modeling framework system will then be used to go beyond the capabilities of current models by including new disciplines into the watershed modeling process, and then eventually allowing specialized groups to advance components of the overall modeling system," he says.

Goodall is conducting his research under an NSF Faculty Early Career Development award which he received in 2009 as part of NSF's American Recovery and Reinvestment Act. Goodall is using the educational component of the grant to plan courses, as well as a workshop for graduate students across different water-related disciplines who "will come up with a water problem that is cross-disciplinary, and then construct a model using the new modeling system that can really test our approach," he says.

In 2013, Goodall volunteered as a mentor at a local middle school, where he guided students through designing a city of the future and "specifically think about how that city would handle its storm water," he says. "We discussed the general problems caused by storm water falling on impervious surfaces such as roads, roofs and parking lots. "Because this rain does not infiltrate into the soil, it can cause problems such as flooding or erosion of river beds," he adds. "We talked about the ways engineers handle storm water so that it does not cause these problems, as well as how the philosophy for handling storm water runoff has changed over the years."

While many urban storm water systems were designed in the past simply to remove rain water from a city as quickly as possible - for example, by using large concrete channels - the focus has changed in recent years. Many cities now employ new practices, such as using pervious surfaces for roads or lots, or capturing rainfall in ponds or rain gardens distributed across the city, allowing water to slowly infiltrate into the soil.

"Storm water is something that most people spend very little time thinking about and these students were no different," he says. "But as they began to think about the problem and the challenge of not only solving the problem, but doing it in a sustainable way, they were hooked. You could see their minds go as they tried to come up with solutions to the problem and that was fun."

This article is reprinted courtesy of the National Science Foundation and can be found in its entirety at http://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=130339&org=NSF

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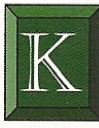
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Drought And Heat Likely To Affect US West's Power Grid

Electricity generation and distribution infrastructure in the U.S. West should be "climate-proofed" to decrease the risk of future power shortages, according to new research results.

Expected increases in extreme heat and drought will bring changes in precipitation, air and water temperatures, air density and humidity, write scientists Matthew Bartos and Mikhail Chester of Arizona State University in a paper published in the current issue of the journal Nature Climate Change.

The research was funded by the National Science Foundation (NSF) Water, Sustainability and Climate (WSC) Program.

"Society depends on agriculture, energy and water availability to prosper," said Tom Torgersen, NSF WSC program director. "Security in these areas requires an understanding of the complex links between humans and nature."

Changing conditions could limit energy production

The authors say that changing conditions could significantly constrain the energy generation capacity of power plants--unless steps are taken to upgrade systems and technologies to withstand the effects of a generally hotter and drier climate.

The scientists report that power stations are particularly vulnerable to the climate conditions predicted to occur within the next half-century.

"In their development plans, power providers are not taking into account climate change effects," Bartos said. "They are likely overestimating their ability to meet future electricity needs."

U.S. West will see higher demand in years to come

The U.S. West in particular is expected to see greater energy demand due to population growth and higher temperatures.

Bartos and Chester say that power plants should strengthen their transmission capacities and conservation strategies if they are to remain capable of reliably supplying power as conditions change.

Scientists recommend that power providers consider climate constraints

Power providers also should invest in more resilient renewable energy sources and consider local climate constraints when selecting sites for new generation facilities, the researchers said.

"Diverse arrays of energy-generation technologies are used by the U.S. West's power grid," said Chester.

The scientists looked at five power-generating technologies: hydroelectric facilities, steam, wind and combustion turbines, as well as photovoltaics.

"We're finding that some power generation technologies may be more climate-resilient than others," Chester said.

"Renewable energy sources are generally less susceptible to climate change effects. More use of renewable sources may contribute to a better climate-proofed power infrastructure."

This article is reprinted courtesy of the National Science Foundation and can be found at http://www.nsf.gov/news/news_summ.jsp?cntn_id=135021&org=NSF along with additional information. Media contacts are Cheryl Dybas at cdybas@nsf.gov and Joe Kullman at joe.kullman@asu.edu.

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MEETING MINUTES

Attendees:	Officers: Closs, Samol, SanFilippo, Scofidio Board Members: Cartwright, Masse, Mooney, Plizga, Wach Members:
Call to Order:	President Marco Scofidio called the meeting to order at 6:00pm
Committee Reports	
Advertising:	Navy would like to put a job ad on web
Audit:	Good shape this year financially
Bowling:	Working on getting three more teams for league. Bowling officer meeting fourth week of July. Captain meeting in August. Bowling will start September 9. There will be some rule review/changes.
Bylaws:	No report
Education:	No report
Endowment:	No report
Events:	The past president dinner will be held on October 22.
Fundraising:	No report
Golf:	No golfers/sponsors yet from ESB. Jeff will call sponsors from last year and send out an email blast. Send note to RES to be in their newsletter? Marco to get info to TSC. Post at local golf places?
Historian:	No report
Media:	Minor web updates
Newsletter:	No report
Nominating:	No report
Scholarship:	No report
Scholarship Run:	Mooney would like some flyers. Will be at the boat harbor again but at pavilion. Parking fee will be waived. Norm Hirschey and Jeff Mooney volunteered to park their motorcycles at the event provided it is not raining. Next scholarship run committee meeting will be in a few weeks
Sunshine:	No report
Y Membership:	Max Smith and Mike Samol want to set up tables at UB next semester. Max will coordinate dates with student life. Need to determine paperwork and services to provide...shadow, resume review, mentorship? Create facebook event? Meeting to grow will be held on July 13 at 6pm.
Minutes:	The minutes of the May meeting were reviewed and approved
Adjournment:	The meeting adjourned at 6:50pm
Next Meeting:	Committees will meeting on July 13 at 6pm! Next board meeting will be September 14 at Wendt Corporation, 2555 Walden Ave, Buffalo NY

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 9:00 am Registration & Open Practice Range
 10:00 am Shotgun Start

Where: Chestnut Hills Country Club
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Fee Includes: 18 Holes of Golf with cart, Bucket of Balls on Driving Range,
 Lunch at the Turn, NY Strip Steak Dinner, Contests, Awards, Prizes, and Beverage Cart during play

Questions: Email Jeff Wach at jwach@egwpersonnel.com



Golf Tournament Registration

Captain / Player 1: _____
 Company: _____
 Address: _____
 Phone: _____
 Email: _____

Mail your check (payable to ESB) at:
 The Engineering Society of Buffalo
 C/O Jeff Wach
 1700 Clinton St
 Buffalo, NY 14206
 716-826-4233

Please register me for:

\$360 Foursome - Other golfer names _____

\$190 Twosome - Other golfer name _____
 \$100 Single Golfer _____
 \$30 Dinner Only – Name(s) _____

\$_____ Total Enclosed



Golf Tournament Sponsorship



Titanium Sponsor - \$1000

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Silver Sponsor—\$150

Your business name will be displayed on a tee box sign

Business Name: _____ Phone: _____
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Application

Date: _____
 I hereby make application to the Engineering Society of Buffalo, Inc. and I agree to abide by the Constitution and By-Laws governing this Society.

Name: _____
 Street Address: _____
 City: _____
 State: _____ Zip: _____
 Residence Phone: _____

Where Employed: _____
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Send mail to: **Residence Business**
 Signature of Applicant _____
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Biography

The Engineering Society of Buffalo contemplates publishing biographical sketches of members in the monthly newsletter "The Western New York Engineer". For this purpose we would like the following information:

Date of Birth: _____ Married Y N
 Member of what other clubs/societies: _____

Education: _____

In what engineering field(s) are you interested in? _____

Resume attached? Yes No

Sports & Hobbies: _____

Name of Spouse and Children: _____

Spouse: _____

Children: _____

Name as it should appear on ESB Membership Card: _____

Activities

Activities in which you would like to participate

- Advertising
- Scholarship
- Bowling League
- Newsletter/Roster
- Golf Outing
- Education
- Program Committee
- Scholarship Run
- Business & Community Affairs



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- \$80 Individual
- \$35 Non-Resident
- \$30 Retired
- \$20 Student

Born on the 2nd of July - or August

By Dan Lewis

“In Congress, July 4, 1776,” begins the Declaration of Independence, “a declaration by the representatives of the United States of America, in general congress assembled.” From this document began the United States and from that line comes Independence Day, celebrated annually in the US on the fourth of July. But some believe that July 4, 1776, is not truly America’s independence day. That honor should fall to either July 2 or August 2.

On June 11, 1776, the Continental Congress created a sub-committee of five delegates - Thomas Jefferson, John Adams, Benjamin Franklin, Roger R Livingston, and Roger Sherman - empowered to write a first draft of a declaration of independence. Jefferson took the lead and the quintet delivered their draft on June 28th. After a few days of debates and revisions, the Congress voted to declare independence - on July 2nd, not July 4th.

The next day - July 3rd - Adams wrote a letter to his wife, Abigail, discussing the Declaration and its significance. In part, Adams wrote: The Second Day of July 1776, will be the most memorable Epocha, in the History of America. I am apt to believe that it will be celebrated, by succeeding Generations, as the great anniversary Festival. It ought to be commemorated, as the Day of Deliverance by solemn Acts of Devotion to God Almighty. It ought to be solemnized with Pomp and Parade, with Shews, Games, Sports, Guns, Bells, Bonfires and Illuminations from one End of this

Continent to the other from this Time forward forever more.

While Adams appropriately described the revelry, he whiffed on the date. Instead, we Americans celebrate independence on the 4th, the day the Continental Congress ratified the text of the document.

Ratified - but not signed. According to National Geographic, many of those who signed the famous piece of parchment simply were not present on the 4th of July and the document was not signed until August 2nd. This belief is buttressed by the journals of the Continental Congress itself; as stated by the National Archives, “on August 2, the journal of the Continental Congress records that ‘The declaration of independence being engrossed and compared at the table was signed.’ One of the most widely held misconceptions about the Declaration is that it was signed on July 4, 1776, by all the delegates in attendance.”

While the July 4th date is, probably, the least relevant of the three, it does lend itself to a fantastic coincidence. Of the five drafters of the Declaration, Adams and Jefferson would go on to become President of the United States. And both Adams and Jefferson share something else in common: both died on July 4, 1826 - fifty years to the day the Declaration was ratified.

Dan Lewis teaches you something cool every day. Sign up for daily newsletters at nowiknow.com.



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Continued from page 4

Because programming the sensor inputs and getting this prototype operational would take considerable time, making onsite testing impractical, Dezer approved construction of a test facility at Mid-American Elevator's Chicago site, adding about \$6 million to the project's cost. Mid-American and Coastal built and tested the first elevator at the site. The contractors plan one last test run for UL in July, before disassembling it and transporting it to Sunny Isles for installation.

The test facility has been "invaluable," says Bailey. The contractors built the structure to a height of 80 ft, which enabled the team to simulate a sudden drop of the elevator - estimated to weigh two to three times more than most high-rise elevators, says Bailey. "We needed to make sure that the elevator safeties, which grab the rail in the worst-case situation, would work," he explains. And the system passed the test.

Building the Surrounding Structure

The Dezervator proved a dominant factor for designing the building. With three car elevators serving the tower, Sieger Suarez Architectural Partnership and structural designer CHM Structural Engineers of Miami positioned it in the center of the building.

The elevator shaft, or hoistway, roughly 55 ft wide, is a core component of the project, with Mid-American crews working from six mast-climbing work platforms at the center of the structure. "You usually don't have the elevator contractor working in the shaft while the structure is still being built," Fallin explains. As a result, Coastal designed and built a special safety platform that waterproofs the area and "structurally provides safety measures" that protect workers from falling objects, he says.


A significant factor for the structural engineer was the big hole in the middle of the circular building, which features three shear wall cores. They are aligned radially, trisecting the tower. To achieve the necessary lateral stiffness, CHM connected the three cores via concrete rings, causing them to act in concert, says Javier Alvarez, chief structural engineer. CHM president Mark Mosbat served as engineer of record. In all, says Alvarez, CHM's structural design utilizes a reduced number of structural members; there are 12 columns supporting the post-tensioned slabs.

Yet another factor influencing the tower's design was the placement of plunge pools on the balconies of 116 of the property's 132 units. To minimize their impact, Sieger Suarez situated the pools between columns, says Jose Suarez, vice president with the firm. The firm also opted for stainless steel pools instead of concrete, which further reduced structural load.

The building rests upon 146 36-in.-dia augered piles, measuring 155 ft in length - among the longest ever placed in the state of Florida - that in turn support a 14-ft-deep concrete slab. The car elevator pit is the deepest Coastal has ever built, adds Fallin, and measures 15.5 ft deep, with a 5-ft tremie seal below that. "All said, we excavated 20 ft below the water table to construct the pit," he says.

At press time, Coastal reported the project was at approximately the 40th floor. The goal, says Fallin, is to have the car elevator running on manual operation in time for the scheduled temporary certificate of occupancy date of June 1, 2016. Contractors are planning for final completion in the fall of next year.


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ESB Golf Tournament Page 12

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~Freeman Dyson

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