

Concrete News



- Annual Awards 2014-2015
- Award of Excellence
- Award of Achievement
- Coloured Concrete
- ACI Concrete Construction Awards

Volume 20
June - December 2015



Kuwait Chapter

Local Connection with International Links

■ Concrete News

Concrete News is published by ACI-Kuwait Chapter for sharing information, promoting exchange of technical knowledge amongst its membership, and enhancing the Chapter's position within Kuwait's engineering fraternity.

Volume 20 / June - December 2015

■ ACI Kuwait Chapter

The purpose of the Chapter is to help in furthering the chartered objectives of the American Concrete Institute. The American Concrete Institute (ACI), is a nonprofit international organization that promotes improved technology, technical competence, design, and construction aspects related to concrete for the benefit of society.

ACI-Kuwait Chapter was established essentially to promote education, standards of technical practice, scientific investigation and research in concrete technology. The Chapter also aims to channel efforts of its members towards a non-profit public service in collecting, correlating and disseminating information for the improvement of design, construction, manufacturing, utilisation and maintenance of concrete products and structures.

■ Functions

ACI Kuwait Chapter is approved and authorized by the Board of Directors of ACI International to provide the means of furthering the chartered objectives of the Institute in the State of Kuwait. The Chapter is managed by a local Board of Directors whose members serve as Chapter Officers. Chapter membership is open to individuals and organizations with an interest in any aspect of concrete technology. The Chapter is operated through its Committees, which are comprised up of volunteers from the membership. Programs are developed by the Committees to help achieve Chapter objectives and to meet the needs of its members. The Chapter may hold several meetings each year and engage in activities that may include:

Sponsoring educational seminars, short courses or technical workshops.
Organising or sponsoring training courses for examinations and certification.
Publishing technical information and newsletters.
Conducting awards programs for local concrete structures and related distinguished services.
Special social events.

■ Benefits

- Chapter members can attend seminars, short courses and workshops organized at reduced fees.
- Free use of ACI publications supplied by ACI International, and which are kept in the Chapter library.
- A forum for members to interact with colleagues and identifying potential sources for cooperation in addressing specific technical problems.

■ Committees

The Chapter's affairs and activities are executed through its Committees, which include:

- Technical Committee
- Membership Committee
- Publication Committee
- Social Committee
- Nomination Committee
- ACI-KC Students' Committee

■ Joining ACI Kuwait Chapter

To become a member of ACI Kuwait Chapter, please contact the Chapter Office Manager on the numbers shown below; or download an Application Form from our website. Different categories of membership are available. You will receive a copy of the Chapter Bylaws upon becoming a member. The functioning of ACI Kuwait Chapter is based on mutual interest and voluntarily effort. Its success depends upon the active participation of its members.

ACI Kuwait Chapter

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■ President's Message



ACI-KC President, Dr. Moetaz El-Hawary

Year 2015 has indeed been an eventful one for ACI-Kuwait Chapter.

We have continued with our technical activities, and preparations are now underway for ACI-Kuwait Chapter's major fourth international conference that is scheduled for March 2016. Our Student's Committee, as they have done since their inception, has also been very busy and conducted a variety of interesting activities.

The highlight of the year was, of course, the grand Annual Awards function during which the Chapter presented its coveted Award of Excellence to a deserving project; and the Award of Achievement to an outstanding individual for lifelong contribution to the engineering profession. The well-attended function was again held under the patronage of His Excellency, the former Minister of Public Works and Minister of Electricity and Water, Engineer Abdul Aziz Al Ibrahim.

This issue of our Newsletter includes a report on the ceremony, the awardees and the winning project. It also includes news of the Chapter's activities over the past few months and, in continuation of our series on Kuwait's concrete industry, an article on decorative concrete.

While we endeavour to organize various technical and social events, including visits to interesting projects that are under construction, I would hope that more Engineers and Architects would avail themselves of the many benefits that we can offer. All members of the Chapter must therefore make more concerted efforts to publicize our activities, and help in increasing our membership.

It is my sincere hope that 2016 will be another busy year for the Chapter. And I would also like to wish you all good health and happiness.

■ Chapter Organisation

ACI-Kuwait Chapter's Board of Directors for 2015-2016 was elected and formalized during the Annual General Assembly held on 10th June, 2015.

The Board of Directors comprised of eleven officials, who are elected by the Chapter's general membership, after being nominated by the Nomination Committee. The President and the Vice-President serve in their positions for a maximum of one year. Directors are elected every year to serve three-year terms. The Board of Directors for the year 2015-2016 comprises:

President	:	Dr. Moetaz El-Hawary
Vice President	:	Mr. Bader Al-Salman
Past President 1	:	Mr. Mousa Al-Sarraf
Past President 2	:	Dr. Saud Al-Otaibi
Director	:	Mr. Hassan Kamal
Director/Secretary	:	Mr. Abdul Wahab Rumani
Director /Treasurer	:	Mr. Mansoor Rao
Director	:	Dr.Khaldoun Rahal
Director	:	Dr.Zafer Sakka
Director	:	Mr. Aziz Mamuji
Director	:	Mr. Mohammad Harb

■ Technical Committee

Chairperson	Dr. Moetaz El-Hawary
Member	Dr. Zafer Sakka
Member	Dr. Khaldoun Rahal
Member	Mr. Abdul Wahab Ruman

- Identifying technical topics of interest to Chapter Members and arranging seminars, short courses and workshops on various topics.
- Reviewing and submitting to Chapter Members, ACI International committee reports on subjects of relevance to Kuwait.
- Reviewing proposed revisions of ACI Standards and submitting comments to Chapter's Board of Directors for submission to ACI International.
- Serving objectives of the Chapter by organizing training courses and technical workshops.
- Promoting local research and testing programs to resolve technical issues of importance for durable concrete construction in Kuwait

■ Students' Committee

Chairperson	Dr. Moetaz El-Hawary
Member	Student Members of ACI-KU Board of Directors

- Activities are generally in line with ACI-Kuwait Chapter objectives.
- Encouraging student participation in all activities of ACI-Kuwait Chapter
- Student participation guided and organized by an elected Board of Directors, and sub-committees appointed from within their membership.
- Activities include technical and social events and further information can be found on www.ACIQ8.com.

■ Membership Committee

Chairperson	Mr. Mansoor Rao
Member	Mr. Abdel Wahab Rumani

- Recruiting new individual members and organizations.
- Issuing and renewing membership identity cards.
- Publishing and updating Chapter's membership directory.
- Facilitating interaction amongst members and communicating their concerns to the Board of Directors and other Committees.

■ Publication Committee

Chairperson	Mr. Aziz Mamuji
Member	Mr. Mansoor Rao

- Publishing periodic newsletters covering the Chapter's activities and providing general information of use to Chapter members.
- Printing and distributing copies of technical reports to Chapter members, as well as to interested individuals and concerned organisations.
- Preparing reports and Chapter news for publication in ACI's Concrete International magazine.

■ Social Committee

Chairperson	Eng. Dana Drobiova
Member	Eng. Mansoor Rao
Member	Eng. Satya Hany Awad
Member	Eng. Sana Javed

- Organizing major annual Chapter events and programs for members.
- Organizing field trips to major construction projects and industries.
- Arranging participation of the Chapter in selected national events.

■ Nomination Committee

Chairperson	Mr. Musa Al-Sarraf
Member	Mr. Khalid Ahmad
Member	Mr. Adel Adel Abdel Tawab
Member	Mr. Wafik Mohammad Ezzedin
Member	Mr. Ali Al-Abdulla
Member	Mr. Walid K. Barakat

- Nominating individuals who have the interest, leadership qualities and willingness to serve the Chapter, for selection to the Board of Directors.
- Submits names, prior to the Chapter's Annual General Assembly, for election by members.

■ Annual Awards 2014 -2015

ACI-Kuwait Chapter's Awards Banquet is a highly anticipated and grand annual event during which the Chapter recognizes outstanding projects and individuals. Two main honours were bestowed this year, namely the Award of Excellence and the Award of Achievement.

This year's Annual Awards Banquet was held at the Messilah Beach Hotel on 12th May 2015. The event was organized under the patronage of His Excellency, the former Minister of Public Works and Minister of Electricity and Water, Engineer Abdul Aziz Al Ibrahim. The function was well attended by ACI-KC members, representatives of Kuwait's building and construction industries and many guests.

■ Award of Excellence

The Award of Excellence is presented annually to a local project of outstanding merit. The award itself is given to the Owners or developers of the project, and is accompanied by Certificates of Excellence, for the general contractor; the local and international design consultant, if there is one; the supervision consultant; and the main concrete supplier.

This year ACI-KC honoured Kuwait's well-known shopping complex, The Avenues (Phase 3), as a grand and innovatively designed landmark development, that provides a unique retail and lifestyle experience in the State of Kuwait, for residents and visitors. The award was presented to the owners of The Avenues, Mabanee Company.



His Excellency Eng, Abdul Aziz Al-Ibrahim



Awards Recipients, Board of Directors and Guests

■ Award of Achievement

The Award of Achievement is presented to an individual to recognize outstanding contribution to the engineering community and in the State of Kuwait. The award this year was given to Dr. Nabil Hani Qadummi for his lifetime contribution towards promoting engineering education, training and professional project management in the State of Kuwait.



ACI-KC Past President, Eng. Mousa Al-Sarraf



Mr. Aziz Mamuji: Master of Ceremonies



Awards Ceremony Audience

■ Award of Excellence 2014 - 2015

Innovatively Designed Landmark Development

ACI-Kuwait Chapter presents the Award of Excellence to a project in recognition of , amongst other aspects, outstanding design using concrete, innovative architectural and structural design landmarks, and high standards of construction.

The Award of Excellence for 2014 was presented to Mabane Company for The Avenues (Phase 3), which was honoured for being a grand and innovatively designed landmark development that provides a unique retail and lifestyle experience in the State of Kuwait for its residents and visitors.

■ The Vision

Mr. Mohamed Al Shaya, Chairman of Mabane Company, had a vision for this project. He wanted to create a complete city, a uniquely designed and iconic multi-facility destination combining shopping, dining, relaxation, opportunities for quality family time and entertainment. The dream was to integrate everything into one convenient mega-development that would receive worldwide recognition and, more importantly, help enhance Kuwait's reputation as a major shopping hub.

■ Design Influence

To realize this vision Mabane Company commissioned some of the world's leading design and engineering consultants to undertake the design work. Norr Consult of Canada were appointed as the international design consultants for Phases 1 and 2. Gensler of USA, was commissioned to design Phase 3, referred to as Grand Avenue, which is the recipient of this year's award. PACE of Kuwait, as the local design and supervision consultants have worked on all phases. Consultants have been involved in this mega-project for about 13 years, and their involvement is likely to continue for a few more years as Phases 4 and 4B are still under design and construction.

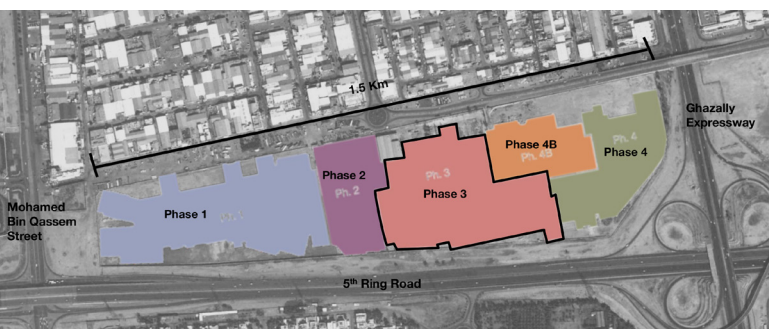
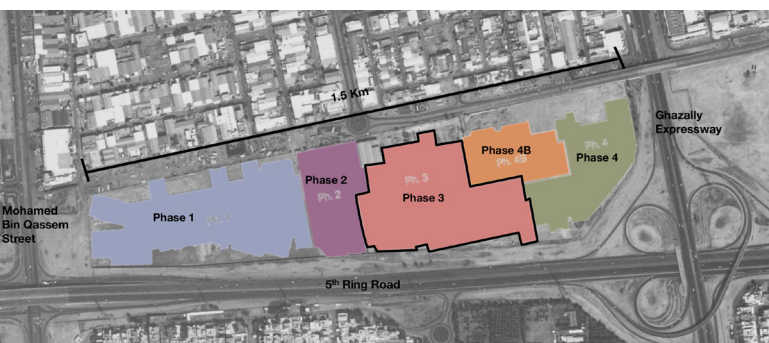
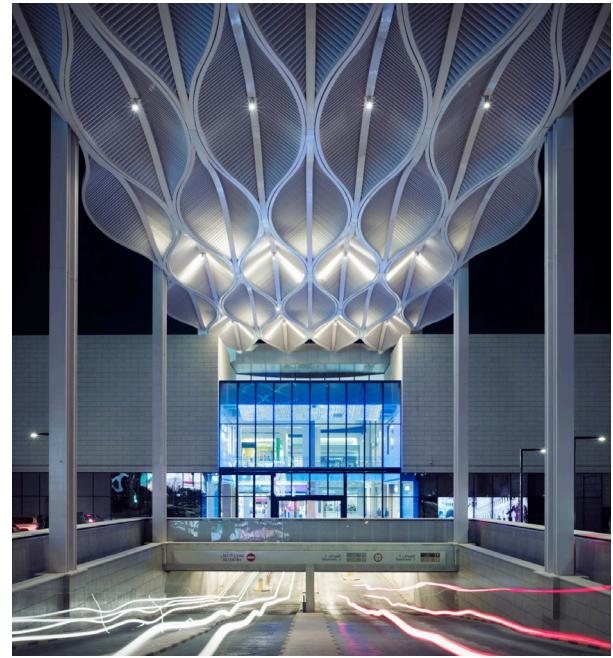
Design work started in 2002, and given the anticipated scale of the complex that will have an overall length of over 1.7



The Avenues, Phase 3

■ Development Scope

Overall Plot Area	394,000 m ²
Phase 3 Plot Area	86,000 m ²
Total Built-up Area	1,239,000 m ²
Phase 3 Built-up Area	413,000 m ²
Commercial Units	8,400 cars
Food/Beverage Units	3,770 cars
Cinema Complex (Screens)	774
Entertainment Centre	149
	11
	2



The Avenues, Phase 3

■ Construction Highlights

An interesting fact pertaining to its expedited construction is the casting of the Phase 3 raft. The raft covered an area of 100,000 m², and its thickness varied between 2.3 to 3.0 meters. It was constructed as one plate at a depth of 16.0 m below ground level, and a total of 0.5 million cubic meters of concrete was poured. Of this, about 12,000 m³ was completed in a single continuous operation lasting over 36 hours, with 9 pumps working and 120 transit mixers in use. Different stages of construction were carried out simultaneously to achieve expedited completion. Other interesting features of the project include the wave shaped skylight spanning 18 m along the Prestige Street; the dome above Prestige Square, which is a steel structure supported on a 36.0 m diameter concrete ring beam. The Grand

Avenue itself is 400 m long and 43 m wide, and it also serves as an emergency service route for fire trucks.

The Avenues is truly an iconic development of a scale few have considered. From a radical approach, through innovative procurement and to rapid delivery, the project has challenged pre-existing barriers and demonstrated what can be achieved with a great vision and the commitment of all stake-holders.



The Avenues, Phase 3, Skylight along Prestige Street



The Avenues, Phase 3, Dome above Prestige Square

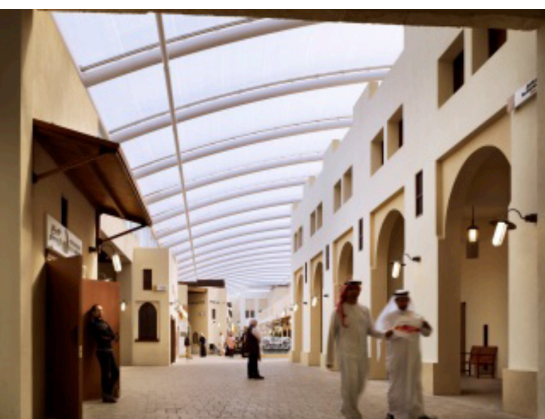
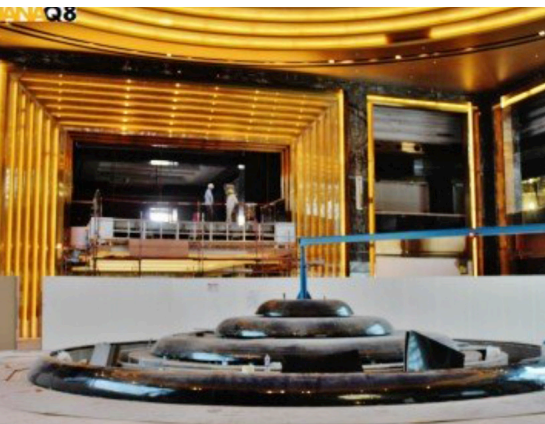


The Avenues, Phase 3, Soku extension and West Village construction

km when fully finished, it was inevitable that it should be implemented in phases. Construction commenced in 2004. The design itself was inspired by natural forms of the desert, dunes, rock formation and the sky, with European street visits influencing the interior character.

Mabane Company's strategy was to complete construction in the shortest possible time; achieve very good quality of work; and to ensure full cooperation and coordination between all concerned parties: Clients, Consultants and Contractors.

Avenues Phase 3 comprises five development districts:
The Grand Avenue, The Mall, Souk, Soku, Prestige Luxury Mall



The Avenues, Phase 3

Awardees

- Award of Excellence:
Owner:
Mabanee Company

Certificate and plaques were presented to:

- General Contractor
Alghanim International General Trading and Contracting Company
- International Design Architect
Gensler, USA
- Design and Supervision Consultant
PACE, Kuwait
- Main Concrete Supplier
Bubiyah Ready Mix
- Concrete Supplier
Lafarge Readymix Kuwait



Eng. Haitham Al-Rifai, CEO of Inshaa Holding and General Manager of Bubiyan ReadyMix, receiving the Award



Mr. Moumen Yousri, General Manager of Lafarge Readymix, receiving the Award



Mr. Waleed Al-Sharian, General Manager of Mabanee Company, receiving the Award



Mr. Tarek Hamid Shuaib, Managing Partner of PACE, receiving the Award



Mr. Tarek Abdulhamid Eisaa, President of Fouad Alghanim General Trading and Contracting, receiving the Award

■ Award of Achievement

Promoting engineering education, training and professional Project Management

The 2014 Award of Achievement was presented to Dr. Nabil Hani Qaddumi for his lifetime contribution, of over 30 years, towards promoting engineering education, training and project management in the State of Kuwait and in the region.

Dr. Qaddumi's journey has been that of two parallel paths - of a distinguished academic career; and of a committed professional whose work and efforts have firmly cemented the concept of multi-disciplinary project management in Kuwait. He has served his country and society well, and he has done that as an educator, professional and philanthropist. His career exemplifies his philosophy that "Life is not about making money – it is about the impact one will leave behind. It is about the seeds we will plant to make the world a better place. It is about giving back to society, your community and to your country."

Dr. Qaddumi was born in Kuwait in 1954. After attending Ghazali Elementary School and Shamiya Middle School in Kuwait, he joined Rawda High School in Beirut. In 1972, he commenced studies in civil engineering at the American

University of Beirut. When the Lebanese Civil War started in 1975, he enrolled at the University of Texas in Austin, USA, graduating with a B.Sc degree in Civil Engineering in 1976. Later that year he went to Stanford University in California where he obtained his Master of Science degree, focusing on construction management. After a short working stint in California, he went to the Massachusetts Institute of Technology (MIT) in Cambridge to pursue his doctorate, which he acquired from their Construction Management Programme in 1982.

The seeds of his entrepreneurial spirit took seed at MIT, which he nurtured after returning home to Kuwait as an Assistant Professor in Kuwait University's Civil Engineering Department. His 13 year career with Kuwait University was indeed very distinguished; but early during this period he was called for military service. He served as a Lieutenant



His Excellency presents the Award of Achievement to Dr. Nabil Hani Qadummi



at the Military Academy, where he had the opportunity to continue his software design work. In 1989, he became a visiting lecturer at Stanford University, and his stay there was extended due to the 1990 invasion of Kuwait. He returned after the Liberation to re-join Kuwait University. Incidentally, a matter of considerable academic pride for him is being invited in 2014 to join the Academy of Distinguished Alumni of the University of Texas.

In 1984, while still at Kuwait University, Dr. Qaddumi ventured into Project and Construction Management, starting a company called Projacs (which is the short for Project Analysis and Control Systems). Needless to say, the Company has indeed become very successful – and today, with a staff of 1000 operating in 20 countries, it has been ranked by the reputed Engineering News Record



■ Academic Career

- **Kuwait University**
Assistant Professor, 1982-1994
- **Vice Rector for Research Office**
- **The Khwarezmi Project**
Computer Literacy Programme
- **Vice-Rector for Planning Office**
- **Kuwait Institute for Scientific Research Project**
Leader, Building Department , 1984-1989
- **PMP Professional**
- **Member of Kuwait Society of Engineers**

(ENR) publication as the 14th largest firm operating in this field outside the USA. It currently is managing projects exceeding \$ 10 billion, primarily in the Arabian Gulf countries. He is also the founder and chairman of SPETCO (Safwan Petroleum Technologies) and a Director of Jordan Investment and Finance Bank.

Public Service and Philanthropy

- In 2000 he started the Hani Qaddumi Scholarship Foundation in his father's name, to help needy students. 984 scholarships have been awarded to students in Palestine and Lebanon; and in addition 640 have obtained undergraduate or post-graduate degrees.
- Deputy Chairman of Arab Fund for Arts and Culture (AFAC).
- Until last year he was Chairman of Board of Trustees of the Welfare Association, which has carried out development work worth over \$ 30 million.

Family and Interests

Dr. Qaddumi is the father of 2 girls. He likes sports and still maintains a rigid activity regime; and is a staunch supporter of England's Liverpool Football Club. His personal mantra, which he diligently practices, is to live life at the highest level of professionalism, commitment, modesty, dedication and integrity.



■ ACI-KC Students' Committee

The ACI-KC Students were active as usual during the past period. Some of the Committee's activities are highlighted below.

■ COE 40th Anniversary

Celebrating the 40th anniversary of the Kuwait University's College of Engineering in Kuwait University. An open day was organised on November 18th, and students participated in many exciting activities.

■ Membership Drive

A membership drive was conducted on 18th October, 2015

■ Concrete Mix Design Competition

A student competition on concrete mix design was also held. Teams comprising members each, designed concrete mixes based on preset compressive strengths, and verified these experimentally.

■ Admissions

Students participated in the College of Engineering 18th Admission Exhibition that was held in October, 2015.

■ Exhibitions

The Committee organised with the help of MPW, an exhibition of current projects being designed or implemented under their supervision. The exhibition was held on 14th April, 2015 in the College of Engineering premises.

■ Workshop on Engineering Drawings

A workshop on how to read and understand engineering drawings was arranged by ACI and was moderated by Dr. Ihab Soliman from Kuwait University.



Board Members

Chairperson	Dana Al Akari
Vice Chairman	Shamlan Al Farah
Members	Jouri AlMuneir
	Fatma AlZufari
	Noura AlAnzi

Website	www.aciq8.com
Instagram	Aciq8



■ ACI Concrete Construction Awards

American Concrete International (ACI) recognized 11 winners at the 2015 Excellence in Concrete Construction Awards Gala during The ACI Concrete Convention and Exposition, November 9, 2015, in Denver, Colorado. The awards were created to honour the most creative projects in the concrete industry, while providing a platform to recognize concrete innovation, technology, and excellence across the globe. Extracts from the article on the awards, as published in the ACI magazine dated December 2015 are reproduced below.

ACI recognized 11 winners at the 2015 Excellence in Concrete Construction Awards Gala during The ACI Concrete Convention and Exposition, November 9, 2015, in Denver, CO. The awards were created to honor the most creative projects in the concrete industry, while providing a platform to recognize concrete innovation, technology, and excellence across the globe. To be eligible for participation in the Excellence Awards, projects must have been submitted by an ACI Chapter or one of ACI's International Partners.

The highest honor, "The Excellence Award," was presented to the MuCEM: Museum of European and Mediterranean Civilizations located in Marseille, France, and submitted by the Paris Chapter – ACI. This award is given to a project that demonstrates excellence in concrete innovation and technology, and stands out above all other entries.

An independent panel of industry professionals judged the projects and selected winners based on architectural and engineering merit, creativity, innovative construction techniques or solutions, innovative use of materials, ingenuity, sustainability and resilience, and functionality. The winning projects are selected from among five possible categories, with a first- and second-place winner available in each. For the inaugural awards program, the categories, winners, and project details included:

Editor's Note:

Pictures of the winning projects, and the write-up on Kuwait's Al-Hamra Business Tower, which won the first place in the High-Rise Buildings category are reproduced on in this article.

■ Low-Rise Buildings

- First Place: MuCEM: Museum of European and Mediterranean Civilizations, Marseille, France; submitted by the Paris Chapter – ACI.
- Second Place: Louisiana Sports Hall of Fame and Northwest Louisiana History Museum, Natchitoches, LA; submitted by the Louisiana Chapter – ACI.

■ High-Rise Buildings

- First Place: Al Hamra Business Tower, Kuwait City, Kuwait; submitted by the Kuwait Chapter – ACI.
- Honorable Mention: Tower One – World Trade Center, New York City, NY; submitted by the Concrete Industry Board, a New York City Chapter – ACI.
- Honorable Mention: Adobe Corporate Campus – Phase 1, Lehi, UT; submitted by the Intermountain Chapter – ACI.

■ Infrastructure

First Place: **Cable-stayed Foot Bridge**, Čelakovice, Czech Republic; submitted by the Czech Concrete Society.

- Second Place: **Interstate 5 Willamette River Bridge Project**, Eugene, OR; submitted by the Oregon Chapter – ACI.

■ Decorative Concrete

- First Place: **Jean Bouin Stadium, Paris**, France; submitted by the Paris Chapter – ACI.
- Second Place: **Downtown Doral Park Pavilion**, Doral, FL, submitted by the South Florida Chapter – ACI.

■ Repair & Restoration

- First Place: Mission Bridge Seismic Retrofit, Abbotsford, BC, Canada; submitted by the British Columbia Chapter – ACI.

■ High-Rise Buildings, First Place

Al Hamra Business Tower

Located on the site of Kuwait's first cinema, which for decades was a well-known landmark that attracted many residents and visitors, the Al Hamra Project builds on this legacy by providing the nation's tallest skyscraper—Al Hamra Tower—which has been recognized by the Council on Tall Buildings and Urban Habitat (CTBUH) as the 12th tallest building in the world. This new landmark and symbol of success offers a dynamic mixed-use facility to welcome investors, tenants, and visitors alike.

The Al Hamra Project's mixed-use development comprises the office tower, a shopping center, and a multi-story garage. The total leasable areas are 21,630m² (32,800 ft²) for the shopping center and 99,020m² (1,065,000 ft²) for the office tower, all served by an 11-level garage with about 2000 parking spaces.

As the centerpiece of the project, the office tower is an iconic sculpted edifice that will provide the country's largest office space. The office floors, the first starting at 35m (115 ft) above ground level, have spectacular panoramic views of the Arabian Gulf, Kuwait City, and beyond.

The tower's south wall, surrounded by twisting east and west walls, serves as the structural spine for the building. It contains sky bridges connecting the east and west wall on each level, as well as openings allowing for dramatic views of the city while controlling solar radiation into the building. The tower's 20m (66 ft) tall lobby was made possible by the creation of a lamella structure (a series of reinforced concrete web-like vaults) to transfer column loads from the north face of the tower to its foundation.

The project used a self-consolidating concrete mixture containing a ternary blend of portland cement, microsilica, and fly ash; having strengths from 40 to 80 MPa (5800 to

11,600 psi); and pumped to a height of up to 412m (1350 ft). The self-climbing formwork system used for the walls had to be adjusted with each concrete placement to compensate for displacement caused by the counterclockwise torqued geometry of the walls.

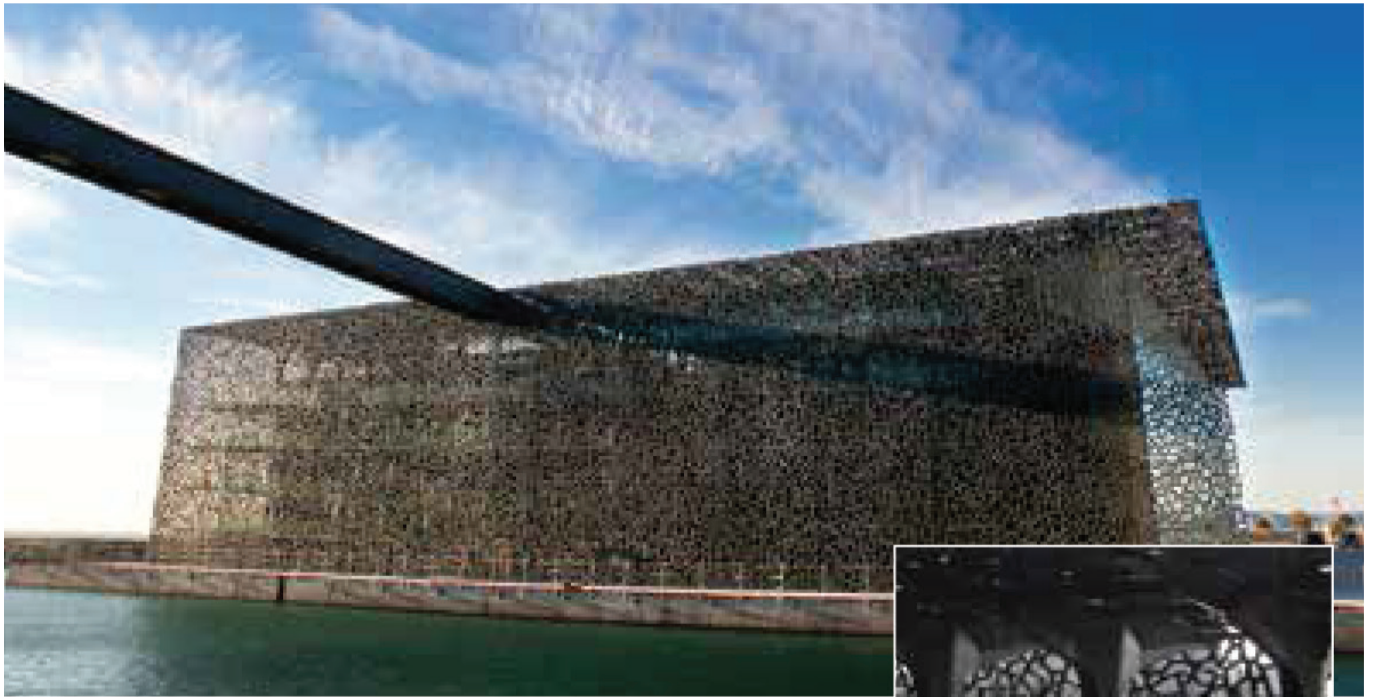
Project credits: Al Hamra Real Estate Co., Owner; Skidmore, Owings & Merrill LLP, Architect of Record and Engineer of Record; M/s. Ahmadiyah, General Contractor, Concrete Contractor, and Concrete Supplier; KCSC, Kuwait, Contracting and Trading Company; Turner Construction – International LLC, Project Manager; Al-Jazera Consultants, Local Design Consultant; and Ajial Real Estate & Entertainment Co., Additional Company Participation.



Al Hamra Business Tower, Kuwait City, Kuwait

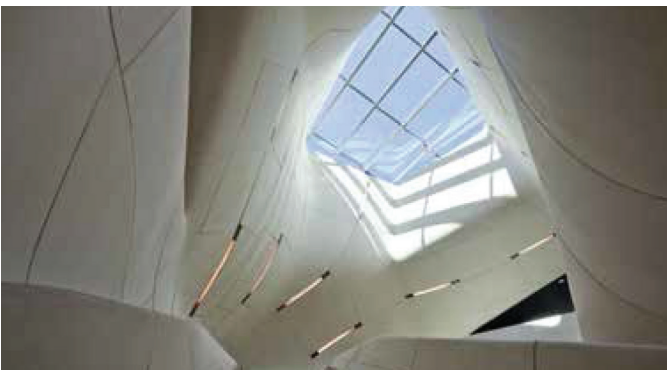
■ Excellence Award and Low-Rise Buildings, First Place

MuCEM: Museum of European and Mediterranean Civilizations, Marseille, France



■ Low-Rise Buildings, Second Place

Louisiana Sports Hall of Fame and Northwest Louisiana History Museum



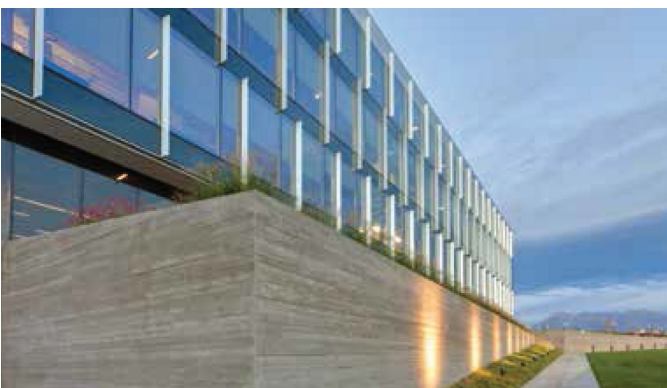
■ Repair & Restoration, First Place

Mission Bridge Seismic Retrofit



■ High-Rise Buildings, Honorable Mention

Adobe Corporate Campus – Phase 1



■ High-Rise Buildings, Honorable Mention
Tower One – World Trade Center



■ Infrastructure, First Place
Cable-stayed Foot Bridge



■ Infrastructure, Second Place
Interstate 5 Willamette River Bridge Project



■ Decorative Concrete, First Place
Jean Bouin Stadium



■ Decorative Concrete, Second Place
Downtown Doral Park Pavilion



■ Technical Activities

Big5 Kuwait

The Big5-Kuwait 2015, the country's largest international construction exhibition, opened to an overwhelming visitor response which saw the attendance of local dignitaries, industry leaders, and government officials. For the third year in a row, ACI-Kuwait Chapter participated in sponsoring BIG5-Kuwait.

BIG5 is considered to be one of the largest exhibitions in the construction and building industry in the Gulf. Big5-Kuwait was held for the first time in September 2013; and as previous years, ACI-KC was invited to co-sponsor this year's event. A Memorandum of Understanding was signed, according to which a link between ACI-KC and BIG5 was established. ACI-KC members were invited to attend this event.

The exhibition, which this year was 40% larger than that of 2014, was held over the period 14th -16th September, 2015 at Kuwait International Fairgrounds. The highlight of the event was the performance of diggers (backhoes), famous throughout the world as the 'Dancing Digger Show', organized by JCB Middle East for the first time in Kuwait. A team of expert backhoe operators performed well-orchestrated and enthralling stunts with the diggers, including driving one machine under another raised up on its hydraulic arms!

Visitors also showed tremendous interest in the 20 free-to-attend workshops that offered attendees Continuing Professional Development (CPD) credits. These were conducted by industry professionals and market experts. Two presentations were delivered by ACI-KC. These included "Advancement in Concrete Durability and Sustainability" by Dr. Moetaz El-Hawary, ACI-KC President; and "Innovations in Concrete Technologies and Applications" by Dr. Hisham Abdel-Fattah, ACI-KC member and associate Professor at the Australian College of Kuwait (ACK).

A half-day seminar on 'How to Trade in Kuwait' was a particular hit amongst investors, businessmen, and entrepreneurs, as it enlightened them about how to establish business in the country. The session provided practical advice to those looking to set up an enterprises in Kuwait, to ensure they enter the market efficiently.



■ Coloured Concrete

■ What is Coloured Concrete

Coloured concrete is much more than just another 'concrete'. It allows you to create colourful designs, which was not possible before with plain concrete. It allows one to create beautiful and colourful designs keeping all the advantages of concrete. It is hard wearing and long lasting, and is suitable for home owners, architects and landscape architects, enabling them to develop exciting patterns and textures and offering unrestricted creativity on any project.

■ Applications

Coloured concrete can be modeled when fresh, or pounded like a stone when hardened, and can be applied on a wide range of setups and locations. In addition, it can be utilised as a pavement for landscaping purposes, giving walkways and driveways a wonderful aesthetic effect. Architectural features can be enhanced in a variety of way, thereby allowing designers to introduce more innovative features in their work. It can also be applied to demarcate zones where underground utilities and services have to be highlighted or to become easily identifiable. Whether internal or external, coloured concrete can be trusted for providing durability and high quality.

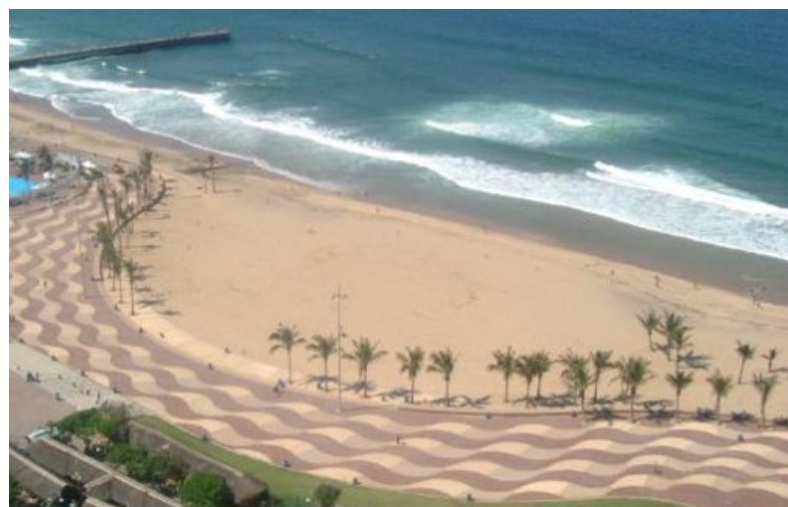
■ Advantages and Characteristics

Coloured concrete provides an integral through colour. It is a long lasting, low maintenance and fade resistant in-built decorative solution. A range of proprietary mixes are available for most applications, which can be achieved with various aggregate sizes.

Coloured concrete behaves in exactly the same way as equivalent non-coloured grade of concrete with regards to slump, placing and setting time. As with all concrete, provision has to be made for movement, with the incorporation of slip membranes and contraction and expansion joints. It can be used internally and externally; and can be specified for use with almost any concrete

and is suitable for non-structural, structural and precast applications.

As coloured concrete is normally delivered with the required slump and water/cement ratio, and with sufficient colour



pigmentation, adding water on site has to be avoided. Additional water can have a significant impact on the colour.

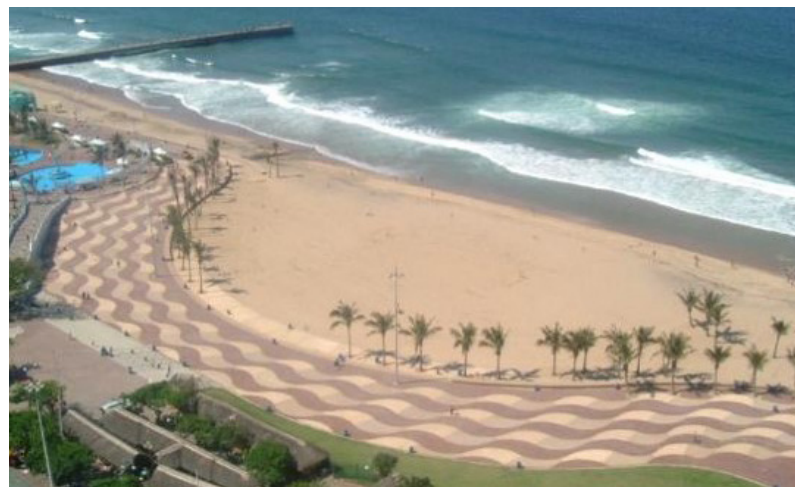
■ Delivery and General Guidelines

Coloured concrete is delivered in a uniform consistency and the final result depends on construction methods such as placing, workmanship, equipment cleanliness, mold oil, type of finish, formwork, curing method, environment and weather conditions. Accordingly, some local variations from the colour chart/samples are to be expected as a result of different raw materials used in different places. The retarder dose can be tailored to individual job sites depending on the size of the pour and complexity of placing.

In order to achieve the optimum results for coloured concrete, the following guidelines are recommended:

- Ensure that the concrete is ordered at the correct slump/workability for the chosen application.
- The water/cement ratio of concrete has significant impact on the colour and as such the addition of water on site is to be avoided.
- A well compacted sub-base is essential for the stability of a new slab. Sub-bases should be at least 100mm thick and equal in depth to the concrete.
- Consistency in placing and finishing is essential as variations can affect colour. Different finishing techniques will affect the way light is reflected from the concrete and hence the perceived colour.
- The curing method will also have a bearing on colour, as will the chosen sealer if applied. Poor curing can lead to lighter colours or shading.
- The slab surface should preferably be sealed with a clear acrylic sealer in order to protect against staining.

Lafarge Kuwait is a member of LafargeHolcim, the top ranked building materials group in the world - presenting a new leader for a new world. Lafarge Kuwait is exclusively introducing to the Kuwait market their product called Artevia®, which is a range of decorative concrete that offers the quality, applications and advantages stated in this article. A cut sheet for the product is reproduced here. It highlights the benefits, applications and technical specifications of coloured concrete.



■ ACI-KC News

■ Annual Dinner

This year's Annual Dinner was held on 15th December, 2015 at Salwa Sabah Al Ahmad Theatre and Hall, located on Gulf Road. The dinner was sponsored by BAXEL and HYCRETE, two companies that deliver concrete solutions.

Ms. Dana Drobiova, Chairperson of the Social Committee welcomed the many members and guests who attended to the event, and then invited Dr. Moetaz El-Hawary, President of ACI-Kuwait Chapter, to address the audience. In his speech Dr. Moetaz outlined ACI-KC activities for this year, and thanked the sponsors for hosting the evening.

Mr. Randall Coley gave an informative presentation on HYCRETE, explaining its technical qualities and its use in preventing corrosion of steel in concrete structures. Following the presentation, Mr. Coley and his colleague, Mr. Soran Thompson, answered questions from the audience.

The evening concluded with Ms. Drobiova wishing everyone well for the New Year; and, of course, a sumptuous buffet.

■ ACI-KC President's Article

An article on ACI-KC's Annual Awards Function was published in the October 2015 issue of CI, Concrete International, the magazine of American Concrete Institute. The article was contributed by Dr. Moetaz El-Hawary, President of ACI-Kuwait Chapter. The Publication Committee is pleased to reproduce that article in this issue of ACI-KC Concrete News.

■ ACI-KC 4th International Conference and Exhibition

Dissmination and exchange of knowledge and information are the main goals and objective of the American Concrete Institute - Kuwait Chapter, as information and knowhow are the backbone of technology development and industry improvement.

ACI-KC announces its 4th international coference and exhibition that will be held in Kuwait Over the period 28-30 March, 2016 of renowned keynote speakers will be invited to share their experience with us. The conference will be also accompanied by other technical and social event that will be announced in due course.

A Recap of Recent ACI Chapter Awards

Kuwait Chapter – ACI 14th Annual Awards Banquet

Kuwait Chapter – ACI is a fast-growing chapter. The chapter has reached 510 individual members, 67 organizations, and 38 student members. Chapter activities include technical seminars, field visits, training courses, social events, technical guides, student activities, and many others.

The 14th Annual Awards Banquet was held in May 2015 at the Jumirah Hotel, Kuwait. The banquet was hosted under the patronage of H.E. The Former Minister of Public Works and former Minister of Electricity and Water Abdul Aziz Al Ibrahim. Two awards were given: the Award of Excellence and the Award of Achievement. The former is given to the most distinguished construction project of the year. The award is presented to recognize and celebrate outstanding work in concrete construction and practices, innovative architectural and structural design, response to cultural considerations and traditions, architectural landmarks and iconic structures, high standards of construction and quality, renewal and renovation projects, creative use of concrete, and public appreciation of a project. The Award of Excellence was given to The Avenues, Phase 3, described as a "Grand and innovatively designed landmark development, providing a unique retail and lifestyle experience for residents and visitors in the State of Kuwait." The award was given to the Mahane Company, Owner; Alghanim International General Trading and Contracting Company, General Contractor; Gensler, International Design Architects; Pace, Design and Supervision Consultant; Bubiyan



Kuwait Award of Achievement 2014



KUWAIT CHAPTER
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Smart, Green and Durable Concrete Structures

March 28 - 30, 2016

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Messilah Beach Hotel
ACI-KC Award of Excellence 2013-2014



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