President's Message

G'Day! Wow, the joint tour and dinner meeting we had recently at the soon-to-be-completed Rental Car Center at the San Diego Airport with our CSI OC and SDA chapters was fantastic! A big thank-you must go out to one of our own — Morten Awes; he was the Project Architect with the ADC working on the Rental Car Center. Thank you also to Darlene Dunn who helped put all the logistics together, along with numerous other people to make this happen. What a wonderful state-of-the-art facility we will have in San Diego.

I haven’t spoken to you about my trip to our 59th CSI Annual Convention and Construct expo held in St. Louis, Missouri (America’s Gateway City) September 30th through October 3rd. The opportunity to meet and learn alongside new and familiar faces never ceases to grow old. The 11 tracks of educational sessions offered ranged from topics about the future of specification writers to Pecha Kucha-style panel discussions with boxed lunches.

Tom Koulopoulos, founder of Delphi Group, was the thought-provoking keynote speaker, discussing ideas from his book The Gen Z Effect. The two technical tours explored the St. Louis Central Library Restoration and the Arch Grounds, along with the Old Courthouse and Cathedral buildings.

We had an abundance of exhibitors (me included) at the Exhibit Hall that rounded out the week’s events. Make sure to mark your calendar for next year’s 60th anniversary which will be in Austin, Texas. Pack those cowboy boots and get ready for a swinging good time!

In the spirit of Thanksgiving, I want to take a moment to say how thankful I am to be part of such a great organization as CSI and in particular our wonderful Chapter. Our meetings would not be possible without the help and support of all of you.

I hope that you and your families had a safe and happy Thanksgiving, and I will see you all at our next meeting.

Racquel McGee, CSI, CDT
2015-16 SDCSI President

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Calendar of Events

♦ NO CSI San Diego Dinner Meeting in October!

♦ SEPTEMBER 30 to OCTOBER 3, 2015
CONSTRUCT2015

Location: The America’s Center
St. Louis, Missouri

♦ MONTH OF OCTOBER ...

ARCHTOBERFEST 2015: SAN DIEGO
ARCHITECTURE & DESIGN MONTH

Features scores of public programs and events throughout October, many free or low cost and family-friendly, brought to life by the region’s leading organizations in the domains of architecture, design, planning and sustainability. Rediscover San Diego and its great places and spaces and plan your Archtoberfest (pronounced “Ark-toberfest”) participation by visiting www.archtoberfest.com.

♦ THURSDAY, NOVEMBER 10, 2015
4:30-7:30 PM
Tri-Chapter CSI Tour of Rental Car
Center (RCC) and Related Dinner
Presentation

♦ FRIDAY, DECEMBER 18, 2015
7:00 AM—REGISTRATION
7:30 AM—BREAKFAST SERVICE

JOINT CSI/ASPE SAN DIEGO
HOLIDAY BREAKFAST MEETING

Program: “2016 Economic Forecast”

Speaker: Alan Nevin
Director of Economic & Market Research
Xpera Group

Location: Admiral Baker Golf Course Clubhouse
2400 Admiral Baker Road, San Diego

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San Diego Chapter SpecTickle Advertising

**SpecTickle Advertising Rates**

- Business Card: $275 - 6 issues or $500 - 12 issues
- ¼ page: $550 - 6 issues or $1,000 - 12 issues
- 1-pg flyer/issue: $125 mbrs; $150 non-mbrs

For more info, contact Executive Administrator Margy Ashby at admin@sandiegocsi.org or 877.401.6733 / 619.401.6733.

**Deadline** for newsletter input:
FRIDAY, DECEMBER 11th

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RESERVATIONS

The CSI San Diego Chapter accepts credit cards for
Chapter events through
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A RESERVATION MADE IS A RESERVATION PAID!
Dear San Diego Chapter Members—

After many years of being your Editor (I lost count of exactly how many), I have decided to “retire” from that position and allow some other people to have fun doing the job. My hope is that, in the future, we will have more participation by Chapter Members to truly make the SpecTickle your newsletter. By this, I mean it would be wonderful if more members would contribute articles and reports about their endeavors and areas of interest and expertise in the Construction World. This Chapter has many talented, knowledgeable people with various backgrounds and expertise. Let us hear from you!!

I will gladly meet with anyone taking on the Editor position to train them.

Best wishes to you all for a happy and meaningful holiday season!

Rob Smith, CCS, CSI, RA

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HELP WANTED!

URGENTLY need the following open positions to be filled:

Vice President
Director
Newsletter - Editor

General Volunteers to take this great Chapter into the 2016 year with a bang.
Tell Me Again, Part 2

by Sheldon Wolfe, RA, FCSI, CCS, CCCA, CSC

In "Tell Me Again, Part 1," we looked at how proper use of reference standards can reduce the amount of text required by making those standards part of the specifications. Going back to the "say it once" principal, proper use of Division 00 and Division 01 can go a long way toward eliminating needless text.

In the good old days, it was common to include at the beginning of every specification section a statement similar to this: "Drawings and General Provisions of the Contract, including General and Supplementary Conditions and Division - 1 Specification Sections, apply to this Section."


Although the Division 01 role in governing the work has been accepted in practice for many years, this authority is not explicitly stated in either the AIA or EJCDC general conditions. Until that change is made, the authority should be established by a provision in the supplementary conditions as follows: Sections of Division 01-General Requirements govern the work of all sections of the specifications.

Even though the A201 and other general conditions make it quite clear that the contractor is responsible for means and methods, I expand this statement to read, Sections of Division 01-General Requirements govern the work of all sections of the specifications. The Contractor shall ensure that all Subcontractors, Sub-subcontractors, and suppliers are aware of and comply with the provisions of Division 01.

Having established the role of Division 01, there is no need to restate it in every specification section. The A201 agrees with that position, stating "The Contract Documents are complementary, and what is required by one shall be as binding as if required by all." Other general conditions typically have similar statements.

Interestingly, while some specifications have followed CSI's advice and deleted the "Drawings and General Provisions…" paragraph, many specifications now have added several more needless references to Division 01 such as these:

- Conduct pre-installation meeting in accordance with Division 01 Section 01 31 19.
- Submit in accordance with Division 01, Section 01 33 00.
- Comply with requirements of Section 01 65 00 and Section 01 66 00.
- Comply with provisions of Section 01 78 00.
- Substitutions: Under provisions of Section 01 25 00.
- Examine conditions and proceed with work in accordance with Division 01, Section 01 71 00.
- General: Comply with requirements of Division 01, Section 01 45 13.

"Well, I just want to help people find what they're looking for!" Following that logic, why stop there? Why not include references to information about taxes, or contract modifications, or final payment in each section?

Division 01 can save a lot more text than that found in the above references. Properly written, they can minimize or eliminate many statements commonly found in specifications. One of the most important requirements, with the widest applicability, is "Follow manufacturer's instructions and recommendations."

The drawback with relying on manufacturers' instructions is that they might miss something, or you might choose to specify more restrictive requirements. In those cases, Division 01 sections can reduce the need for many statements in the specification sections.

For example, consider the article for delivery, storage, and handling. Most materials should be protected from the elements until they are installed. A comprehensive Section 01-6000-Product Requirements can include storage
Learn More about CSI’s Corporate Partner Program

CSI’s Corporate Partner Program is designed for building product manufacturers, design firms and other commercial construction-related organizations that have multiple employees interested in joining CSI and accessing CSI’s products and services at value pricing. The Program provides increased visibility for partnering companies as well as professional development opportunities for organizations wishing to educate their project teams. CSI thanks and recognizes the following companies that have recently joined the Corporate Partner Program:

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- Metal-Era
- Noble Company
- Nudo Products, Inc.
- Specifications Consultants in Independent Practice (SCIP)

See a full listing of CSI Corporate Partners. Ready to become a CSI Corporate Partner? Contact CSI Director, Business Development Susan Konohia at 800-689-2900 ext. 4744.

Tell Me Again, Part 2 (cont’d from pg 4)

requirements such as temperature range, humidity, and protection from moisture, that are suitable for all but a few products. Add the basic requirement for complying with manufacturers’ instructions, and there isn’t much left to say. Do the same for packaging, labeling, and handling; then go on to other subjects of Division 01 sections, and you may find you can delete some of the standard articles in the specifications.

Another place to look for redundancies is the “Common Work Results” sections found in mechanical and electrical specifications. These sections often state requirements already found in the general conditions, in bidding requirements, and in Division 01 sections. The only time those subjects should be addressed is when mechanical and electrical specifications have additional or unique requirements, and even then I would try to take care of the differences in Division 00 and in Division 01.

I have looked at many of these sections at the beginning of mechanical and electrical Divisions, and rarely have I found anything not already specified in the front end of the project manual. At best they are merely redundant; most of the time they are contradictory.

We spend a lot of time talking about Division 01, but it's also worth taking a look at what's in the general conditions. I have seen many specifications that discuss payment for testing, for re-inspection, for concealing work before it was inspected, for unauthorized work, and for similar activities. These typically are covered in the general conditions; in the A201, they are found in Articles 12 and 13.

Why are we so concerned about redundancies? Perhaps the biggest problem is that when different people state the same thing, they may do it differently. Another problem, which isn't so obvious, is that the longer the specifications are, the longer it takes to read them, and the more likely that things will be missed. Why add a lot of unnecessary text, making it harder for the contractor to understand?

Shorter specs are more likely to be read, will be easier to read, and will be easier to interpret.

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Agree? Disagree? Leave your comments at http://swconstructivethoughts.blogspot.com/
Serving Others

by Marvin Kemp, AIA, CSI, CDT

Sunday’s mass at our church was offered for my friend, Mark, who passed away in December. I wrote about Mark, his prayer service, funeral and his service to me and to our church.

Mark’s widow, his daughter, son-in-law, grandson and many friends were at church tonight. This was not announced publicly. In fact, I didn’t know the mass was for Mark until I read the Prayer of the Faithful before mass. I was training two young people to be lectors at our mass so we went through the call to worship, the two readings, the Prayer of the Faithful and the announcements. It’s fitting that I found out the mass tonight was offered for Mark while I was preparing young people for service in the church.

It also dovetails nicely with some other items from my recent efforts. Last week at CONSTRUCT [CSI National Convention & Exhibit], I gave a presentation on being a Buddy, Coach and Mentor at work or in our professional organizations. My major theme is that in our work and volunteer activities, we need buddies to make things fun, coaches to help us be better at our current jobs, and mentors to help us across our careers.

I noticed that many of the presentations I attended at CONSTRUCT mentioned mentorship and service to others. In one on developing the next generation of specifiers, the notions of coaching and mentoring specifiers were particularly acute.

CONSTRUCT also featured the Young Professionals program which I hope grows into an annual event. Chaired by my good friend, Cherise Lakeside, a group of young professionals spent Wednesday learning about various topics and then toured the Hager facility in St Louis. I spent some time Wednesday morning with the group talking about how to network at CONSTRUCT and then in a speed mentoring session. It was a great event and I think the young professionals found it beneficial.

I’ve also been doing some work thinking and writing about what I enjoy the most about my volunteer activities. In the past, I coached soccer, but now I focus on scouting and working in my church. I’m a member of my son’s boy scout troop committee and assist the troop and my other son’s cub scout pack in a myriad of ways. In our parish, I help with confirmation and organizing young people to lector at our 5:30P mass which also features a contemporary music group and progressive message.

In my work activities, I try to focus on creating the next generation of architects and firm leaders by spending time with our staff making them better at their jobs and helping mentor them for the future that is coming.

I do a lot of reading about leadership. I follow many people on Twitter who tweet about leadership. These themes of mentorship and service to others are reoccurring in my reading and in my life. I think this is what Mark wanted for me and for all of us: serve others, work in your faith, but have a ball doing it! You do that every day, and you’ll have a rich and rewarding life.

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In the last quarter of the 19th Century, the Age of Robber Barons, many self-made men became famous and rich, Carnegie and Rockefeller are two names that come to mind. William Mulholland also came of age in this period and, although he never became rich, or as widely known as his contemporaries, it can be argued that his accomplishment in the construction of the Los Angeles Aqueduct was far more important for its scale, for its novel engineering, and its impact on the development of Los Angeles and Southern California. This story is presented by Lee Standiford in the biography, Water to the Angeles, William Mulholland, His Monumental Aqueduct, and the Rise of Los Angeles.

Mulholland was born in Ireland in 1855. He immigrated to the U.S. in 1874, arriving uneducated in California by 1877. He began work as an irrigation ditch tender for the privately owned Los Angeles Water Co. and by 1886, at the age of 31, had risen to be its superintendent. By 1896, Mulholland had overseen the construction of 325 miles of iron water piping during a period of dramatic population growth and, with this, growing concern that the Los Angeles River would not meet the water demand forever. The City of Los Angeles purchased the Los Angeles Water Co. in 1901 and named Mulholland the chief engineer. Due to drought conditions then, the LA River was carrying less than half the volume of water it had carried 10 years earlier. In one of his first acts, Mulholland installed meters on each customer’s water line. This simple step reduced water usage by a third. But this wouldn’t be enough as population continued to increase and Mulholland realized he had to find a new source for water, outside of LA. Between 1900 and 1905, the population of LA had more than doubled to nearly 250,000.

At the suggestion of former LA mayor and real estate promoter Fred Eaton, Mulholland traveled to the Owens Valley in 1904 and determined it to be a feasible source of high quality water. The only question was how to get it to Los Angeles, 225 miles to the south. On July 29, 1905, Mulholland revealed detailed plans for spending $23 million to transport the water through construction of a series of canals, 43 miles of tunnels, and 12 miles of steel pipe siphons. The basic factor in making delivery of the water feasible was the elevation change, from 3500 ft. above sea level at the Owens Valley to 1300 ft. elevation at its terminus in the San Fernando Valley.

The bulk of the book is devoted to details of the six-year construction process. Before construction on the aqueduct itself could begin, detailed survey work for the route had to be completed. Then the infrastructure to support construction had to be built. This included access roads across the uninhabited desert, camps to house the 3,600 workers, wells and water lines, electrical power plants, and a cement plant. Additionally, hospital and medical services had to be established in remote regions along the way. Food had to be procured and prepared.

The scale of the project is almost breathtaking, and no part of it more so than the construction of the steel pipe siphon at Jawbone. Here, an 8,000 ft. long pipe, 10 ft. diameter had to cross a valley, down one side, across the bottom, and up the other, with the sides sloping at a nearly 35-degree angle. It was constructed of 1¼” thick, predrilled and preformed steel plates, each weighing up to 52,000 lbs., manufactured in Pennsylvania and transported on wagons by mules from the nearest railway line and then supported in place on timber cribbing during the riveting process.

Mulholland was a great work planner and a charismatic manager of his men. This resulted in completing the project on November 5, 1913, nearly one year earlier than initially planned. He was also a vigilant guardian of the City’s construction funds. This was important since the City had great difficulty selling bonds to finance construction, and for one short period had to halt construction for lack of cash. He was always looking for new, less costly ways to build. He found it was cheaper to manufacture his own cement rather than purchase it. He determined that the amount of cement used to make concrete could be reduced by up to 50% by using locally mined volcanic tufa as a cement replacement. He found that it was significantly cheaper to construct the aqueduct using his own City construction employees, rather than using construction contractors bidding on portions of the work. His use of incentive payments to laborers bore significant improvements in productivity and was an important reason why the entire project was completed very close to the original cost estimate. Mulholland coined the term “caterpillar” for a tracked vehicle he developed to haul heavy loads in the desert. This vehicle was subsequently abandoned when the use of mules was...
**Kearny High, School of Engineering Mentor Opportunity**

**Background information on the School of Engineering senior project:**

Each year 12th grade students at the Stanley Foster School of Engineering, Innovation, and Design (EID) at the Kearny High Educational Complex work on a culminating project through their final capstone engineering course. Through this class students will demonstrate their knowledge and understanding of the design process by creating an architectural design or a mechanically engineered product. In preparation for life after high school we would like our seniors to connect with a mentor three (3) times as they develop their senior project. This year we are using the an online portfolio space called the Innovation Portal. Within the Innovation Portal students are able to upload project designs and mentors are able to view and provide feedback electronically.

To read student project descriptions and sign-up to be a mentor click here: [https://goo.gl/AomYeJ](https://goo.gl/AomYeJ)

Note: There are two groupings **Architecture Project Descriptions** and **Engineering Project Descriptions** in the spreadsheet.

**What is the mentor’s role?**

The mentor role within this process should be minimal. It is more about our students going through the process of asking for input on concept ideas or something that is challenging, communicating with professionals in a real world setting, and using the writing skills they have developed thus far. Since students have already selected their project ideas, had due dates, etc. we ask our mentors to graciously come along side and work with what has already been set in motion and not suggest that their student (mentee) “start over”.

**Timeline for the Senior/Project/Mentor Connection**

- **December 7-11** Using the Innovation Portal student will connect with and ask mentor to review pictures of the 3D model uploaded to the Innovation Portal. Mentor will respond through the Innovation Portal with some overall observations, ask a couple of clarifying questions, notice something well done within the 3D modeling phase.
- **January 5-11** Using the Innovation Portal student will connect with and ask mentor to review final presentation and designs. Mentor will respond through the Innovation Portal with some overall observations, ask a couple of clarifying questions, notice something well done.

At EID, our goal is to raise up the next generation of engineers and architects. The mentors role will be minimal in terms of time commitment but have great impact on our students’ project and help prepare them for life after high school. Thank you for your consideration and we hope to be working more closely with you over the next few months. Lastly, some have asked if they are allowed to mentor more than one student. The answer is yes, of course. :-)

James Michaelian  
Vice Principal  
School of Engineering, Innovation, and Design (EID)  
Kearny High Ed. Complex

**Buch Notes**

(cont’d from pg 7)

determined to be more flexible and efficient. His design for an enormous steam shovel resulted in extraordinary progress in excavating. This same steam shovel design was used in construction of the Panama Canal a few years later. He also developed the hydraulic method of placing fill in earthen embankments, saving money and time, and he developed a pneumatic method for placing concrete that is still in use today.

Mulholland was a successful self-educated and self-made engineer. But his career was not without tragedy. His design for the St. Francis Dam in San Francisquito Canyon north of Sagus resulted in its failure in 1928 and the loss of 450 lives and untold property damage as the flood of water raced down the Santa Clara River bed 54 miles to the Pacific Ocean. This effectively ended his career. Mulholland died in Los Angeles in July 1935.

The book was published in 2015 by Harper Collins and has 315 pages, including a section of historical photographs.
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