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The “Connection” is the official publication of the National Institute of Steel Detailing, Inc., 2600 Kitty Hawk Rd., Suite 117, Livermore, CA 94551. Editor, John Linn

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This issue of the Connection highlights the 2017 Annual Meeting held in San Antonio, Texas.

San Antonio is a lovely place to visit. The river walk is one of its main attractions. It has a special charm with lots of outdoor restaurants alongside the beautiful and restful flowing San Antonio River. If you have been to San Antonio and have enjoyed the ambience of the river walk, you will understand why so many people love going there.

In years past, if our annual meeting was being held in lovely San Antonio, we would have had at least seventy or eighty people in attendance. This year our attendance was not even half that many. The decline in attendance started just after we began the twenty-first century. During the early years of the 2000s we experienced some pretty serious economic recessions not only in the U.S. but worldwide. Of course, it hit hard on new construction projects and we in the steel detailing profession were critically affected; as a result many detailing firms went out of business. In addition, I believe that with the advent of electronic transmission of drawings, steel detailers have become more exclusive than before when they would go and visit fabricators’ offices to bid work, attend start-up project meetings and maybe go out to lunch. In general we had more face-to-face interaction with not only our clients but also with some of the fellow detailers who were in our chapter.

Sadly we have lost much of the social contact we previously had within our institute. I remember the years when annual meetings would be big affairs with activities for spouses, with beautiful dinners and dancing and a good time was had by all. We made new friends, and with more members participating, we had good meaningful discussions in our annual meetings. I believe that was due to having a diverse membership with people coming from all over North America and more recently from overseas countries as well.

I fear that the loss of strong member participation and social activities at NISD annual meetings, may be the price we have to pay for advancing from hand drawings and face-to-face client visits to 3D computer detailing and electronics communications. But that certainly should not be the case. We should be aware though, and take notice of our diminishing participation at NISD annual meetings so as not to let these business changes change us. We will soon be sending out the information for the 2018 annual meeting, so please make an effort to attend if you can do so – we miss you!

Remember NISD is the only representation for steel detailers out there, and to keep it strong, we need to support it and celebrate it at our annual meetings. I hope to see you there in 2018 – our 50th anniversary!

I appreciate the contributions of articles for this Connection from several of our members: Richard Anderson, Jim Long, Kerri Olsen, Greg Brawley and David Merrifield.
Hello Everyone, and Happy Holidays!

It is hard to believe another year is almost over. As I write this during the Thanksgiving season and headed towards Christmas (at lightning speed) I can’t imagine where the time has gone. It seems like just the other day we were in San Antonio enjoying each other’s company and listening to some very informative, entertaining and enlightening sessions at our Annual Meeting. As we typically do, we heard from representatives of other parts of the steel supply chain such as steel erection, grating manufacturing and software suppliers. We had the opportunity to ask questions and look for new and better ways to solve problems that are important to all of us and to the steel industry as a whole. We appreciate the guest speakers who come to enlighten and entertain us and thanks to all of you who attended or served and made this year’s meeting a success.

At this year’s meeting we were able to reconnect with some old friends and make some new ones as our organization becomes more international and inclusive than ever. I had the privilege of presenting the 2017 Man of the Year Award to David Merrifield at this year’s meeting. David has worked tirelessly to promote quality in detailing through his contributions to our QP Program. He has been instrumental in helping to create and develop our CD-BIM certification program and has given webinars, represented the NISD and the detailing industry as a whole as a Board Member for the NISD, AISC and TSSI. Thanks, and congratulations to David for all his service to you and me.

As we move away from Thanksgiving and towards Christmas, I am reminded of how blessed and thankful I am for all that me and my family, both my relations and my work family, and you as my NISD family, have been given. So much of the time, we as detailers (maybe more than many vocations) are extremely focused and engrossed in our work as time and life speeds by us. I would urge all of you to pause and reflect on all your blessings during this season. Hopefully we can all find some way to bless someone else who may be less fortunate than we are especially during this time of year.

Thanks, and Happy Holidays!

Training, Safety, Leadership – Training Spotlight
AISC and IMPACT Introduce Steel Detailer Training Series

Originally developed by AISC and the National Institute of Steel Detailing, the AISC Detailer Training Series is being made available as a free web-based service thanks to funding from IMPACT.

The DTS program provides an introduction and overview of the roles and responsibilities of the steel detailer. This program consists of 10 Modules – most with multiple parts. Each of these parts consists of a series of videos, followed by a quiz pertaining to the concepts covered in that section. Click on a module listing on the DTS page to begin. At the end of the (entire) course is a final exam. A certificate of completion is earned upon passing this exam. Each exam can be repeated until a passing score is achieved.
**LOD Press Release**

*Dallas, November 7, 2017*

BIMForum released the official version of its *2017 Level of Development (LOD) Specification* ([www.bimforum.org/lod](http://www.bimforum.org/lod)) at its fall Forum in Dallas. The announcement of the release was preceded by a NASA presentation on their Martian Habitat Centennial Challenge ([www.bradley.edu/challenge](http://www.bradley.edu/challenge)), which has adopted the BIMForum LOD spec to evaluate submitted models. Looks like the Spec has achieved escape velocity!

The LOD schema is a language for the definition of the completeness and reliability of BIMs down to the element level – the *LOD Spec* is the dictionary for that language. The schema was developed by the American Institute of Architects (AIA) for their G202™-2013 Project BIM Protocol Form. The LOD Spec, developed under a licensing agreement between the AIA and the Associated General Contractors of America (AGC), provides detailed interpretations and graphic examples of over 400 building systems and components at each LOD. Its purpose is to provide a reference to allow designers and builders across the world (and now the solar system) to clearly communicate and understand the degree of precision and reliability of each other’s models.

The 2017 version contains many updates and clarifications of existing material plus some major new content:

- Reference elements, including space objects, structural grids, and building levels
- Specialized items such as helical piles, mechanical fasteners, and metal grating
- Concrete formwork
- Grading

The section on elevators has received significant development and detail in order to align with the practices of architects, elevator consultants, installers, and manufacturers.

The *LOD Spec* is developed through a consensus process involving designers, builders, and professional and trade organizations from across the AEC industry. It is updated annually, each update going through a cycle of public review and comment before being released officially. All versions are maintained on the website to provide continuity of reference.

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**Take Pride in our Steel Industry**

*by John Linn*

Those of us who are part of the steel industry can be proud of the fact that the steel we detail is not only the premier building material in construction, it is also the foremost eco-friendly building material. Actually steel is reported to be the best “green” building material compared to wood and concrete.

One of the most amazing qualities of steel is that it can be recycled over and over again and still retain all of its original properties. In North America alone, more than 80 million tons of steel is recycled annually.

The production of steel has largely moved away from the high energy demands of the blast furnaces to the much more energy efficient electric arc furnaces that are fed with used steel products rather than iron ore. As a result, steel production today uses about one third of the energy that was required to produce the same amount of steel thirty years ago. In addition, steel production today has reduced its carbon emissions into the atmosphere by a whopping 47%.

Just consider the progress that has been made in our industry over a relatively short period of time. We recycle and use less energy and we have reduced air pollution in the process. You can see that our industry has taken a leadership role when it comes to protecting the environment and conserving our natural resources. Despite the added burden of protecting our environment we have succeeded in keeping steel competitive with other building material while maintaining a higher quality steel product.

Steel detailers have been good team players along with the steel fabricators and erectors. We have played a large part in the success of steel construction. We may be proud of our contribution to the team effort. Our high quality and accurate shop and erection drawings are the first critical step in the success of every steel project.
NISD 50TH!

by Kerri Olsen

It is amazing to me when I stop and think about the NISD celebrating 50 years! While the NISD continues to evolve and grow, one thing remains constant – The NISD is the only organization in the US that is exclusively for and by steel detailers. Our detailers consist of members worldwide. It is always an honor and a pleasure to be recognized and meet with my fellow detailers, and especially when beyond border member steel detailers join us at our annual meetings.

The annual meetings are where we may join others of aligned interest, also to share our joys and woes with those who truly understand our trek in life. While at times it is difficult to carve out the few days from my schedule to travel and attend these meetings, I plan for it every year. These meetings are a priority for me. I always return with a renewed sense of belonging and enthusiasm for the future. Looking back on the years I ran my own steel detailing company without benefit of NISD membership or involvement (I simply did not know about the NISD), I treasure even more the support I get just from my associations with other members. Know though, that we are not the ONLY steel detailing organization in the world.

I have recently been made aware of another organization called the AISD – the Australian Institute of Steel Detailers, a formation of five, independently run, state-based groups. Actually, it was John Linn who had first mentioned them to me and sent the link to their website. You may visit their website at www.aisd.com.au – I did and am very impressed! Their newsletters are posted back to 2001, and discuss the development and beginning of their organization, very similar to our own. Much is explained there and it is worthwhile to spend some time reading what is posted.

The Australian Institute of Steel Detailers has reached out to me recently, inviting me to be a speaker at their annual meeting next September. From their invitation, I see that the challenges faced by them in their workday are the same as ours. The AISD newsletters voice the same frustrations caused by lack of design drawing information, and they seek to move forward with engineering partnerships, receiving the same push back as we do. I have many questions for them as we plan, and hope to learn much more about the AISD prior to my trip.

Returning to discussion on our own group, I am still learning about our own history. The documentation we have, the history behind the Industry Standard, the development and expansion of the certification and quality programs - it is amazing really what we have done and what we continue to do to support each other. I look forward to the coming years as we collaborate with other organizations like the AISD, for I am sure we have much to learn from each other.

For those members who have a lengthy history with the NISD, it would be appreciated if you would send to us a note and any pictures you may have from the years gone by – our next issue and annual meeting will be all about celebrating the big five oh, and all help with that would be greatly appreciated!
Behind Every Principle There is a Promise - Part 3

by Kerri Olsen

Chapter 4 – Business Operations: A Framework for Providing Service

We reviewed Chapter 3 of the National Institute of Steel Detailing Industry Standard in Behind Every Principle There is a Promise – Part 2. This chapter outlined the Benchmark and Elective services we offer our clients, and the importance of written wholesale coverage with estimating, together with the extended benefits of following this standard when providing a proposal.

This installment for Framework for Providing a Service involves discussion regarding effective business practices generally found in successful professional steel detailing services that include the following:

• Adequate capitalization
• Ability to transform talent, ability and expertise into effective services for the client
• Unwavering commitment to meeting client needs
• The ability to conceptualize, market and sell the steel detailing services
• A practice based upon solid ethics and principles for estimating and sales
• A commitment to deriving fair value for services
• Continuing training, education and technology updates, ensuring a productive work environment

Chapter 4 - Business Operations provides a complete breakdown of the cost allocations to be considered and included with our labor rate per hour, vital information regarding the finances of the steel detailing firm. Not only are the operating costs identified and explained in detail, this information works together with Chapter 7 – Appendix 7.1 Suggested Steel Detailing Cost Accounting Standards (SD-CAS), further explaining how to determine, calculate and apply overhead rates. Unless all operating costs are included in the charge-out rate per hour for our labor, we may be operating at a loss rather than at a profit.

This chapter of the Industry Standard provides the working information for identifying our operating costs, important to all of us, but especially the individual steel detailers who are simply charging by the going rate and may not be considering a complete breakdown hourly inclusion for all elements of their costs.

It is when work is stalled or stopped that the identification of operating costs may become most important. It is the share of lost revenue attributed to our overhead that may become unrecoverable unless documented as part of our sold product. If we are unable to shift our work schedule to a different project, which would then provide the needed billable hours to cover the operating costs, we may then need to charge our clients for the overhead contribution for the lost hours. Our business survival may depend on recovering this lost revenue. If we do not already have one, adding a ‘loss of operating cost’ clause to our proposals may be considered as necessary information to our clients.

Identifying and categorizing operating costs is a crucial element not only for calculating our service charge-out rates, but is also a vital element for verifying costs associated with delays and work stoppage. As our operating costs are typically amortized for annual sales, whenever work is delayed or stopped, these costs need to be considered in our lost revenue.

Chapter 7 – Appendix 7.1 provides examples by which to calculate that particular loss significant to the hours sold, reflective then of the unabsorbed overhead. The objective is to have in place a confirmed method of cost information, which provides for a standard determination of allowances and equitable adjustments. Even if your firm does not have or need such sophisticated management and accounting techniques, it is good to have resources in place to meet such needs in the future.

Typically, operating costs may be classified into three categories: Direct Cost, Overhead and Other. Direct Costs are any costs that may be identified specifically with a particular project. Direct Cost examples are:

• Labor
• Labor Taxes & Insurance
• Subcontractor Labor
• Travel
• Supplies
• Reproduction
• Shipping
• Telephone/Fax/Internet
• Plans/Specifications

Continued on page 20
Classification:
- [ ] Senior Detailer – Class I: Minimum 10 years experience including checking
- [ ] Detailer – Class II: Minimum 5 years experience

Category:
- [ ] Structural/Miscellaneous
- [ ] Bridge

Submit:
- Either a letter of recommendation from a steel fabricator, a Certified Class I detailer, or a NISD National Director.
  
  When your application is processed, you will receive a sample test and a list of publications to study for the test.

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<td>Non-Members Overseas - $250.00 + $300.00</td>
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- NISD Member: yes [ ] no [ ] Last 4 digits of SS# or SIN#__________________________
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...the Steel Detailer’s Point of View

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## Certification Programs for Detailing Companies & Individual Detailers

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<td>Quality Procedures Program</td>
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**[Regular, Associate & Overseas new members receive 1 copy free of the following manuals & CD]**

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<td>NISD Industry Standard Manual</td>
<td>$30.00</td>
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<td>Beam Cards [CD only]</td>
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<td>Hot Dip Galvanizing “What We Need To Know”</td>
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<tr>
<td>Painting And Fireproofing “From a Detailer’s Perspective”</td>
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(Sorry No Invoicing)

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**TOTAL**

All above items going to addresses within the US include shipping & handling. Please allow 10 business days unless other arrangements are made at additional cost. **International shipping is extra.**

- **Detailing Guide for Erector’s Safety & Efficiency** [Second Edition] Contact SEAA at 336-294-8880 or [www.seaa.net](http://www.seaa.net)

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Name on card: ____________________ Signature: ____________________ Daytime phone: __________

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phone: +91 240 2381011
abdul.shaikh@qubatic.com
www.qubatic.com
Shaikh Abdul Wajid

Congratulations!
This regular feature recognizes detailers who have recently taken and passed the IDC test. The listing is by discipline and class.

Structural/Miscellaneous Senior Detailer – Class I

Kevin Moksnes
Lejeune Steel Company
Minneapolis, MN

Biju Varghese
Aarbee Structures PVT, LTD
Karnataka, India

Individual Detailer Certification Program

Industry professionals are in search of talented detailers who have the knowledge and capability to produce quality shop drawings within the framework of various codes, specifications and contract documents.

NISD created the Individual Detailer Certification Program in response to the steel industry’s need to measure the skill level of individuals performing steel detailing services.

This is not a test of memory but a test of ability. The exam’s emphasis is based on a candidate’s knowledge of the various techniques, codes, and specifications involved in detailing.

NISD Publications...
These reference guides are available.
Order them online at www.nisd.org

Ace & Stewart Detailing, Inc.
4940 Long Beach Blvd.
Long Beach, CA 90805
srstew1@aol.com

Glenn Ihde & Company
4716 Goldeneyes Lane
McKinney, TX 75070
glenn@gihde.com

J.B. Long, Inc.
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Fleetwood, PA 19522
jim@jblong.com

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genev@nationaldetail.net

PEC Detailing Co., Inc.
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Steel Systems Engineering, Inc.
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Sherman Oaks, CA 91423
meb@ssseus.com
NISD 49th Annual Meeting - San Antonio, TX  

by Kerri Olsen

Meeting attendance was noticeably higher in San Antonio, Texas, and many new faces have joined our group! Some NASCC conference goers were able to extend their stay especially to join us!

This year’s meeting was held at the Embassy Suites – San Antonio Airport. We want to extend a special thank you to the Welcome Reception sponsors, Apex Structural Design, Ltd., and Trimble! We all appreciate what you have done, and continue to do in support of the NISD Conferences!

The Embassy Suites provides a nicely combined location for the Welcome Reception, Annual Meeting and the President’s Dinner. Not having to travel around town makes it easy to spend more time together – more time for us to solve all of the world problems of the steel detailer. For where else may we be able to be solely in the company of our fellows? These meetings are special, our time is so short, and we alone understand one another in our trials and successes!

It is always a pleasure to see the familiar faces, and to catch up on the past year’s happenings. Within this group, all competition falls away, and our focus turns to supporting a successful NISD. The annual meeting is a time to not only meet and greet, it is a time to reflect on what we have done as a group over the past year and make decisions on where we are going from here.

This is a busy time for steel detailers, and many of us often deny ourselves the opportunity to get away in favor of our work. Taking time out for the NISD Annual Meeting is for some the only way we are able to check in with the steel industry happenings. We do very important work, and though it seems sometimes that we are the only ones who appreciate the true value of the miracles we perform, there are positive changes happening that we often do not learn about except at these meetings! Put it on your calendar to attend the next one - we will be happy to see you!

Continued on page 17

PHOTOS

WELCOME RECEPTION ATTENDEES DAVID MERRIFIELD, MAHESH NAGARAJAN AND WILLIAM I KERIT!  

PRESIDENT’S DINNER ATTENDEES

DAVID DEEM, JACK METCHALF, RICHARD ANDERSON, MICHAEL PELLICO AND FRED TINKER, ENJOYING WELCOME RECEPTION COCKTAILS PROVIDED BY APEX STRUCTURAL DESIGN, LTD.

GROUP PHOTO WITH 2017 MAN OF THE YEAR

DAVID MERRIFIELD RECEIVES MAN OF THE YEAR AWARD
David Deem with Deem Structural Services, LLC
*What Erectors Love to Hate about Detailers*

Mr. David Deem is the president and owner of Deem Structural Services, LLC. Headquartered in Longview, Texas, Deem Structural Services is an ASCE Advanced Certified Steel Erector. Mr. Deem is currently serving his second term on the board of directors of the Steel Erectors Association of America (SEAA), an organization with which he has been involved since 1995. David is co-author of the joint SEAA/NISD Detailing Guide for the Enhancement of Erection Safety published in 2001, and has been very proactive regarding the advancement of industry quality and safety standards. Mr. Deem discussed the importance of including erection aid details in the shop drawings and reviewed each specific detail erectors look for in our erection drawings. His presentation was helpful and informative. Mr. Deem is a true advocate of the NISD; it was wonderful to meet him and we hope to see him again!

Alden Prier, President of Apex Structural Design Ltd., and NISD Vice President
*Sepia to Augmented Reality and The Future*

With the questions and discussion which followed each speaker, there was no time left for Alden Prier’s presentation! Hopefully Alden will save this presentation for us in 2018!

Kerri Olsen, owner of SteelAdvice
*The Elephant in the Room*

Kerri discussed an extended version of the topics from last year’s presentation on the article ‘The Elephant in the Room’, published in the Winter 2016/2017 edition of the Connection. More specifically, Kerri’s talk was regarding the suggestion that we should develop fellow detailer partnerships to help us with labor support during the busy times, rather than turn work away.

Seeking additional labor support from NISD member firms with certified detailers, including those overseas, could be helpful for us to retain and protect our client base. Kerri suggested seeking out other NISD member detailers as potential partners, either during the NISD conference or making contact by way of the NISD website membership map. It certainly doesn’t hurt to try and at least we might make some new friends along the way.

Tony McHugh & Scott Wilbur
*What Detailers need to know about Grating*

Tony McHugh & Scott Wilbur gave a very informative presentation regarding their work in providing detail drawings for grating. They described the challenges with the step-by-step process they go through in working with grating. Tony McHugh is Vice President of Sales and Marketing with Fisher & Ludlow/Nucor Grating, Tony has been in the grating industry since 1988, and has 26 years with Fisher & Ludlow/Nucor Grating. Scott Wilbur is Vice President of Engineering with Fisher & Ludlow/Nucor Grating in Burlington, Ontario. Scott has been in the grating industry since 1981 and has 36 years with Fisher & Ludlow/Nucor Grating. Scott’s talent range includes detailing, estimating, information technology and quality control.

We enjoyed their presentation; it is great to know that there are grating suppliers out there providing detail drawings!

Ian Coats with Autodesk – Gold Sponsor
*The Future of Making Things*

A most informative presentation by Ian Coats with Autodesk discussed ‘The Future of Making Things’ and how it is related to the architecture, engineering and construction (AEC) industry. The presentation covered how we have moved through 3 distinct periods: An ‘Era of Documentation’ where drawings were the main deliverables, on to an ‘Era of Optimization’ where Building Information Models prevailed, and now on to a new ‘Era of Connection’ where cloud services, connected or mobile devices, and rapid prototyping via 3D printing are changing how we construct the physical world.

Gartner, a technology research firm, predicts that 57 trillion dollars will be spent on building and infrastructure worldwide over the next few years and this will only be possible due to the advances in technology and software. This presentation focused on what Autodesk is doing to address this need and how the steel detailing sector can further mobilize to stay on the leading edge of these developments.
Nova Scotia, Canada

Tenca Steel Detailing, Inc. located in Quebec City, Canada has detailed an unusual bridge project located in Nova Scotia, Canada, known as the Angus L. Macdonald Bridge. This suspension bridge was originally built and completed in 1955. The bridge remains safe but after 70 years the deck is worn out and needed to be replaced.

The renovation plan for this 2500 foot bridge was to save the 337 foot towers, the main cables, the cable bents and the anchorages. The old road deck was removed and replaced with 46 new complex deck frames, stiffening trusses and suspender cables. In the process the bridge clearance was increased by over 6 ½ feet to accommodate a wide range of vessels.

The construction time was 18 months. The bridge had to be open to vehicular traffic during the day so the work had to be done mostly at night and necessitated several weekend bridge closures. The main structural steel fabricator for the deck panels was Cherubini Metal Works.

This was only the second time that the suspended spans of a suspension bridge were replaced while keeping the bridge open to traffic to facilitate the approximately 48,000 crossings on an average workday. (Photos courtesy of Cherubini Metal Works and Herald News)
Washington, D.C.

Each year, more than 4 million people visit the National Gallery of Art in Washington, D.C. Seven days a week, they descend on its galleries to view its incredible 500 or so great works of art.

A new stair detailed by J.B. Long, Inc. using Autodesk’s Advance Steel detailing software was recently added to the gallery building. In order to be compatible with the works of art housed there, the new stair had to be a work of art in itself.

That called for some complex geometry. What is most unusual about the stair is the fact that in plan view it has a diamond shape. With most stairs, there’s a level landing where they change direction. This stair didn’t have that. This stair changes directions midflight. To achieve that geometry, they had to machine and bevel the edges of the plate stringers to form a V-joint at the midpoint. That was really difficult to do.

It is a beautiful stair. For the crew that fabricated it, however, it was beastly. “It was probably the most unusual stair I’d ever seen,” says Joseph Milani, president of Crescent Iron Works, the Philadelphia-based company that fabricated the staircase. “The architects didn’t want to see welded joints; they wanted the stair to look like it was carved out of a block of metal.”

The hidden key to the design’s success — invisible to those who come to enjoy great works of art — was a detailer-fabricator collaboration that started with the architect’s concept and was realized by the detailer and fabricator who put it all together.

The tight trajectory of the staircase.

The diamond shape of the staircase.
# National Institute of Steel Detailing
## Membership Application

The annual membership cycle runs from June 1st through May 31st.

### ☐ Regular Membership

- **Definition:** Open to any company that conducts its office in the Americas for, and is regularly engaged in, the business of steel detailing. Such office shall have been conducted for a minimum period of one year. A member in this category may be chapter affiliated or a member-at-large, and has all privileges and benefits of membership including voting and holding office.

- **Fee Schedule:**
  - $290 for companies with a gross annual income of less than $250,000 [June-September]
  - Prorated dues when joining October-February $200
  - March to May 31 of the following year (15 months) $290
  - $450 for companies with a gross annual income greater than $250,000 [June-September]
  - Prorated dues when joining October-February $305
  - March to May 31 of the following year (15 months) $450

### ☐ Associate Membership

- **Definition:** Open to any company, national or regional trade or professional association interested in enhancing the detailing profession or the activities of the NISD, whose primary business is not in structural steel detailing. This category includes all privileges and benefits of membership except those of voting and holding office.

- **Fee Schedule:**
  - Annual membership fee is $360 [June-September]
  - Prorated dues when joining October-February $245
  - March to May 31 of the following year (15 months) $360

### ☐ Individual Associate Membership

- **Definition:** Open to a person employed as a steel detailer or other person interested in the future of the steel detailing industry but who does not fall in the category of Regular or Associate membership. This category includes limited privileges and benefits of membership, which precludes them from voting and holding office.

- **Fee Schedule:**
  - Annual membership fee is $65
  - Annual dues of $65 are renewable on June 1st

### ☐ Overseas Membership

- **Definition:** Open to any company that conducts a regular office for, and is regularly engaged in, the business of steel detailing outside the Americas. Such office shall have been conducted for a minimum period of one year. Members in this category may vote (no proxy votes), but they may not hold national office.

- **Fee Schedule:**
  - Annual membership fee is $450 [June-September]
  - Prorated dues when joining October-February $305
  - March to May 31 of the following year (15 months) $450

### ☐ Member Emeritus Membership

- **Definition:** Open to any individual who was a former regular member of the NISD and has retired from the competitive field, but wishes to remain active in the NISD. Members in this category may not hold office.

- **Fee Schedule:**
  - Annual membership fee is $100
  - Annual dues of $100 are renewable on June 1st

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The undersigned hereby applies for membership in the National Institute of Steel Detailing, Inc.

**Name: ________________________________ Title: ________________________________**

**Company Name: ________________________________**

**Address: ________________________________________________________________**

**City: ________________________________ State/Province: ________________________________ Zip/Postal Code: ________________________________**

**Country: ________________________________**

**Telephone: ________________________________ Fax: ________________________________**

**E-mail: ________________________________ Web site: ________________________________**

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**Payment in US Dollars**

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**Method of Payment**

- ☐ Check, payable to: **NISD, Inc.**
  2600 Kitty Hawk Rd., Suite 117
  Livermore, CA 94551-9699

- ☐ MasterCard
- ☐ Visa

**Number: ________________________________ Expiration Date: ________________________________**

**Signature: ________________________________**

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2017 Annual Meeting Event Sponsors

Thank You!

NISD would like to give special thanks to the generous sponsors who contributed to this year’s Annual Meeting.

If you ever have the opportunity to thank them personally please let them know that you do appreciate their participation and contributions to our annual meeting.

Welcome Reception Cocktails Provided By Apex Structural Design, LTD

Visit their web site www.apexstructural.ca

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NISD 49th Annual Meeting - San Antonio, TX

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President Joel Hicks took the floor around dessert time to present the Man of the Year award to David Merrifield for his continued and outstanding QP Program contribution on behalf of the NISD.

David’s unwavering commitment to the NISD Quality Procedures Program has provided an unquantifiable benefit to NISD members and its clients. David’s work is far reaching — and he is forever busy. Currently President of the Texas Structural Steel Institute, David continues to be involved with the BIM Education Program, Industry Lift, and the NISD. David did actually retire from ‘work’ last May. We all are grateful for the work David has done and continues to do for steel detailers through NISD.

We are an international organization, and we continue to see our group grow to include others from all parts of the world. These are exciting times for our industry and we look to the future for new opportunities and continued growth.

Congratulations David! We look forward to more participants, and seeing YOU ALL join us for our 50th meeting next year in Phoenix, Arizona.

Stay tuned….
Looking Back at the NISD

by Greg Brawley

As the NISD approaches its 50th year in existence, I can say that I personally remember about 40 of those years! And, perhaps because we tend to remember the best and forget the rest, I can honestly say that I managed to experience those years fully and have kept them as fond memories. My first real exposure to the NISD was through my first business partner, Mike Barskey shortly after we formed Transbay Associates in 1974. Mike became an activist and facilitated the formation of the Pacific Chapter sometime around 1975 or '76. A membership committee delegation led by Jack Metcalfe met with a handful of firm owners from the San Francisco Bay Area at the old Oakland Airport Hilton Hotel and the Pacific Chapter was born on the spot.

Without the benefit of the Internet, email or even a reasonable FAX machine, communication was mostly verbal and face-to-face. The importance of chapter formation was elemental to the growth and development of the institute and formation was done by face-to-face point of sale contact. But what we took away from those early meetings was that our competitors were not our enemies and that through common interests, we could unify on critical issues of importance to our business growth and development. Thereafter, it became clear to me that IF one wanted to maximize the potential of such an organization, it was best to commit a certain amount of resources and energy to insure the well-being of that organization. The fundamental belief that rising tides lift all boats dominated my thinking and actions with respect to my business dealings and my participation in the NISD.

It must be remembered that the detailing business in those years was more akin to guerrilla warfare than an actual business! Many of us at that time wanted to be in a real business, but there were no precedents to guide us, nor rules of engagement to govern either our conduct, or the conduct of business with our client. It was often remarked that for many firm operators, it was necessary to have undergone the rigorous apprenticeship of our trade, and then proceeded to acquire a very expensive equivalent of a Harvard MBA to able to survive in the detailing business. Through these years, it has often been noted that as the design delivery process changed (in our opinion deteriorated), it coincided with our ability to communicate and respond efficiently. Note that in 1975, since there was little reference to RFIs; if you had a query on a design issue, a letter was typed up and dropped into the postal system, and then maybe 2 or 3 weeks later, some kind of response would appear. I’ve often reflected upon the notion that, as our ability to communicate quickly improved through technology, the frequency of needing to communicate increased dramatically - perhaps as a by-product more than anything! Nonetheless, even then, as now, technology changed the face of our industry.

Through those years, as the economics of the construction project delivery system drove the shift to expediency and down-streaming of design completeness, the detailing industry became more vocal about the inequities and inconsistency of the rules of the game. The Pacific Chapter, along with other NISD chapters in our geographic region became more vocal and concerned about the effect this development had on our businesses. While there were our NISD Annual Conferences with an opportunity to air some of these concerns, some regions experienced more impact from these issues than others and it was through these common interests that some regional conferences were cultivated. In particular, there were a series of tri-chapter meetings involving the California Chapter (Southern California), Pacific Chapter (Northern California) and Southwest Chapter (mostly Texas) where some of the formative notions about an Industry Standard were aired. While, for the most part, these meetings were more informal social get-togethers, rather than institute business, relationships were formed that stimulated issues of common interest. I met Tom LeDonne at one of these meetings, and he presented ideas and concepts derived from general construction project management principles and sought to apply them to the detailing business. But we both understood that such concepts would be most useful if applied by a whole body of the detailing industry rather than simply as a commercial development of a particular firm. We corresponded and discussed these matters at great length for some considerable length of time, before a concept gelled. The concept was that it would be necessary for the industry as a whole to develop its own standard of practice in order to gain acceptance of what were commonly held principles, definitions and practices within our business. Tom LeDonne had done a lot of the footprint on developing checklists for driving RFIs, which in turn would drive drawing delivery schedule performance. With that foundation, the elements of much needed principles would evolve.

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Elective Services –
Keep those ‘freebies’ under control!

Kerri Olsen

In chapter 3 of the NISD Standard, the section on Elective Services lists examples of some broad-based subject items. Each of the Elective services listed identifies topics for which steel detailers often find they are devoting a large number of hours while supporting their steel fabricator clients – all for free. These little favors somehow become unintended deliverables.

Often these unintended deliverables become expected deliverables, not only for a job you are currently working, but also for future jobs.

While we all like to do favors for our friends, when you find yourself devoting an unquantifiable amount of time on little added projects to a job, you begin to wish you had not elected to travel down that road in the first place.

...make it clear that all labor applied is to be charged at a time and material cost...

One thing we can do is to put a parameter and a cost to such elective service items in our proposal. Pick anything that may be common to a freebie you provide. As an example, we will talk about meetings, modeling and designing. Our favorite things.

Meetings, either on site, on the phone or online, can quickly get out of hand. When needing to include meetings as an elective service, they could be offered as a cost per hour and may include travel costs. Meetings could be offered as a change order item, to be paid in the next billing cycle.

Modeling, for some is no issue, though the provisions of the model may quickly become convoluted when dealing with industry partners who take this elective service for granted. Problems like expectations regarding Level of Detail (LOD) and trade coordination are time eaters which run rampant without pre-determined parameters. This elective service may be excluded, offered with specifics for LOD, and further, offered as an hourly rate offered, or block of time that may be purchased outright by our clients or offered as a change order to be paid within the current billing cycle. As many of our clients remain uneducated regarding the LOD with Modeling, 100% detail and accuracy is likely to be expected on their end, even if we do not intend it to be.

Design. Ah, designing. Well, this condition, when we are asked to ‘just make something up’ and submit for approval, is a problem we invite ourselves into by agreeing to it. Simple answer is not to agree to do such things. It really is in the best interest of our clients to make the designers, design; it’s what they do. If you are unable to ‘just say no’, then the suggestion is to put specific parameters to these items. Quantify the initial hours and the rate to be applied, and proceed as an agreed extra cost to be billed and paid in the next billing cycle. As this item is then revised – as you know it will be, and probably more than once – make it clear that all labor applied is to be charged at a time and material cost, or give it a static cost with conditions.

It is not fair to be used as an extension of the project management team. We don’t cost that service in our quotes to the client. That is the danger we face, in that much of this type of elective service work is used by our clients to avoid having to manage this work themselves, and while it seems like a good idea for them, it is not so for us OR them as the total labor to execute these items often remains undocumented. Until a real cost is exposed and shown to our clients, it will remain a free and easy thing for them to do.

So the remedy and prevention become our own ability to either say no, or say yes with conditions. Then the client may decide if the extra work they are asking you to do is worth the time and money to execute. After all, they might likely be charging their clients. So the only way to ensure those costs are passed upstream is to start that conversation ourselves.
Behind Every Principle There is a Promise - Part 3

Continued from page 7

Overhead are all costs other than Direct Costs and are not specific to any job. Overhead costs may be subdivided into Indirect, Selling and General and Administrative Expenses. Indirect Cost examples are:

- Labor (not already applied to a specific project)
- Taxes & Insurance
- Travel
- Supplies
- Telephone/Fax/Internet
- Equipment Depreciation
- Warranty
- Fringe Benefits
- Computer Software

Selling Expenses include advertising and sales efforts, bid and proposal costs, market planning, and direct selling. Selling Cost examples are:

- Bid Expenses
- Travel
- Commissions
- Contract Drawings
- Telephone/Fax/Internet
- Estimator Salaries
- Salesperson Salaries
- Auto Expense
- Promotion and Advertisement
- Fringe Benefits

General and Administrative Expenses include any management, financial and other expense incurred for the general management and administration of the business not directly associated with a project. G & A cost examples are:

- Office Salaries
- Clerical Salaries
- Labor Taxes and Insurance
- Property Taxes
- Professional
- Legal
- Supplies
- Reproduction
- Telephone/Fax/Internet
- Dues and Subscriptions
- Furniture, Fixture and Equipment Depreciation
- Travel and Entertainment
- Rent/Lease Office
- Vehicle
- Insurance – General Liability & Automobile
- Maintenance
- Building & Contents Insurance
- Malpractice Insurance
- Utilities
- Fringe Benefits
- Postage
- Donations
- Conventions & Seminars
- Recruitment
- Bad Debts

Other costs are those that normally are not allocated to any project in any manner. Examples of other costs might be:

- Interest
- Income Tax – Federal
- Income Tax – State
- Contingencies

There is much undocumented labor involved with managing and running a steel detailing business that smaller firms tend to take for granted. Appendix 7.1 Suggested Steel Detailing Cost Accounting Standards (SD-CAS) provides examples for how to determine and calculate overhead rates, suspension of work costs and overhead recovery. Operating costs need to include adequate facilities, sales and marketing costs, general administration, service development and labor, including benefits.

Continued on page 23
Another Look at Some Old Issues

by Greg Brawley

Well, it’s time to take another look at the NISD Industry Standard and bring it up to date with the continuing evolution of the steel detailing business. The NISD Industry Standard document was initially published in 1995, with a subsequent update by Joel Hicks in 2006. It is fair to say that the landscape of the steel detailing business has changed dramatically over the passing years. If you are unfamiliar with this document, it was created to provide a foundation of ongoing principles and practices aimed at professionalizing the steel detailing industry and establishing some basic guidelines for conducting business in our industry. There are no mandates in steel detailing, so the consensus findings of the industry leadership became the guiding light for acceptance and publication by the Institute.

While many things have changed over the ensuing years since the last update, the need for a document that unifies and defines the principles of the steel detailing industry remains constant. However, technology has broadened steel detailing considerably, and the one-size-fits-all approach to this document may not be as suitable as it once was.

Nothing Changes If Nothing Changes!

Although technology has elevated the tools for doing our tasks, it has also had a deep impact on the business of steel detailing. High-speed Internet connectivity, powerful hardware and sophisticated software tools have changed the face of the business of steel detailing to the extent that our product can be produced anywhere in the world where skilled and knowledgeable detailers exist. Along the way, the face of steel detailing for the US steel fabrication market changed dramatically. The size and vitality of the North American structural fabrication industry, while cyclical like the rest of the construction industry, is still enormously attractive to the detailing industry worldwide. In an effort to remain inclusive of the entire steel detailing industry, the NISD has extended membership internationally in an effort to address issues of importance to firm operators worldwide.

It is noteworthy, and probably not newsworthy to veteran firm owners, that rates for steel detailing have not increased appreciably over what they were a couple of decades ago. From a purely anecdotal viewpoint, it is reasonable to assert that the rates have not grown much, precisely because of the cyclical nature of the North American construction industry. While we like to think of ourselves as being self-determining in our rate structure, the price of detailing services has always been driven by the algorithms of the fabrication industry...which, in turn, have been largely driven by the steel subcontractor’s position in the food chain of the project delivery system. Ask any fabricator who is still delivering erected structural steel for close to the same price per ton that they were two decades ago! Sure, we experience intervals in the cycle where the rates can support innovation, training and technical development, but in the longer view of things, those intervals have never quite been strong enough or long enough to sustain a detailing industry comprised of strictly North American labor. The migration to reduced labor costs, aided by currency fluctuations some years ago, created enough gross margins to allow for much needed resource and technological development to occur on a world-wide basis.

Presently, detailing firms, whether US-based or foreign-based, have had to create business models that include blended labor rates of offshore and domestic resources to be able to provide the extensive service levels demanded by their clients for larger scale projects. Local firms, serving the mainstream projects within their production capacity, have experienced their own sets of challenges. Steel detailing is no longer simply a matter of producing high quality shop detail drawings. The exhaustive project management demands of extracting the needed detailed information through a complex and perhaps outdated project delivery system, affect the efficient and orderly production of the product. Often, the product becomes the ability of the detailing firm to extract the needed design information and convert it into useable fabrication and erection data, rather than simply providing shop detail drawings. The inclusion of “additional services” (i.e. data files for CNC, data file compatibility issues and extended coordination services) have become taken for granted as these elements have insinuated themselves into the detailing firm’s product. The impact of these developments on the steel detailing industry has been formidable, and helping the detailing firm to develop a functioning policy regarding these issues becomes a defining task of the NISD Industry Standard. It is important to point out, however, that since the Industry Standard is not codified, the suggestions and concepts expressed in the document are suggested, and only become useful and functional when absorbed into common practice.

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Quality Procedures in Detailing Offices
by David Merrifield

Maintaining and improving quality is not just a matter of having a quality process in place, but also regularly examining it, updating it as necessary and making sure it’s being followed.

“When people and organizations focus primarily on costs, costs tend to rise and quality declines over time.”

These are the words of famed engineer and statistician W. Edwards Deming. And he was right.

Quality in steel construction today reflects changes in attitudes and management styles developed over the last three decades. Working in the 70s and 80s as a detailing manager for a bridge fabricator, I was charged with the annual review of our quality control (QC) manual and overall compliance with our shop and erection drawing quality standards. Later, as a plant manager and business owner, I developed an informal goal of “no errors,” which became the workplace norm with everyone taking ownership and pride in the success of the company. “Writing it down”—a concept stemming from two of Deming’s statements—was instrumental in the success of our company. Those two statements are:

1. “If you can’t describe what you are doing as a process, you don’t know what you’re doing.”
2. “It is not enough to do your best; you must know what to do, and then do your best.”

Deming’s Contribution

World War II completely destroyed industry and business in Japan, and General MacArthur consulted Deming to see what could be done. During the next 30 years, Deming contributed to the economic reformation of Japanese manufacturing, now known for its high-quality products and advanced innovation. His belief was that if you improve quality, you reduce expenses and increase productivity. In his 1982 book Out of Crisis, he posed 14 points for building a successful and high-quality organization. In the mid-80s, the U.S. Navy adopted a total quality management (TQM) program based on Deming’s work, and in the 90s that knowledge evolved into programs such as the AISC Quality Management Systems Certification program, ISO, Lean Manufacturing and Lean Construction. All of these programs have their roots in Deming’s work.

With his 14 points and later in his Seven Deadly Diseases of Management, Deming proposes a concept of achieving quality by engaging the total organization. It’s not enough to engage only management groups or quality departments; you need to build a quality system the same way you manage safety. Safety engages everyone from the CEO to the support staff, all participating in a safe work environment. This safe workplace culture is achieved by having a plan, providing continuing education and engaging the workforce to actively identify unsafe situations.

Can you imagine a safety program goal of “one workplace injury every 1,000 man hours?” Goal-setting of this type only provides an excuse for not being engaged. Why then should we have a quality program that sets goals such as “one error every 100 pieces.” One error can be the difference between profitability and massive additional expenses. A proud and involved workforce pays attention to the details. From the first concepts of design to the final turnover, providing a quality product and service should be the target of the whole team. The only goal should be “I know what I’m doing, and I am achieving my best.”

In today’s world of “time is of the essence” contracts, speed is stressed as goal number one. I often refer to the story of Henry David Thoreau desiring to create a perfect walking stick. After thinking about the process, he decided not to pursue the endeavor because it would be an achievement that would consume his life. The three elements of production (time, price
Behind Every Principle There is a Promise - Part 3

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Take some time to review chapter 4 of the Industry Standard and see if there might be some helpful information for your use with your own company finances for operating costs and overhead distribution.

I am aware of a recent situation with an NISD steel detailer who was having an extremely difficult time getting some very necessary dimensions from the design team on a project. The Architect of Record simply stated that they did not need to provide them. I received a call from this detailer asking my opinion. My advice for how I would handle this was the following: Immediately, stop work on the project. Send to your customer a very nice, yet detailed letter outlining every point of issue, together with a copy of the Guidelines for Successful Presentation of Steel Design Documents and the NISD Industry Standard.

They followed my advice. The project manager for the general contractor, in an attempt to keep the project moving forward, sent the detailer marked up PDFs of design drawings with their scaled dimensions. Shortly thereafter, the architect sent out a notice that they ‘had to do significant rework’ to their design drawings, so the project was put on hold until the corrected drawings were to be released.

This is a significant win for the steel detailer, not to mention a big save for their fabricator customer and the general contractor who has an inexperienced project manager working this project. One can imagine the consequences for all concerned if the steel detailer had continued down the destructive path that the rest of the team was driving them to follow. By utilizing the RFI system, the steel design guidelines and the Industry Standard, the team may expect a much better outcome than the one for which they were headed.

Sometimes the guy in the caboose needs to notify the engineer that the train has derailed.

Looking Back at the NISD

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Gunther Baresel was a member of the California Chapter and national president of the NISD about this time. He, along with the NISD Executive Board, at that time consisting of Vice President Don Pope, and Secretary-Treasurer John Linn, thrust their considerable influence in the industry behind this project. It is a testimony to Gunther’s leadership and vision that he did everything within his power to facilitate the development and publication of this document. It was under the guidance of the executive leadership, that many members were drawn into the cooperative effort to create, validate and build a consensus for its publication. Around this time, Tom LeDonne, who had partnered with me in the formation of the concept of this document, had moved on to other business interests, while I was left to complete the text and content. Once I had actually drafted a document, a blue ribbon panel of the leading members of the detailing business was formed from across the nation with a mandate to review and confirm the content. I was privileged to have chaired several meetings of this august group where these members were active, forceful and engaged in hacking out the consensus understandings that were eventually expressed in that document. As is often the case, there is a huge debt of gratitude for the commitment that these industry leaders showed to their task.

It soon emerged that in order for this document to be meaningful, the member firms, as a body, needed to form a consensus of the entire membership to embrace its principles. By 1995, that consensus culminated in the publication of the NISD Industry Standard. The need for developing that consensus remains today, as we once again approach the task of updating the document to reflect the changes and developments of the steel detailing industry.
and quality) restrain us all. It’s often said you can only choose two and sacrifice one. To correct this concept, everyone in the supply chain of design through construction needs to be engaged in doing their best. For example, a concerted safety effort across all industry has boosted profitability by lowering cost, elevating morale and increasing productivity through team effort. A safe company is a profitable company. The same is true of a quality management program. You achieve profitability and success by instituting a system with quality as its core. Starting a quality management system should not be a radical adjustment but rather should come in the form of small achievable programs that grow and expand.

A New Approach

So how does quality apply in the world of steel detailing? NISD’s (National Institute of Steel Detailing) quality procedure program (QPP) has been in place for some time. It was developed to mirror, to some degree, the old AISC checklist certification program. There were two elements to the QPP: a checklist of required points and an on-site audit by an engineer local to the detailing office. The program worked well during the early years, primarily due to the number of engineers who were trained in the steel industry. But the retirement of many who understood the fabrication/detailing process, strained the audit program. The rapid growth of offshore detailing also posed logistic problems. It was clear a review of the program was necessary. Both the checklist and the audit program required new thinking.

Engineering firms interviewed by the QPP committee were reluctant to review quality procedures as they were unfamiliar with the detailing and fabrication processes and viewed the audit as a liability issue. The primary question in the initial review was, “Is there a need for detailing companies to have their own quality procedures?” As the final responsibility for the fabricated product is ultimately part of the contract, many fabricators believe their quality manual is all that’s required. However, detailing firms require an internal set of guidelines when dealing with different fabricators to ensure a consistent quality presentation.

Detailing service has fundamentally changed from providing a picture to transmitting data.

Detailing service has fundamentally changed from providing a picture to transmitting data. Information now contained in the model is imported directly into shop processes. While this is a more efficient fabrication workflow, there are fewer eyes reviewing the work. Detailing offices also have fewer workers on a project now. In today’s environment, model checking is more the norm rather than a complete check of individual drawings. In the short interval between creation, approval changes and comments, the review of all information can be daunting.

Chapter N of the AISC Specification, Quality Control and Quality Assurance, sets the requirements of quality in steel construction. The user note on drawings states that QC inspection is based on shop and erection drawings alone. The 3D modeling process produces fewer shop and field errors, but the inclusion of quality instructions such as welding and other non-model attributes is a common issue between detailer and fabricator.

Consistency and Repeatability

The aim of a quality management system is to provide a consistent, repeatable process. Developing written procedures and maintaining communication standards provides continuity within a changing workflow. Factors such as rotating personnel, new software, employee training and communication affect customer satisfaction.

But by using the current NISD format and following the checklist, a company can develop a quality management manual to be certified. Here’s how it works: QPP Certification is now based on a quality procedure manual that uses the NISD-developed checklist as its guide. The committee audits the submitted manual, uses the checklist to evaluate each item and

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Our Steel Detailing World -
A couple of updates:

by Kerri Olsen

Industry Lift – I was talking to David Merrifield the other day and he mentioned that he attended the latest Industry Lift meeting in Williamsburg, Virginia on October 25th, 2017. The consensus of this meeting was that the group is actively looking for candidates to interview who would like to speak about the benefits of the steel industry in their careers. These individuals would be those who have built for themselves a successful career while working in steel, and need to be willing to conduct a video interview for website posting. If you know of anyone who fits that description, please contact David Merrifield; you will find his contact information at the NISD website Membership Map.

BIM Forum – Also while I was talking to David Merrifield, he wanted to let our group know that there was some forward movement with the BIM LOD specification, adding now to the Level of Development specifications a requirement for Horizontal and Vertical Grids. What is important about this is now the Horizontal and Vertical grids are part of level 300 development, which was not previously identified. You may download a copy of the Level of Development Specification from the website at bimforum.org. This website provides all the information about what is happening in the BIM Forum and includes information on upcoming presentations and seminars for interested parties.

Another Look at Some Old Issues (Continued from page 21)

A Word On Construction Project Delivery Systems

Another facet of the detailing business that has not changed much, is the position of the steel detailing on the project delivery system food chain. If we assume that the framing for any significant steel structure cannot be fabricated and erected without the highly specialized skill set of the steel detailing function, it would seem that the old paradigm of project delivery needs to be refreshed. The relative position of the steel detailing function with respect to the information sources has become a scenario of the tail wagging the dog, as illustrated in the diagram of the traditional project delivery approach. (SEE FIGURE “A”) The fundamental premise of this model of project delivery, was that the design documents provided by the architect, and subsequently the structural engineer of record (SER) would be complete and correct. Indeed, the AISC Code of Standard Practice for Buildings and Bridges (ANSI/AISC 303-13), which has served the steel fabrication and erection industry for decades, was created specifically to insure that certain consensus understandings with regard to quality and completeness for design, fabrication and erection of steel structures, are codified in the construction industry. Indeed, from the Commentary in SECTION 3.1 of this document, this point is clearly emphasized:

“Contract documents vary greatly in complexity and completeness. Nonetheless, the fabricator and the erector must be able to rely upon the accuracy and completeness of the contract documents.”

Further, the specific information that the “…structural design documents shall clearly show or note…” is listed in this section of the Code. While the reasons that these requirements are continuously overlooked is best addressed outside the scope of this article; the reality cannot be denied, that the accuracy and completeness of the structural design documents have continued to decline.

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The design community, like the detailing community, faces continuous pressure to deliver design faster and cheaper. However, within the current information flow, when essential mandated information is lacking or missing, the access to remedy is cumbersome at best, and punitive at worst. While a project may be able to tolerate the embarrassingly low level of completeness of design-side documents, the delivery of the finished product on the execution-side MAY NOT be tolerated at anything less than 100%. Regrettably, as long as the premise remains, that the design documents can be relied upon to be complete and accurate, construction disputes and all the accompanying conflict will continue to expand.

As the legal, financial and professional consequences of these circumstances continue to pile up, numerous alternative methods of project delivery gain traction in the construction industry. A couple of methodologies that create a closer relationship between the source of critical information and the steel detailer, appear through IPD (Integrated Project Delivery) and BIMM (Building Information Modeling Management). Both of these approaches shorten the path of information between the SER and the steel detailing function, through model-sharing, shortened lines of communication and improved coordination links. These alternatives also offer the potential of improved scheduling, coordination of steel fabrication and erection, approval process, and reduced risks of construction disputes.

This ever changing scene, while creating opportunity for steel detailing firms, also creates challenges for the steel detailing business. Presently, the steel detailing industry has no consensus understanding of issues such as legal liability, model ownership and copyrighting, or general business practices, etc. within the context of these types of emerging project approaches. Further, we need to update the practices and procedures that are already established by the NISD Industry Standard, as a means to addressing more current industry practices. As always, we need to build consensus on these issues and issue a call for the help from those who have present experience in any issues of importance that need to have a statement within the Industry Standard.

If you feel you have a viable practice or proposal to advance these objectives, ALL contributions will be gratefully considered. While not all of these suggestions, policies or practices may be accepted as whole cloth, consensus is built by taking the best and leaving the rest behind. We are looking forward as this project gets underway.

**AUTHOR’S NOTE:** The commentary and observations of this article are born out of over 50 years of steel detailing and fabrication industry experience and do not necessarily reflect or represent the opinions of anyone other than the author.

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makes acceptance recommendations to the president of NISD. Note that the QPP committee makeup has been altered to include members from outside the detailing community; only two of the five members are from detailing companies. The other three represent the fabrication, erection and software development communities. The concept of quality assurance was removed, as this is provided by customer review and satisfaction. This program is under constant review to keep current with new trends and procedures, such as building information modeling (BIM) documents and initiatives. The application packet includes a copy of the checklist and a sample manual.

But keep in mind that this manual is not a blueprint for your company’s management system. Deming’s work was criticized for not providing a sample plan and his response was, “You’re the manager, you figure it out.” Every company has a different approach to management and thus every plan should reflect unique elements. NISD’s mission is to provide guidance and to encourage adherence to your company’s specific plan.

David Merrifieldis is the owner Of Alpha Fabrication Services, LLC. and a NISD board member and chair of the QPP committee. He is also the co-chair, structures, of the BIMForum LOD Specification committee.

This article was a preview of Session D2 “Quality Procedures in Detailing Offices” at the 2017 NASCC: The Steel Conference, in San Antonio, Texas.
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