On the Job Site
Copper Cliff South Mine — Copper Cliff, ON

New NISD Officers
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On the Job Site - Copper Cliff South Mine
pages 11-13

NISD First Virtual Annual Meeting
pages 15, 21, 25

Race to the Bottom
pages 19, 22
NISD 54th Annual Meeting
In Denver, Colorado

Save the Date!
March 21-22, 2022

In Conjunction with
NASCC: The Steel Conference
Which follows our conference from March 23-25, 2022
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The "Connection" is the official publication of the National Institute of Steel Detailing, Inc., 2600 Kitty Hawk Road, Suite 117, Livermore, CA 94551. Editor, John Linn

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I cannot recall ever having published a job site article where the steel structure did not sit on footings and anchors on top of good old mother earth. Some of our jobs have had basements that went below ground zero, but all of our previous job site articles for these past many years have been easily visible and above ground.

Well, thanks to Jason Peck, V.P. at Apex Structural Design, this job site article he has so generously submitted takes place in a mine shaft that extends three quarters of a mile straight down and all of that 200 tons of steel is under ground and out of sight. The erection and the detailing for the project must have required a tremendous amount of team coordination between all the players when you consider the environment of working in a mine shaft that is about 4000 feet deep.

I would like to thank Douglas Weaver for his article "Race to the Bottom," which strives to help detailers develop a better cooperation with their fellow detailers.

Our newly elected President, Kerri Olsen, suffered a great loss with the passing of her husband Torrie who had been sick for many months prior. Our deepest sympathy goes out to Kerri at this sorrowful time. Despite her personal loss, Kerri has forged ahead and has written a President's message along with several other articles that she submitted. Thank you, Kerri, for all of your many contributions and sacrifices to NISD which are above and beyond the call of duty.

- John Linn
I truly believe that the most difficult job in construction is that of the steel detailer. When we consider all of the players involved with any construction 'team,' it seems as though the steel detailer is the last to receive information even though our part of the work is among the first to be developed.

I cannot think of anything more backward.

As technological advances were introduced into our trade, we were quick to embrace these emerging trends, excited about anything which made our most tedious job easier! What we have instead experienced is an increased workload with shorter delivery schedules, making our job even more difficult.

With new programs to be purchased and learned, new integration tools to utilize, together with a growing list of data files, client expectations have increased way beyond the simplicity of the shop detail and erection drawings. For many of us, the impact to our business model is staggering.

Technology sold us all on the glowing prospect of time and cost savings, though both of these things are seldom realized. All the "extra" monies go to software costs and training. We also spend an undeterminable amount of time completing the designer's work. All without any recognition, increased pay or scheduling allowances. We take it all on the chin.

Contract drawings continue to be unworkable, offering less information than ever before. Determinedly supportive of our clients' demands, we generally proceed without fuss, ultimately perpetuating our continuing demise. This is the root cause of most of our project problems. It is also what makes organizations like the NISD so very important. We need a place to share our experiences and explore possible solutions! Something which gives us hope for the future as we learn better management techniques.

Without that we will continue to bounce from one job to the next, excited in the beginning with the new job positivity and ending in the search for the guilty.

It is an honor to serve the NISD and I look forward to helping this organization move forward in whatever manner that I am needed. I think that education is the key to broaden our own horizons and to increase the awareness of our clients and other trade partners into what steel detailing is all about and how we may help each other to navigate to a successful end for each and every project. Thank you all for your continued support!
NEW NISD OFFICERS

Kerri Olsen
NISD President

Kerri Olsen's early working years were spent with steel fabricators doing estimating, detailing, project management, purchasing and fabrication management. Her career progressed to include owning a steel detailing and steel estimating firm for many years. She is now working as a steel estimator; Kerri continues to support select clients in estimating and project management.

Kerri has been involved with the steel detailing business for 40 years now. She is a published author, having written many articles regarding steel detailing for publishers including The (Seattle) Daily Journal of Commerce, Modern Steel Construction, ENR Magazine, Structure Magazine and the NISD Connection. Kerri also authored the Commercial Steel Estimating manual, which is distributed and sold by The Industrial Press.

During recent years, Kerri had the opportunity to travel across the United States working as a software trainer. While visiting steel fabricators of all different sizes and types, this contact allowed for direct NISD promotions, and developed an awareness for how design drawing and steel detailing issues are much the same worldwide.

Kerri is currently serving as Marketing Chair for the National Institute of Steel Detailing. In addition, she is presently teaching a steel detailing class, which she designed.

She lives out in the country near the town of Shelton, Washington.

Christine McCulloch
NISD Vice President

Christine has been in the steel detailing industry since 1996 when she started working for her father, Thomas McCulloch at Loch and Associates, until he retired. She has been a member of NISD since 2000 and an NISD Certified Detailer since 2002. Christine has been a long-standing board member of NISD and has served as chair of the Education Committee. Since 2012 she has been working for DBM Vircon, starting out as a project coordinator and now is working in Sales and Business Development.

In her spare time, Christine likes golfing and really enjoys getting out on the course. She is an avid reader, and also loves to travel.
Estimating Blue Sky

by Kerri Olsen

Estimating steel detailing is our "Blue Sky" gamble that the odds will ever be in our favor. We give our best possible price to every job we bid in the hopes of gaining a winning project. We always anticipate doing a great job for our clients, completing everything on time and within budget.

Yet, we know in our heart of hearts it almost never works out that way. Often, we spend way too much time working to prove our own innocence and trying to collect our billing balance near a project end, while our client has a laser-like focus on their search for the guilty on all of their project ills.

While discussing problematic jobs and clients with a colleague, I came to realize that we are often responsible for our own project failures, the root cause of which lies in putting client needs ahead of what we know as correct steel detailing project management practice.

I chose to write about this issue as I have written many, many times about the need and purpose of project RFIs for tracking. RFIs continue to be the most fundamental element of every project, which no one seems wanting to engage.

We know with every project there is going to be missing information and there are going to be questions. Our client focus is to get their shop approval drawings timely and they are perfectly fine with drawing clouds in lieu of RFIs. In fact, we are directed to cloud drawings even if our client's own detailing manual and/or project specifications are written to include RFIs. Additionally, I could remind us all that RFIs are an NISD and AISC requirement. Yet, RFI protocol is instantly waived and accepted by project teams to "save schedule." But waiving RFI protocol does not actually "save schedule," does it?

Removing RFI protocol actually puts the ownership of the schedule on us, saving everyone else from that responsibility.

When we submit approval drawings with clouds and NO referenced RFIs, we make the entire project team think that we had workable contract drawings when in fact we did not.

When we do not follow RFI protocol, we maintain a silence to what the designers have left undone and take it upon ourselves to finish their work for free.

Once we do these things, we cannot undo them. This is how we then make ourselves responsible for all the issues which are really not our fault.

We continue with this behavior because our less sophisticated competitors most likely will do the same. We do not realize that the competitors with this behavior actually may end up working only one job for any client. Personally, I am not a fan of that business model. My fabricator friends are not big fans of that behavior either.
National Institute of Steel Detailing
Application for Individual Detailer Certification

Classification:
☐ Senior Detailer – Class I: Minimum 10 years experience including checking
☐ Detailer – Class II: Minimum 5 years experience

Disciplines:
☐ Structural/Miscellaneous
☐ Bridge

Submit:
• Experience history, and
• 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.

IDC Test Fee Schedule
At time of application + 10 days prior to test + virtual proctor fee

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Rev. 2-2020
Copper Cliff South Mine

by Jason Peck

NISD member, Apex Structural Design located in Red Deer, Alberta recently completed the detailing of a Mine Project totaling 2,000 tons.

Background

The Canadian Shield is one of the world's richest areas in terms of mineral ores. It is filled with substantial deposits of nickel, gold, silver, and copper. Throughout the Shield there are many mining towns extracting these minerals. On the outskirts of Sudbury is the underground nickel ore mine known as the Copper Cliff South Mine. The Vale-Inco Superstack (right) in Copper Cliff is the tallest chimney in Canada and in the Western Hemisphere (1,250 ft). In addition to the use as an alloy in cast irons and stainless steel, nickel has become an important metal due to the increased demand for rechargeable batteries in phones and electric vehicles.

From the Top Down

The new mine sits inside an existing pit and below an existing headframe (see tower left). This headframe stands directly above the shaft and houses the pulley structure and cables that raise and lower elevator cars in the mine shaft. The headframe is like the tip of an iceberg, as it connects to a vast and hidden underground network of mine workings. The steel was erected above each larger "station" platform level but in descending order working their way down. This was a narrow space for swinging beams and an upside-down approach to normal high-rise erection. Items such as the checker plate flooring and bar grating panels had weight limit restrictions so they could be manhandled only.

Continued on page 12
Copper Cliff South Mine

Kick Off

As this project involved a new customer based in Ontario, we felt it prudent to kick off this project face to face (this was before Covid and Zoom meetings). So, I flew from Calgary to Sudbury for a few days to meet with the steel fabricator and their team. I can't stress the importance of talking with the client at the beginning of a project, especially one of this size. There was a lot to cover, everything from their own shop standards and capabilities, the project design details, erection issues and the schedule.

Put to the Test

One of the unique challenges at the beginning of the project was a temporary Test Tower to be assembled in the yard and shipped to site. The interior steel of the Test Tower consisted of three complete levels of the mine (right in red), while the exterior steel skeleton was designed to mimic the connections to the mine shaft rock walls (right in green). At 40 feet tall the finished product resembled something of a rocket launch pad.

Getting the Shaft

The shaft consists of three main compartments, a "Skip" compartment for ore material, a "Cage" compartment for manpower and equipment, and a "Counterweight" compartment, all fabricated from over 24,000 feet of galvanized HSS guides. Each shaft is separated by brattice partitions used to direct air for ventilation. These wall panels are welded angle frames filled with either an expanded metal mesh or corrugated gauge steel sheets. Extending down to over 270 different platform levels and opening up to 15 larger "Station" levels. Each of the 270 levels consists of platform bar grating, a manway ladder and guard railing. The guide elevations were designed and detailed to 1/32" tolerances to keep the HSS as true as possible.

The More Things Change

We began this project back in May 2018, and as of this writing in June 2021 we just issued the last of the revisions at the shaft bottom. What began as an aggressive 3-month project has taken over 3 years of starts and stops. The biggest factor in this extended time frame has been a constant arrival of new and revised design drawings including 35 major change orders. We started with 45 different consultant drawings and now have 145. Our original drafting quote was based on a huge amount of repetition throughout the shaft, but much of that repetition was lost due to these changes. But thanks to our extensive experience using Tekla Structures we were able to mitigate much of this extra work.

By the Numbers - The Challenge

From the top collar to the shaft bottom is over 4,000 feet. By comparison, that is 3 times as tall as the Empire State Building. As of 2021 the tallest building in the world (Burj Khalifa) is 2,717 feet tall. In total over 4,000 beams, 2,200 columns and 70,000 bolts (including 40,000 plate washers!) were used. There were over 100 erection drawings and 1,500 assembly drawings. However, one beam drawing alone with a quantity of 231, represents over 68 tons. 143 RFIs were issued and the quick responses from the EOR helped keep the project on track.

One of the biggest challenges was maintaining the same mark numbers through multiple different phases. The reason for this was so the shop could re-use jigs for the thousands of beams and columns. But thanks to our understanding of Tekla Structures software and the custom components we were able to control the model consistency through automation.

Legacy

When operation of the Copper Cliff South Mine commences later this year, the project will employ 400 workers including about 300 miners. We developed a good working relationship with the steel fabricator and saw relatively little in the way of shop or field questions. The team at Apex Structural Design pride ourselves on these types of challenging ventures and look forward to working on similar projects in the future.
SEAA Board Meeting & Annual Convention Report

by SEAA Liaison – Jack Metcalfe

I had the privilege of representing NISD at the Fall Board Meeting and Annual Convention of SEAA (This annual was delayed from the spring due to Covid). Following is a brief accounting of the meetings:

**Wednesday 8:00 to 12:00**

The quarterly Board Meeting of Directors (I am still a director) naturally included the usual housekeeping stuff but the emphasis was on a drive to finish/complete the numerous videos on safety and craft training we are producing or have produced, and which need updating. This is a $100,000.00 plus endeavor. Videos will be sold to the public but given free to SEAA members - talk about member benefits. These are being professionally done but with real member actors and member on-site shops and projects.

Other major topics were what other member benefits we can improve on or establish (always important), and committee restructuring. Presently I serve on the Safety and the Long-range Planning committees but will probably be moved from Safety to By-laws as many SEAA by-laws are outdated and are no longer workable considering the growth of members (up to 350 and growing), the changing times, and the activities we have.

The next Board meeting will be in January 2022 in Houston and will also have a Meet and Greet (*See note below). Due to manpower shortages, a new endeavor will be a Job Fair for local Houston high schools, or colleges and trade schools. A number of members have signed on for demo booths and we will also show some of our videos. Our NISD friend and SEAA Vice President David Deem will be chairing the show and if this event is successful, we will attempt to hold it again in other cities.

**Wednesday 1:00 to 5:00 - Trade Show**
**Wednesday 6:00 to 7:00 - Meet and Greet for new members and first time attendees.**
**Thursday 8:00 to 4:00 - Trade Show and Seminars**
**Thursday 5:00 to 7:00 - Closing dinner.**

The Conference and Trade show were considered a success even though, due to Covid, we had to reschedule the event and many vendors and speakers were not able to reschedule to attend. Nevertheless, we had over 250 attendees and 45-50 vendor companies with about 100 reps showing safety equipment, welding equipment, small, medium, and large crane demos, stud welding, decking, and certification programs, etc. There were also several seminars on OSHA, rigging, etc.

Our complimentary $1500 booth was staffed by Pam and me. We were next to AISC's Certification booth, so I had ample opportunity to beat their ears about our programs (Ya owe me a drink, Fred!).

Continued on page 17
Hosting the annual meeting as a virtual event was not as challenging as we thought it might be. While not as much fun as our in-person meetings, it certainly was more convenient given the travel challenges we all face. Presentations were as riveting and informative as ever, and definitely worth attending.

First to present was Kerri Olsen, with 'The Art of Saying No' or 'The Art of Not Having to Say No'. This discussion was regarding the necessity of providing a complete and adequate bid time proposal, then being diligent about executing your work accordingly. Advising that project execution begins immediately upon receiving a notice to proceed, having a proposal-specific discussion with our clients regarding the execution bullet points, then documenting this meeting to our clients, making certain that there is clear understanding of the project execution plan.

The whole point is to get our clients to understand that in order for us to provide a quality product that also provides time and money-saving efficiency techniques, there are behaviors our clients must execute in order to achieve the goals for schedule, scope and budget. The driving proposal elements for this is not a long list though it must include the following: Our company policy for payment requirements, procedures for RFIs and change orders, then the inclusion of Industry Standards, be they AISC or NISD or both, and a specific scope of work and order of delivery. When these proposal elements are first established and agreed to, then we have a working partnership.

The next presentation was provided by Mark V. Holland, PE and James W. Reeves J.D., LL.M who discussed 'The Theory and Practice of Difficult Negotiations.' Mr. James W. Reeves, J.D., LL.M is Principal at Clearbridge Consulting, LLC, a firm focused on helping people work together more effectively through mediation. Mark V. Holland, PE, is the Chief Engineer with Paxton & Vierling Steel Co., in Omaha, NE.

Originally presented at NASCC, the discussion between Mr. Holland and Mr. Reeves was very compelling and helpful, covering practical techniques and considerations when handling difficult negotiations.

Bullet points were: to listen more than you talk, establish your subject matter competence, do not bully the other side, know who you are negotiating with, have a plan or goal, know and have the facts, know your side of the argument while making sure you understand the other side of the argument, try to listen and understand. Write all agreement terms down, do not settle for handshake deals, always get everything in writing regarding the negotiation from both perspectives. Make sure you understand the description of the deal to avoid ambiguities. Establish entitlement first. Never discuss money until entitlement is clearly identified. Use objective standards and criteria to support that entitlement.
National Institute of Steel Detailing

Membership Application

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

☐ Member-At-Large Membership is open to any company that conducts its office in the Americas, 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 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 is 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  
Prorated dues when joining October-February $245  
March to May 31 of the following year (15 months) $360

☐ Individual Associate Membership is 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 $65  
Annual dues of $65 are renewable on June 1st

☐ Overseas Membership is 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  
Prorated dues when joining October-February $305  
March to May 31 of the following year (15 months) $450

☐ Member Emeritus Membership is 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

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

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Rev. 11-2019
We showed the Safety Manual (sold a few and two were "borrowed" while my back was turned - we had numerous visitors). The painting and galvanizing manuals, the design book, the Industry Standard manual, and of course the certification information booklet and Fred's SEAA "Connector" article were all displayed. Please note that some of our publications, except the Safety Manual, need updating and refreshed, and the whole booth needs some brighter eye-catching stuff.

During the AISC seminar on Certification I tried to sandbag them a little with some questions about NISD certifications being included but there was such an uproar when AISC announced an annual 3% fee increase for their programs I let discretion be the better part of valor.

Again, we heard numerous complaints about the lack of detailers, especially quality ones, and the numerous problems caused by inexperienced operators of automated systems. Our answers were certifications, and their suggestions were that we should increase our prices and attract more quality help.

All-in-all a very good show and I highly recommend we accept the invitation to be part of it again in Charleston next April.

Thank you for your confidence and for letting us beat the drum and show the flag.

* Missy Mercurio took time off to accompany me at the SEAA Pittsburgh July Board Meeting and "Meet and Greet" with western PA fabbies, erectors and suppliers - she can give you her version of those meetings. I will tell you she made a good impression. Well done Missy!
National Institute of Steel Detailing
About NISD Certification Programs

Certificate of Development in BIM:

Building Information Modeling (BIM):
The Certificate of Development-Building Information Modeling is an assessment-based certificate credential that establishes the knowledge and understanding of concepts to BIM and detailing practices that is important for all BIM teams to know. CD-BIM has been designed to prepare entry level technicians as well as highly experienced construction professionals in BIM with a common understanding of core concepts. Some of these topics include who the stake holders are in the process, what the BIM Execution Plan is, how coordination meetings function, and many other key concepts.

Individual Detailer Certification Program

The National Institute of Steel Detailing created the Individual Detailer Certification Program (IDC) in response to the steel industry’s need to determine the skill level of individuals performing steel detailing services. 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.

The IDC program examines and evaluates an individual’s detailing knowledge and issues a certificate attesting to that level of knowledge. NISD has established this program as an industry-wide professional standard of practice in conjunction with its Quality Procedures Certification Program.

Quality Procedures Program

The NISD Quality Procedures Program is aimed at helping companies define their commitment to quality through management planning. The program provides a guide and a checklist to help your team define such aspects as management goals and responsibilities, office procedures, training and corrective actions. This program, while targeting detailing firms, has its roots in solid business planning that any company providing similar services could find to be beneficial. Whether you’re providing structural steel, miscellaneous metals, bridges or design services, you will find it helpful in guiding your company to a successful and profitable project.

Because NISD fosters a professional approach to business and advocates improved quality through member networking, education, and certification, our members are highly regarded by fabricators, architects, engineers and contractors.

For more information about these programs: Visit our website at www.nisd.org or send us an e-mail at nisd@sbcglobal.net
Race to the Bottom

by Douglas Weaver

Why cooperation between detailers in lieu of paranoia and pricing wars benefits the industry.

Let me preface this article by saying that every "good read" has an antagonist (for this article, the paranoias of detailers); as well as a "protagonist" (in this article, the options before us to work closer together). So, please "read until the end…" The protagonist shows up!!

It seems that for as many years as I have been in this industry, one thing has remained the same (at least from my perspective). That one thing is that most detailers are highly suspicious of other detailers and HATE to be outdone and outbid by their competition. We hate to give up any of our "DWG" files, as we are concerned that the competition will pick up some of our secrets, and that our fabricator clients might accidentally slip (or on purpose) let a competitor get ahold of one of our sacred "DWG" files, and then ALL our secrets are out!!!

This however is very rarely the case, but somehow it is how we are wired and programmed to think. Now I know there are already some of you reading this article thinking "That is not me," and I am sure there are many of you who perhaps do not think this way. But there are many of you who do, and you know who you are. You are the ones who see an awesome project being erected and the first thing you think is, "I wonder who detailed that?" Or "Man, we could have knocked that one out of the park!!" We ARE competitive. We must be. To do what we do takes an enormous amount of skill, concentration, intelligence, hard work, focus, and high energy. Day after day. It is hard for us to think that there are others out there that are quite as good as we are. But there are.

Many times, during a bid, we know of a competitor that is a little bit hungry, and we know that they will be pricing a project extremely low. What do we do now?? We could use some work. Do we try to beat them? Do we gamble with our normal pricing? What if nothing is coming down the pike for a while after this bid comes due? And lastly, "I don't want that group doing this job, this one is for ME!!" I call this the "Race to the Bottom."

We are so intent on winning a project because of ego or because of paranoia that we end up working it down to a price that is NOT ideal for us. We work hard to be the "low price" on a project. Not a great strategy. I had a very respected mentor back in the day who joked about the guys who would think "we lose money on every job, but we make it up on volume!!" This always cracked me up because it is SO true.

I have an idea that I would like to present to the masses. (Or at least the other detailing firms that are reading this article.) Why don't we try cooperating a tad more on some of these projects and quit beating each other up on bad pricing strategies that seem to only benefit certain players in the food chain. (Let's face it, a 5% difference between detailing prices on a line item of a fabricated project that only makes up 5% of the total...Continued on page 22
When problems arise – which they will, often so numerous and obscure that to include specifics in this writing would bury my point – it is the steel detailer who is first held responsible.

The RFI process is our ONLY support to identify responsibility. This is the root source for added costs and scheduling delays. The RFI document instantly proves a question was asked and answered; it provides the date and nature of the answer, as well as the trickle-down economics and scheduling issues that may result.

How very convenient it is for those who benefit the most from the lack of tracking to deny RFI protocol. This makes everyone else's job in the project team easier – easier for everyone except the steel detailer.

I suggest to colleagues, if you are going to cloud drawings, at least create and reference an RFI at those clouds for tracking and send those through with your shop detail and erection drawings. I suggest also to have some discussion with clients on how RFI protocol for submittal, return and incorporation into the approval submittal drawings saves time and money all around.

I have suffered in the past myself until I finally learned this lesson, and it continues to break my heart to hear of steel detailing friends who suffer still. For when the RFI process is not used, it will be the steel detailer who will be writing essays to prove their case for root cause responsibility on every issue that comes up. Ultimately, it is likely that all the work they do will still not get them paid. The RFI process is the best insurance we have to support a successful project!

**Missy Mercurio**  
**NISD Secretary/Treasurer**

In 2015 Missy, along with co-owner Frank Mercurio Jr. purchased the John Metcalfe Co. from John "Jack" Metcalfe. As the Owner/VP of Administration, Missy manages the financial side of the company for their nine-person team, utilizing her 25 years of experience in office management and her BA in Finance and Management from Kent State University.

Prior to taking on the role of owner, some of Missy's work experience includes: Financial services administration for Respironics Company in the IT Department, Property Manager for 40 townhouses for a family-owned company as well as volunteering for a wide variety of school and church organizations. Missy also has experience in trade association membership development and meeting planning from her time working for the National Wooden Pallet and Container Association and AIM USA.

She is the proud mom of two very hardworking independent children - Max, age 22 studying chemical engineering and Bella, age 19 studying mechanical engineering. Missy recently moved to Oakmont, which is a suburb of Pittsburgh, Pennsylvania.
Suggested reading for more information were the following:

Richard Shell – *Bargaining for Advantage*

Deepak Malhotra - *Negotiation Genius: How to overcome obstacles and achieve brilliant results at the bargaining table and beyond!*

Chris Voss - *Never Split the Difference: Negotiating as if your life depended on it!*

This was a wonderful discussion and will be presented again at the next NASCC in Denver, 2022!

Saving the best for last we had Greg Brawley, who has now completed the NISD Industry Standard updates. Greg began his steel detailing career in 1966, and has spent 30 years as a firm owner and operator. Greg now spends his time as a trainer and teacher, looking to pass along that experience and knowledge to those who are up and coming.

Now the 3rd rework for the Industry Standard, these updates are intended to address critical points and shifts in industry practice. Greg talked about how most of what is encountered for problematic situations may be avoided or mitigated by preparation and anticipatory practice. The AISC Code of Standard Practice, the lynch pin in our contractual dealings, supports the status quo in our industry.

Greg continued by explaining how we need to provide certain protections to our provisionary scope of work. Our NISD Membership categories reflect industry changes. Ethics and standards of practice have many variables, as steel detailing is now a global industry. Developing techniques to protect our product is more important than ever.

Technology demands an expanded skillset and training, deeper education background of applicants, the expanded role of steel detailing in project development and evolving project delivery systems. Challenges include the Contractual link vs. Information path, also Design vs. Execution. As we see a broadening role of project delivery systems, we see that the steel detailing industry has been forced into a larger supporting role.

For having such a critical role in project development, the steel detailer's contribution continues to be minimized. While reasons for this are not always evident, the lack of uniformity of product are present because our product is demanded to meet specific shop needs. With each client believing their way is best, it will not be until only data files are used for steel fabrication that this problem will be resolved. Steel detailers serve the steel fabrication industry and are bounded by those requirements. The price of our product is set by the budgetary concerns of not just the fabricator, but by the GC and design team.
Race to the Bottom

Continued from page 19

There are so many things we could do to work together that could benefit the industry, as well as the fabricators who rely on us. Many times, I get involved in a very tough geometrical project and would love to have a second set of eyes on it. I am quite sure we all do. However, many times, we ARE the top tier in our company, and we have nowhere to go. What most of us do is put it away for a day or so, and just come back to it, and look at it again. This is dangerous. We could be talking ourselves into the exact same wrong answer as we did the first time. A great solution to this would be to get with another firm, who has their "top gun" available, and have them give their input and opinion. If we had these types of relationships with other detailing firms, then our talent pool opens, we start working together and trusting each other a little more. Perhaps we even work together on projects that accelerate a fabricator's schedule. A truly win/win scenario for everyone.

I have recently started a website "SteelTrade," which is a networking site for the steel fabricating, manufacturing and engineering industry. (This is a free site, so this is not a shameless self-promotion.) This website has the capacity to allow steel detailers from everywhere to cooperate, to reach out for help and to possibly get in contact to work together on projects. (This is also the main function of the site: for fabricators and steel manufacturers to work together and cooperate to work more as a community). NISD is really a great platform for this. NISD exists for many reasons, and one of the most valuable is the ability to network with other detailers, and share ideas, thoughts, give back to the industry, and learn about (and possibly appreciate) the other detailers who are also members. This is such a valuable resource.

I think moving forward, humanity needs to correct itself and to start learning to work as a unit, to trust more, to create more friendships, more relationships, and to lose some of our "paranoias." I think this could be true of ALL industries, but perhaps our little piece of the pie that we call Steel Detailing would be a good place to start. Let's stop the "Race to the Bottom." Let's start the "Process to Cooperation."

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.
NISD OFFICE OF THE PRESIDENT

The President presides as chairman of the Board of Directors and all meetings of the Institute. The President shall have all of the duties customarily incident to such an office.

A fidelity bond shall be obtained by the Institute for the faithful performance of the financial obligations of the officers and employees.

The board shall consist of seven directors. Each director shall serve a maximum 4-year term. The terms are to be staggered as determined by the President.

A nominating committee for directors shall consist of five Members at Large in good standing appointed by the officers.

The three officers, President, Vice President, and Secretary/Treasurer of the Institute other than the Past President shall be elected at an Annual Meeting for a 4-year term by a 40% plurality vote.

NISD OFFICE OF VICE PRESIDENT

The Vice President has the responsibility of taking over the duties of the President in the event that the President is impaired and unable to perform them properly. The Vice President shall exercise the power and perform the duties of the President for the balance of the President's term, or the period of incapacity, whichever is shorter.

The Vice President's main duty is to completely plan the annual meetings. The board of directors will determine the date and location of the annuals. The Vice President will then arrange for the hotel and schedule of all of the many different events and their locations. The NISD office will be of assistance to make this task easier.

The Vice President will similarly be responsible to make preparations for board of directors' meetings whether the board meetings are in person or online.
Virtual Image & Animation, LTD, together with the NISD, are in the process of developing a virtual reality game which supports steel detailing education. The purpose of this VR game is for use with public education at job fairs and promotional trade events.

The premise of this game is to give the player a good understanding of what structural steel detailing is, how it works, and what a career working in structural steel detailing entails. The game is part instructional and part fun, with a National Institute of Steel Detailing animated "professor" speaking to the player as they work through the different levels. Each level presents a different aspect of structural steel detailing, so by the time the player finishes the levels they will have an understanding of the steel detailing process. Each level is relatively simple, as it is understood that the players of this game will be completely new to detailing and thus will not know anything about the subject. Animation added will be stars, fireworks and other celebratory-type sounds when each step is completed to make it more fun for the player. Video play is initially designed for use with the Oculus Rift headset though will be available for computer use.

Virtual Image & Animation, is a 3D visualization and animation specialist company based out of North Vancouver, Canada. Starting business as a value-added feature to Anatomic Iron Steel Detailing Services, Virtual Image & Animation was born out of a steel fabricator’s need for providing a client with a project model presentation.

Anatomic Iron, hired by Canam Buildings to do the Denver International Airport Canopy, provided an animation for how the airport canopy was to be built as value-added support to the fabricator. It was this video that sold the job for Canam. Seeing the need to continue providing visual presentation services as a value-added option to other fabricators, Virtual Image & Animation, LTD was then started at the hand of owner Clifford Young.

This opportunity may have never been realized had it not been for the introduction provided by Bill Issler with Industry Lift. We are most grateful for the help and support Mr. Issler continues to provide to the NISD! Thanks to Bill, we now look forward to a long-term beneficial relationship between the NISD and Virtual Image, as this new education tool will be extremely useful to increase steel detailing awareness for potential tradespersons and trade industry partners alike.
The three constraints of any project are scope, schedule and budget, all of which can and do work against getting a quality product. Schedules are dictated without regard to what is needed to be executed regarding project design. The Industry Standard together with our original proposals help to provide definitions regarding the fundamental purpose of our business and the groundwork for disputes. Steel detailers who use the NISD Industry Standard continue to be grateful for Greg’s involvement and contribution for this very important work.

These sessions were recorded and the link may be distributed to the list of annual meeting attendees upon their email request. We do look forward to seeing everyone in Denver in 2022!

NISD Office Duties

Continued from page 23

NISD OFFICE OF SECRETARY/TREASURER

This office has two separate jobs to perform.

1. For the office of Secretary it is very important that this officer must have the ability to take good notes during the board meetings and then be able to write up accurate minutes of what has been spoken in the meeting and was important enough to be recorded in the minutes. The Secretary shall keep accurate records of membership and meeting notices.

2. For the office of Treasurer the big job of a non-profit business is to do an annual balanced budget which is to be completed before the first day of January each year. This task involves making changes and adjustments to the previous year’s report. The Controller and all other officers can work together to make this a much easier task to accomplish.

All checks or other instruments for the payment of expenses or other withdrawals of funds shall be signed by either the Treasurer, or a designee or by the President.

Monthly bank reports will be sent from the main office to the Treasurer to keep our finances accurate and up to date with two people checking them over.
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
Benefits For NISD Members!
Visit Your NISD Website...

We Are Your Voice...

The NISD Board of Directors was pleased with the feedback it has had from membership regarding new ways that NISD can help expand the scope of services for the benefit of members and the steel detailing industry!

Our web site is contemporary, easy to navigate, and represents our members as a professional and knowledgeable organization. Check it out!

Visit NISD.org

Networking Knowledge!

Our Discussion Board is a tool to allow sharing of knowledge and resources. Post your industry-related questions or comments. Receive responses from other professionals. Utilize your NISD membership network today! nisdorg.wordpress.com

Find us on Facebook too!
www.facebook.com/NISD.org

Because NISD fosters a professional approach to business and advocates improved quality through member networking, education, and certification, our members are highly regarded by fabricators, architects, engineers and contractors.