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The NISD Difference

By Kerri Olsen

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Designers, fabricators and other industry partners tend to believe that the shop detail drawings are all created the same. What is often not understood is that the manner by which the steel detailers conduct their work, and how their information is presented on the shop detail and erection drawings, are what create the difference between shop detail drawings which are easy to use and encourage correct fabrication as opposed to those which do neither.

There is a faulty idea in the industry that how the fabrication information is presented on the shop drawings does not matter, as long as the information is correct. It is like saying we don't care how the car runs as long as it gets us to where we are going.

The truth is that the shop detail and erection drawings are a key element to steel fabrication and steel installation. Shop drawing development, level of completion and detail presentation is paramount to the success of every project.

Industry Professionals are Unaware

Steel detailers and steel fabricators with years of practice may not know about correct shop detail and erection drawing production and presentation because they have never been exposed to the difference themselves. Often, these same steel detailers and fabricators blame other sources as the cause of problems, and thus, the cycle is never broken.

This lack of understanding by both steel fabricators and steel detailers can cause problems for reviewers in verifying that the shop drawings follow the original intent of the design drawings. Failure to follow industry standards for shop drawing presentation may cause parts to be fabricated and installed incorrectly, even though the information shown on the drawings may be correct.

Presentation Matters

The manner by which the fabrication information is presented in the shop detail and erection drawings determines the flow of the work for all who use them. Properly developed shop detail and erection drawings promote efficiency for the designers, the shop fabricator and the field erector, which in turn creates confidence in their accuracy.

Problematic shop detail and erection drawings are often a result of the steel detailer's focus on the steel fabricator's wants and needs only. Thus, the information shown will sometimes be confusing to others, and may not be complete and accurate upon the first approval submittal.

Common Approval Submittal Problems

Sending out shop detail drawings for approval prior to checking and not ready for fabrication is a common industry problem. This is a practice often caused by the general contractor pressuring the fabricator to get shop drawings out faster. But, in fact, it slows down the shop detail drawing development and approval process altogether. Further, this practice may prevent the production of subsequent drawing submittals while the first batch is being completed and checked.

The contractor's pressure on the steel fabricator to produce speedy detail drawing approval submittals induces the steel fabricator to then force the detailer to submit the shop detail drawings for approval unchecked and possibly incomplete. The steel detailer, with the incomplete and unchecked drawings out for approval, will then return to complete the drawing development for those same sheets. Upon receipt of the engineers' review comments, the questions, answers and verifications will be incorporated. The steel detailer has now developed the drawings to three completion levels. The fourth completion level will be the checking and then the fifth level will be the final scrub for approval verification.

Forced submittals of partial and incomplete steel shop detail drawings by the general contractors and steel fabricators intent upon getting quick approval, actually *slows down* the shop detail drawing production, and is in strong contrast to the NISD suggested practice.

The Designer's Problem

The designers are the first to notice the level of shop detail drawing development while they struggle during the approval process to see how the application of their design intent has been presented. The steel detailer's questions and verification requests will be included on the detail drawings, with the expectation of answers from the designers on the return approval. Multiple drawing approval submittals will be required. Shop fabrication delays may result, erectors may be delayed by fabrication errors and then production schedules are pushed out. This inefficient process can continue until the last refabricated piece of steel has been placed.

This is the normal process for many and it does not have to be so. The National Institute for Steel Detailers (NISD) was born out of the need for a better way to produce steel shop drawings. The NISD continues to support the construction industry by promoting the proper method of shop detail drawing development and production. The NISD Industry standard publication provides information and encourages sound project management procedures conducive to successful projects.

The NISD Mission Statement

The following paragraph is the mission statement at the center of the entry web page for The National Institute of Steel Detailing:

Founded in 1969, The National Institute of Steel Detailing or NISD is an organization which fosters a professional approach to doing business as a steel detailer in the construction industry. The mission of the group is to create a better understanding of the importance of steel detailing services, by advocating improved quality, education and certification.

What does this statement mean to NISD member detailers? What about to those who are not members? Let's break this down by parts and review what is meant by each sentence.

"The National Institute of Steel Detailing or NISD is an organization which fosters a professional approach to doing business as a steel detailer."

The goal of the NISD is to encourage and support steel detailers, their fabrication partners and other trades people by promoting a professional approach to steel detailing. This is achieved through the active execution of the other half of the mission statement.

'The mission of the group is to create a better understanding of the importance of steel detailing services, by advocating improved quality, education and certification.'

The NISD provides guideline documentation, in both CD format and written materials, which is information on providing a professional approach to steel detailing for their members. These training CDs, guides and informational materials all focus on the best business practices for creating complete and accurate shop detail drawings following industry standard procedures.

Advanced steel detailers working on structural steel buildings and bridges may be NISD tested and certified. NISD members and certified steel detailers are sought out by designers and steel fabricators wanting complete and accurate steel shop fabrication and erection drawings.

The Supporting Business Practice

The business practice promoted by the NISD, NISD members and NISD certified detailers provides a much more rigorous process regarding shop detail drawing approval submittals. Steel shop

detail drawings are developed and produced using a careful review, and correct application of the design drawings together with only essential RFI requests. Shop detail drawings are not submitted for approval until the shop detail development is complete and the drawings have been checked and are fabrication ready.

In most cases, shop detail and erection drawing presentation is provided in a manner that promotes ease of review using cross reference details and notes leading back to the design drawings as appropriate. Section cuts and

detail views are correct and consistent, eliminating confusion for the reviewers, fabricators and erectors.

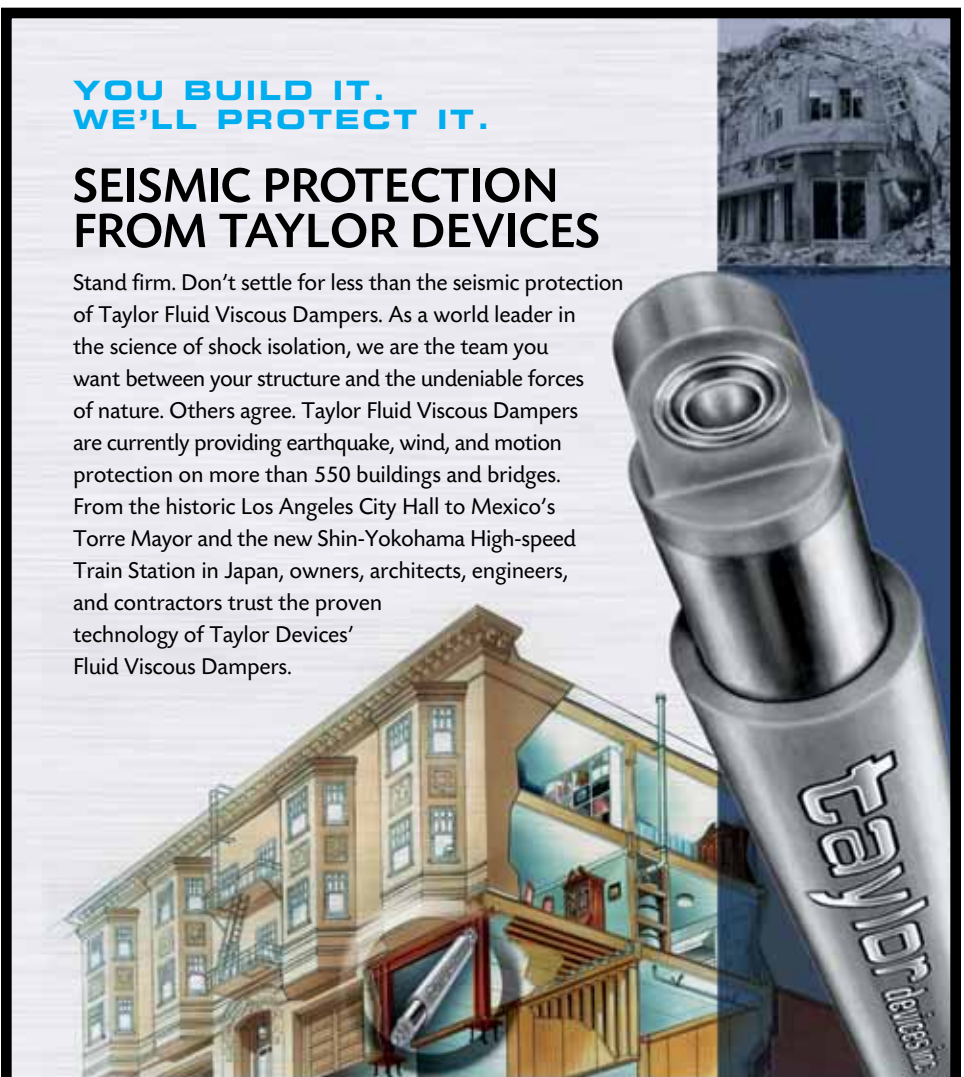
NISD members and NISD Certified steel detailers are encouraged to perform every job with an emphasis on accuracy, clarity in presentation, consistency in format, and endeavor to never waiver from that commitment.

That is the NISD Difference – using quality procedures and certified detailers. Such a standard will always increase speed and efficiency for all who use NISD produced shop detail and erection drawings. ■

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