

DM Berg Consultants, P.C.

Summer/Fall 2007

Serving the industry since 1963, DM Berg Consultants, P.C. is a consulting structural engineering firm specializing in building analysis and design. For the past four decades, we have focused on the practice of providing sound, efficient engineering solutions and interactive client service; those remain our goals today.



CIVIC

Libraries, Town Halls, and Maintenance Facilities

COMMERCIAL

Offices and Manufacturing

EDUCATIONAL

PK-12, Colleges, and Universities

ENTERTAINMENT

Cinemas and Theaters

HEALTHCARE

Hospitals, Nursing Homes, and Assisted Living Facilities

HOSPITALITY

Hotels and Convention Centers

INSTITUTIONAL

Prisons, Court Houses, and Police/Fire-Fighting Facilities

PARKING GARAGES

Stand-Alone, Attached Above-Grade, and Below-Grade

RESIDENTIAL

Multi-Family Apartments and Condominiums

RETAIL

Restaurants, Stores, Malls, and Supermarkets

Shop Drawings: Keys to Successful Interpretation by Peter M. Shedlock, Principal

The submission of Fabrication Drawings, commonly known as "Shop Drawings", is a vital link in the chain of project construction.

Architects and engineers frequently request shop drawings, prepared by the General Contractor and/or their Sub Contractors Detailers, to ensure the Contractor is accurately interpreting the project specifications and design documents. As noted in the AIA General Conditions, A201, 3.12.1 "Shop drawings are drawings, diagrams, schedules and other data specially prepared for work by the contractor, sub contractor, manufacturer, supplier or distributor to illustrate some portion of the work."

Review, acceptance, or rejection of these drawings by the contractor prior to submitting to the architect and engineer is indication that the contractor has firm knowledge of the work to be performed by the respected trade associated with a specific submission. Part of the contractual agreement entered into by the contractor and the owner usually has terms stating that the contractor is responsible for the checking and submission of the fabrication drawings.

Many times, as the project begins, the contractor is under tremendous pressure to turn over the completed project on a time sensitive schedule. The first item slated for "time saving" seems to be the review process of the shop drawings. The drawings become the victim of paper pushing through the contractor's administrative staff. The "rubber" stamped drawing(s) is then forwarded to the architect/engineer for review. Also part of the timesaving is the request by the contractor to have the architect/engineer expedite the review process and have the drawings turned around quickly, usually in an unreasonable timeframe. Many professional contractors exercise care in the work they are responsible for; however the shop drawing process seems to suffer the most in proper checking. The process of checking, red lining corrections

and coordinating the shop drawings requires the person doing the checking to be familiar with the type of construction being conveyed. Competent, experienced, knowledgeable staff of the associated trade should be responsible for this checking.

A few things to remember when navigating through the shop drawing process...

- Make it a part of the pre construction meeting agenda that the contractor is obligated to follow the shop drawing review and submission process.
- Look at the dates on the submitted drawings; does the received stamp date match the sub contractor submittal stamp date? Ask yourself this question: Can the review be done in this limited time or does it seem "Rubber stamped"?
- Has the contractor checked the appropriate status on the shop drawing stamp - indicating acceptance, re-submission required or rejection?
- Insist that the contractor follow the submission process as outlined in the general conditions of the specifications.
- Keep communications open between the architect, consultants and contractor throughout the review process.
- Review the field's shop drawings during site visits. Do the shops in the field bear the acceptance stamp of the contractor, architect and consultant?
- Review, with the contractor, the specification submittal requirements of the associated division.
- Don't consider the process of checking shop drawings as a waste of time, rather as a time to verify proper interpretation and conformance to the design documents.



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Summer Wrap Up

Congratulations to **William & Sarah Barry** on the birth of their son, **Douglas Arthur**, in June.

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20 Years!
Congratulations to **Mimi Moore** and **Tom Ball** who both celebrated 20 year's of service working at DM Berg.

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We enjoyed group barbecues this Summer! Thanks to all for helping out and a special thanks to **Tom Ball** and **Tom Queally** for manning the grills!



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To read past issues, visit our website at www.dmberg.com and click on **News**.

News Staff Profile

Stepping into "BIM"

Our plans for upgrading our production software to include Building Information Modeling (BIM) are now underway. After many hours of evaluation, both internally and along with a client survey, we have decided to add Autodesk's Revit - Structural Modeling Suite to our repertoire. Over the next several weeks, we will engage in a complete office training program to develop the necessary skills for utilizing Revit. For the time being, we will continue to be predominantly AutoCAD based, but we plan to ramp up the use of Revit in the future.

Revit - Structural Modeling Suite provides us a structurally focused BIM platform for creating 3D structural models of a building and facilitating integrated 3D analysis and design of the building as well. Revit offers many BIM benefits to the document preparation process including coordination of changes between members of the design team, interference checking of building components and automatically generated interconnected plans, sections, elevations and schedules. Revit also works with our current analysis and design software, including RISA 3D and RAM Structural System.

Our ultimate goal is to utilize the full benefits of a Building Information Modeling program like Revit. This will require the entire design team, architects, civil, MEP and structural, collaborating with a central BIM database throughout the project cycle from Schematic Design to Construction Documents. We anticipate our clients will continue to develop a form of BIM and contact us as the industry grows together in this new direction.

Stay tuned to our progress in the upcoming months.

David J. Shepard Cadd Drafter

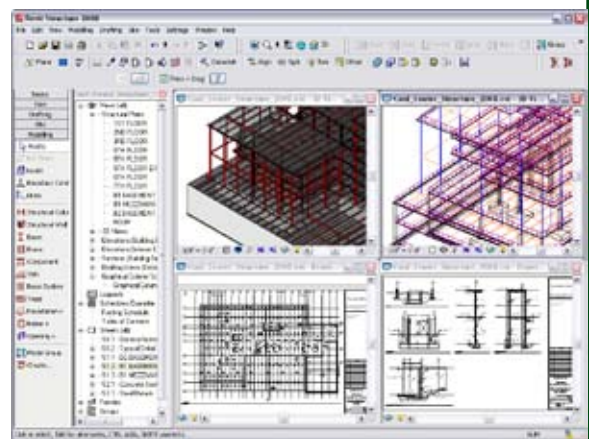
Dave joined DMBC in 1999 and is an ambitious employee who is willing to step up to the plate when needed.



In addition to his role as Cadd Drafter, Dave has taken on the additional responsibility of performing Construction Administration services at several of our project sites, including BassPro Shops, Bed Bath & Beyond, and Christmas Tree Shops at Gillette Stadium's Patriot Place project in Foxborough, Massachusetts.

Dave has gained a wide variety of experience working on many different types of structures. One project he is currently working on with a senior engineer consists of several repairs of an existing outdoor area at Fitchburg State College.

In his spare time, Dave enjoys going to Patriot's games, playing golf, shooting darts, and spending time with family and friends and his dog Sadie.



Single Model for Both Structural Analysis and Documentation!