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Some Father’s Day Reflections, Musings and Ramblings

This Father’s Day was spent without my kids for the first time in nearly 30 years. Doing so allowed me to spend some time with my father, who is in his early nineties and dealing with health issues but is as tough and unwavering as I remember him being in my childhood. I also spent some time reflecting on my role(s) as a father to my children, (now adults) a husband to my wonderful wife, in our company and in our industry. As a man of faith, I have learned over the years, that it is much easier to hear the still small voice that brings thoughts and events into focus and proper prioritization in quiet times and that there is value and purpose in everything we do, go through and deal with—the good and what we might perceive at the time as bad.

For the past 29 years, I have been blessed to have not only worked for, but with, a great family and the man who founded and has been the leader of WPI. Mike Roach has been to me not only a boss but an example and a mentor. My success in life is directly related to the example, influence and opportunities he has provided. Thanks Mike, and also Pam (she sharpened my ability to read and amend contracts).

The role of being a father, it seems, has some parallels with our roles as owners and managers of our businesses. The decisions we make on a daily basis affect the futures of those around us. Our companies are made up of people and relationships that have developed over many years. Our workers depend on us to make the right decisions to provide a level of stability as well as opportunities for improvement in their lives. Just as we baby boomers were brought up understanding that we had a role to be the “bread winner” for our families, those who make up our companies are looking to us to “provide” opportunities for them to do the same for their families.

We deal with and share at some level the joys, dramas and, sometimes, tragedies of the lives of those around us like our fathers did with us. There are times we need to correct their behavior or point them in a better direction. There are also times we need to recognize their achievements. When we do so, we are looking out for not only our present situation and/or our future but theirs as well.

I also strive to remember to always be thankful for those who surround me and walk with me through this journey we call life—family, friends, coworkers, and those in our industry. When times are good, it is easier to be thankful. But even when there are disagreements or struggles, there is still reason to be thankful. When in the middle of struggles, I have found that usually it is better to be looking for what will be the best solution in the long term. Short-term fixes often come with unintended long-term costs associated with them.

Being with my father also reminded me of the fact that time really does fly. We all need, at times, to have a time of refocus and reprioritizing. We need to take time to let those around us know how much we appreciate them and value them. We need to spend more time with our wives and kids today. No-one knows what tomorrow might hold. In the end, if we can look back and see that we made things better for those we came into contact with, that is a life well lived.

My wish for each of you is to take some time to look around, be thankful, make any necessary reprioritizations, instill value in those around you, fulfill your role as best as you can and have a life well lived.

Neil O’Connor, NWCB President
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To improve is to change; to be perfect is to change often.
—Winston Churchill

For the Northwest Wall and Ceiling Bureau, this quote couldn’t be more appropriate. Everything seems to be changing, and it has been challenging to keep up. The challenges are good because they have helped steer us in our pursuit to be the best wall and ceiling association in the industry.

We have seen changes to building codes, building standards, technology and communication; virtually every aspect of how we function is changing. As we strive for quality in the products and services we provide to our members, we must change.

Change is hard but also exciting. It provides opportunities, and we are approaching these opportunities as the open door for improvement. Harrison Ford said, “We all have big changes in our lives that are more or less a second chance.” Our second chances are exciting and we are striving to be better for them.

The 2015 Northwest Wall and Ceiling Industries Convention and Trade Show took place at the Westin Mission Hills Golf Resort & Spa, April 16-18. We enjoyed the beautiful spring weather of Palm Desert, California, applauded our project of the year winners and were inspired by our keynote speaker, Kelly McDonald. The seminars were educational, the exhibits were informative and the golf was ideal. I would like to extend our appreciation to our sponsors and exhibitors for their continued support that makes this 65-year convention tradition possible. I look forward to seeing everyone at next year’s convention April 28-30, 2016, at the Loews Coronado Bay Resort, San Diego, California.

One of the key elements to the success of the NWCB is the participation of our members. It is this continued support from our members that will keep us at the leading edge of our industry. Please continue to participate in chapter meetings, social events, seminars and the convention. In addition, consider getting involved in a committee, a focus group or volunteer to assist at an event. The growth, health and continued success of the NWCB greatly depends on the efforts of our members.

The NWCB is assembling a series of seminars and chapter meetings for the 2015-2016 season. The seminars will provide an educational forum along with the opportunity for architects to earn AIA Continuing Education Learning Units. The chapter meetings will also provide educational information together with networking opportunities. Please watch for the upcoming announcements and meeting information.

Change is important but so is upholding traditions. We will continue to maintain many of our past traditions such as our training seminars, chapter meetings, holiday parties, golf tournaments and convention. These gatherings provide an excellent opportunity to spend time with people in the industry and office colleagues. Keep your eyes open for additional information and visit us at www.nwcb.org. We are looking forward to seeing you!

All the best,

Mark Eisenmann, Executive Director
Northwest Wall and Ceiling Bureau

Job Opening

Build to a Higher Standard

Northwest Wall and Ceiling Bureau (NWCB) is seeking to hire an Architectural Consultant. The NWCB is a nonprofit trade association for the wall and ceiling industry, serving a wide-ranging membership of contractors, manufacturers, dealers, labor organizations and other professionals in the industry. NWCB also provides assistance to design and construction community on the proper use of the products and systems offered by our industry, including stucco, EIFS, gypsum wallboard, interior plaster, suspended ceilings, steel framing and spray-on fireproofing.

Job Description:
• Provide contractor members technical support
• Give informational presentations to architects, general contractors, wall and ceiling contractors, owners, and building officials
• Promote the use of quality products and systems
• Assist architects and designers with specifications and detailing
• Stay current with code changes and help establish required industry standards
• Assist local code officials with issues affecting the wall and ceiling industry
• Answer technical questions related to the wall and ceiling industry
• Make field and site inspections as required for members
• Update existing and create technical documents
• Write articles for industry publications in order to increase the quality of construction and assist the industry
• Be a professional representative of the wall and ceiling industry

Compensation:
Salary, 401k, vacation and health insurance.

Qualifications:
A strong knowledge of commercial building construction, specifically the wall and ceiling industry. Solid writing, public speaking and communication skills are important. Experience working with contractors, architects, manufacturers, distributors and inspectors is a plus.

Location:
NWCB Seattle Office. Some travel is required. NWCB is an equal opportunity employer and all qualified candidates are encouraged to apply. Please send a cover letter and resume to mark@nwcb.org. All applications and communication will be confidential.

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Neil O’Connor, NWCB President

It is truly an honor to serve, in this new role, the industry that has provided for me, my family, our company, and a great many friends and colleagues over these past 40 plus years not only a very good living, but a life full of rich unique experiences that only could come from being involved in our industry.

In this new role for the Bureau, one of my first orders of business is to thank each of you contractors, labor organizations, manufacturers, dealers, and others who have continued to support the Bureau, its mission, and our industry through your memberships, your supplemental support, sponsorships and your involvement in the Bureau and its activities. Without you and your support, we would have no Bureau and a much bleaker future.

A special thanks goes to those who have in the past and currently serve on committees, trusts, and/or the boards of directors for both of our contractors’ associations and the Bureau and who sacrifice time and energy from the operations of your own businesses to make your Bureau and your associations successful. You are making an investment in the future of our industry.

This Northwest Wall and Ceiling Bureau is an internationally renowned organization known for being cutting edge in technology support and is responsible for the production of the only Impacts to Labor Productivity Study that is specific to our industry. At our convention this year, Terry Kastner and Gerry Williams unveiled a new tool available to all of us to better project and calculate the cost of productivity impacts we suffer on projects, thus making the NWCB “Impacts to Labor Productivity Study” a much more user-friendly tool for our industry.

My first contact with this organization occurred in the 1970s, when Bob Drury was the Executive Director of the Northwest Lath and Plaster Bureau. The Northwest Wall and Ceiling Bureau came into existence in the mid 1980’s, following a bad recession, when the Drywall Contractors Association in Washington merged with the Plastering Contractors Association, forming the Northwest Wall and Ceiling Contractors’ Association. The promotional arm of the Northwest Lath and Plaster Bureau became the Northwest Wall and Ceiling Bureau, which now served both the drywall and plastering industries in Washington. A couple of years later, the plastering and drywall contractors’ associations in Oregon followed suit and merged, forming the Associated Wall and Ceiling Contractors of Oregon and Southwest Washington.

This is your Bureau and we are committed to serving you, our members. The mission of the Northwest Wall and Ceiling Bureau is to work for “the good of the industry,” our industry. We commit to you that is exactly what your Bureau’s mission will continue to be.

We do, however, live in a changing society. Much like our companies must adapt to new materials, new code requirements and changing market conditions, your Bureau will have to make some adaptations to better serve you, our members. Change is a constant and essential part of life. We can either choose to embrace change and adapt, or we get left behind and go extinct. My good friend, Ed Charles once told me: “The best way to manage change is to make it ourselves.” In other words, just reacting to change is not good enough but, rather, we will be more successful by getting ahead of the curve and drive the change ourselves. None of us can change yesterday, yet each of us is empowered to change both today and the future.

In our business, it is said that you are only as good as your last job. While the NWCB is steeped in a lot of great history, we cannot afford to rest on that history. Rather, it is up to us to make new history and write the next chapter.

We all have a responsibility to not only give back to our industry but to leave it better than we found it for those who follow us. After working through the worst recession any of us has personally experienced, we have much work ahead of us to rebuild and leave our industry and the Bureau better than we found them.

In order to be successful, we will need your ideas, your continued support and your involvement. The success of your Bureau is dependent on you. Working together we are much stronger than the sum of our individual parts. Will you commit to working together to support the Northwest Wall and Ceiling Bureau and the future of our industry? Let’s design build a better future together.

With your help and support, we certainly can have a better Bureau, a better industry and a brighter future to leave to our children.

www.nwcb.org 9
Jointing in Wall and Finish Framing

Riley Mahaffey, Principal, P.E. & Dana Hennis, S.E., P.E.

The performance of a building and the interaction with the architectural finishes that it supports have been perplexing issues that the AEC industry has faced for many years. In a “perfect” construction world, we would be able to design and construct a building that could stand on its own with standard detailing that connects everything together starting at the roof to the walls to the foundation. Unfortunately, this is not the case as the structure is going to experience active live loading by the occupants on the floors, exposure to temperature differentials from the environment and motions due to wind and/or seismic activity during the life of the building. These events cause vertical and horizontal movements that must be addressed to prevent cracking, etc., in the exterior and interior finish systems. Generally, these issues tend to happen after all construction crews have moved on to the next project and require subsequent efforts to repair that are probably not budgeted in the original project fee (i.e., out of pocket expense to correct).

One misconception is that the finish systems must be tied to the base structure so it will move with the building during horizontal and vertical movement events. The real intent is to provide connections to the structure that allow the building to move while the finish system stays in its original location. This helps alleviate potential cracking/compromising of the exposed elements.
Our industry has fortunately developed products to address these issues and provide solutions to previously difficult framing conditions. There are connectors made that allow for vertical and/or horizontal structure movement. These connectors are used at areas where jointing is being provided in the finish and framing systems.

Let’s take a moment and recognize the jointing types that are referenced in the field and on construction documents.

1. Control Joints

These are located in the finish system only (i.e., stucco, EIFS, etc.) Their intent is to provide relief locations for the system based on the amount of exposed surface. There is no special structural joint in the framing system behind the finish.

2. Expansion Joints

These are provided at locations where a separation is required in the finish system and the structure support framing. These are oriented both vertically and/or horizontally.

3. Drift Joint

These are a complete separation system, horizontally along the building framing, allowing horizontal movement between building levels without creating a “tearing” effect in the finish system. These joints are used predominantly in high seismic zones. The drift joint is designed to provide more horizontal movement than the typical finish will allow. The different drift systems are also dependent on the structural framing of the main structure.

4. Crush Zone Jointing

(needed in high seismic locations)

These joints are needed at locations where perpendicular walls connect. During a seismic event, one wall is moving in a horizontal direction and will collide/crush the perpendicular wall elements/finishes unless some form of relief is provided (i.e. jointing). This is an item the industry is now trying to consider as past building earthquake performance has indicated more attention to detail must be paid in high seismic locations to alleviate building intersection damage.

The design architect and structural engineer must take into account these issues and coordinate the need and placement of joints as part of the architectural finish. Structural framing layouts and where they occupy space in relation to the wall framing systems are extremely important.

If a system is laid out where a floor-to-floor stud framing condition must occur, options for joint layout are limited. The wall system and the structural framing system are in the same plane and are forced to move in plane and out of plane together. Framing around steel brace-frame elements is an area where these issues are surfacing. When the brace-frame members experience an out-of-plane loading, the wall finish may tend to crack in a pattern that follows the brace-frame members. Architecturally, it is challenging to have an acceptable finish jointing pattern at brace-frame locations. In typical buildings, jointing must occur at the floor/roof levels to be where the framing breaks occur. At times, this is not the most architecturally acceptable or preferred jointing layout for the final appearance of the building.

A by-pass exterior framing system, relative to the structural framing system, allows more flexibility in jointing layout patterns. As the exterior framing is set forward of the structural members and floor slabs, it allows the light gauge framing to span lengths more than the floor-slab-to-floor-slab dimension. Extending the light-gauge stud frame past the floor slabs allows the system to move the joints away from the floor slab levels to a location where the visible jointing is desired. Joints can also be placed at the top of windows or curtain walls to provide better movement for the structure.

In closing, as a design/construction community, it is our responsibility to address the issues of structure movement and protection of finish systems from unacceptable performance for the life of the building early on in the project. When the finish system does not perform properly, building owners are not satisfied and the responsibility falls on our profession to develop a costly repair to rectify the situation.

—Riley Mahaffey, P.E., LEED Green Associate, is one of the principals at Lochsa Engineering, where he is responsible for the design of commercial, institutional, and industrial projects with a focus on seismic retrofit, seismic investigation, specialty theming, and infrastructure/wastewater development. His over 25 years of engineering experience spans from assessing structural damage and designing repairs/retrofits after the Northridge earthquake in Southern California, to seeing the completion of the Las Vegas City Center urban design project, the largest privately funded construction project in U.S. history.

—Dana Hennis, P.E./S.E., is a senior project engineer at Lochsa Engineering. He has over 22 years of experience in structural engineering, including forensic engineering, amusement park facilities, schools, hospitals, industrial facilities, and various retail establishments and complexes. For the past 17 years, his primary emphasis has been in the design of light gauge framing systems, both exterior and interior as well as high rise and panelized systems. Lochsa is a consulting engineering firm with offices in Las Vegas, NV, Boise, ID and Denver, CO and is licensed in all 50 states and 3 Canadian Provinces.
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The 2015 Wall and Ceiling Industries Annual Convention and Trade Show were held April 16-18 at the Westin Mission Hills Golf Resort and Spa in Rancho Mirage, California.

The event featured an informative trade show, educational seminars, industry meetings combined with numerous networking events ranging from golf to receptions and dinner functions. The winners of the 2015 Outstanding Project of the Awards, celebrating the quality products and workmanship our industry provides, were announced at the opening ceremonies.

The educational offering was especially strong this year, with standing room only at most sessions. Our keynote speaker, Kelly McDonald, delivered a strong message about the demographic shifts and trends that present both challenges and opportunities to our industry. The technical topics included: managing, documenting and getting paid for change orders; NWCB Labor Productivity Study; latest technologies that are enhancing the traditional construction process; and the code requirements for suspended acoustical ceilings. In addition, the joint caucus meeting for contractor and labor members addressed the critical question on how to attract younger people to our industry and retain them.

The closing banquet marked the changing of the guard as Jim Taylor, of Mehrer Drywall, Inc., who had been the association president for the past two years, passed the reigns over to the incoming president, Neil O’Connor, of Western Partitions, Inc.

Planning is well underway for the 2016 event slated for April 28-30 at the Loews Coronado Bay Resort in San Diego. Read more about next year’s event on page 27.
The 2015 Best Booth Award was presented to Plastic Components.

Many thanks to Jim Taylor for leading the NWCB for the past two years.
The Industry Person of the Year Award was presented to Joe Young, president and owner of Wall & Ceiling Supply, Inc., in Seattle, for his many years of dedication and service to the industry and the NWCB.
2015 CONVENTION EXHIBITORS

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The sharing of information is one of the most important aspects of economic growth. Without new information we cannot increase knowledge. Without knowledge and information, we cannot think, process or accomplish our objectives. Sharing of industry information is one of the key functions of associations and translates into growth for their respective industries.

Given the number of responsibilities that a person has to juggle on a daily basis, participating in a professional organization such as the Northwest Wall & Ceiling Bureau (NWCB) may not be one of your top priorities. After all, what business person has time for more meetings? A wise man used to say to me, “in order to maximize your production, periodically you need to stop cutting wood and sharpen your ax.” As in this metaphor, sharing of industry information is akin to sharpening your ax. Information sharing increases our capacity for learning and assembling knowledge. In addition, sharing knowledge is a synergistic process: you get more in return than you put in. In essence, sharing of information will make you more efficient just like sharpening the ax.

What objectives of the NWCB are related to information sharing? Let’s outline a few of the goals from our Vision and Mission Statements related to this question.

1. To be the authority as it relates to the industry it represents
2. Increase awareness of all trends that affect the members and the industry
3. Create new and develop existing standards
4. Expand the industry’s scope of work
5. Promote work for our membership
6. Elevate the status of the work the wall and ceiling contractor performs

In order to accomplish these objectives we need member participation. Participation in NWCB events such as educational seminars, chapter meetings and social events is a great way to stay involved. In addition, please consider joining a committee, volunteering for an event or writing a blog entry for our webpage. Your support will benefit your business, support the NWCB and help grow our industry. The growth, health and continued success of the NWCB and our industry greatly depend on the efforts of our members and sharing of information.

The creation and application of new knowledge is essential to the survival of all businesses. The NWCB is the perfect conduit for distribution of industry updates. Information sharing isn’t about sharing everything and giving away your competitive advantage. It’s about sharing information that will help the industry. What are some of the areas in which you can share information without giving away your company secrets?

- Suggestions related to product improvement and development
- Improvements and updates to technical documents
- Enhancements to codes and standards
- Insight on industry education and training needs

Most often, an association can have more of an impact on influencing change than an individual. Through member input, the NWCB can identify issues that need to be revised and address them.

Please help the NWCB help you by sharing information. This assistance will come back to you in the form of improved efficiency and economic growth.
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NW WALL & CEILING BUREAU’S

Outstanding Project of the Year Awards

The Glenn Massay Theatre project by Bradshaw & Associates, Inc.

UW Sound Transit Link Light Rail project by Performance Contracting.

Photo Credit: Aaron Hatch
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Mainland Exterior Stucco Restorations Inc.

Architectural Firms
Rosetech Hemphill Architects

Supplier
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Manufacturer
Dryvit Systems, Inc.

British Columbia
SUSPENDED CEILING

Blueshore Financial
Wall & Ceiling Contractor
Benton & Overbury Ltd.

Architectural Firms
Atelier Pacific Architecture Inc.

Suppliers
B.C. Ceiling Systems Ltd.

Manufacturers
CGC Inc.

British Columbia
INTERIOR—RESIDENTIAL

Remy Project
Wall & Ceiling Contractor
Showtime Contracting, Inc.

Suppliers
Dryco Building Supplies, Inc.

Manufacturers
Bailey Metal Products, Ltd.
CertainTeed Gypsum
CGC Inc.
HILTI

British Columbia
INTERIOR—COMMERCIAL

Songhees Wellness Centre
Wall & Ceiling Contractor
Gordon ‘N’ Gordon Interiors Ltd.

Suppliers
Slegg Lumber
Winroc

Manufacturers
Bailey Metal Products, Ltd.
CertainTeed Gypsum
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Bailey West, Inc.
Cascadia Design Products
CGC Inc.
Decoustics – Saint-Gobain
Plasterform

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**Alaska**
**RENOVATION/RESTORATION**

**Wall & Ceiling Contractor**
Bradshaw & Associates, Inc.

**Architectural Firm**
CCI Solutions, LLC

**Suppliers**
Salmon Bay Sand & Gravel Co.
Alaska Industrial Hardware
Alaska Traffic
Safway Services

**Manufacturers**
Insulfoam
Parex USA

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**Alaska**
**INTERIOR-COMMERCIAL**

**Wall & Ceiling Contractor**
Bradshaw & Associates, Inc.

**Architectural Firm**
Kumin Associates Inc.

**Supplier**
Salmon Bay Sand & Gravel Co.
Alaska Industrial Hardware
Alaska Traffic
Safway Services

**Manufacturers**
Vero-Rialto

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**Oregon**
**INTERIOR-COMMERCIAL**

**Wall & Ceiling Contractor**
Performance Contracting, Inc.

**Architectural Firm**
SERA

**Supplier**
GTS Interior Supply
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**Manufacturer**
Armstrong World Industries
BlazeFrame Industries
CertainTeed Gypsum
Georgia-Pacific
Hamiton Drywall Products
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SCAFCO Steel Stud Company
of the Year Awards

**Oregon**

**EXTERIOR-COMMERCIAL**

Public Utilities Commission Building

- Wall & Ceiling Contractor: Billings & Cronn Co.
- Architectural Firm: Studio 3 Architecture
- Suppliers: Knez Building Materials Co., R-Factor/Service Partners, Steeler Construction Supply
- Manufacturers: BMI Products, Fortifiber, Fry Reglet, Georgia-Pacific, Structa Wire Corp.

**EXTERIOR-RESIDENTIAL**

The Andy Student Housing

- Wall & Ceiling Contractor: Western Partitions, Inc.
- Architectural Firm: 2-Form Architecture
- Suppliers: R-Factor/Service Partners, Western Materials
- Manufacturers: BMI Products, Sto Corp., Structa Wire Corp.

**SUSPENDED CEILING**

Madras High School Performing Arts Center

- Wall & Ceiling Contractor: Performance Contracting, Inc.
- Architectural Firm: BBT Architects, Inc.
- Suppliers: GTS Interior Supply, Knez Building Materials Co.
- Manufacturers: Armstrong World Industries, Georgia-Pacific, Hamilton Drywall Products, USG Building Systems

**RENOVATION/RESTORATION**

POE Rose City

- Wall & Ceiling Contractor: The Harver Company
- Architectural Firm: VLMK Engineering + Design
- Supplier: AMES Taping Tools, GTS Interior Supply
- Manufacturers: Armstrong World Industries, Georgia-Pacific, SCAFCO Steel Stud Company, USG Building Systems

Photo Credit: Gabe Hurley
2015 NW WALL & CEILING BUREAU’S Outstanding Project

Washington INTERIOR-RESIDENTIAL

Premiere on Pine
Wall & Ceiling Contractor
Anning-Johnson Company

Architectural Firm
Weber Thompson

Suppliers
AMES Taping Tools
Drywall Distributors, Inc.
R-Factor/Service Partners

Manufacturers
Award Metals
BASF Wall Systems
CEMCO
Georgia-Pacific

Hamilton Drywall Products
HILTI
USG Building Systems

Washington INTERIOR-COMMERCIAL

Pokémon Tenant Improvements
Wall & Ceiling Contractor
Firstline Systems, Inc.

Architectural Firm
JPC Architects, PLLC

Suppliers
Drywall Distributors, Inc.

Manufacturers
CEMCO
CertainTeed Gypsum
USG Building Systems

Washington EXTERIOR-COMMERCIAL

Block 44
Wall & Ceiling Contractor
Anning-Johnson Company

Architectural Firm
Zimmer Gunsal Frasca Architects LLP

Suppliers
Building Specialties, Inc.

Manufacturers
Award Metals
CEMCO
CertainTeed Gypsum
Fry Reglet
Georgia-Pacific

Grabber Construction Products
Hamilton Drywall Products
HILTI
Parox USA
USG Building Systems

Washington EXTERIOR-RESIDENTIAL

Magnolia Residence
Wall & Ceiling Contractor
Joseph J. Jefferson & Son, Inc.

Architectural Firm
Mucci/Truckess Architecture

Suppliers
Salmon Bay Sand & Gravel Co.

Manufacturers
BASF Wall Systems
Washington
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LMN Architects

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Washington
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Washington
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 Architectural Firms
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Next year’s Northwest Wall and Ceiling Industries Annual Convention and Trade Show will be held April 28-30 at the Loews Coronado Bay Resort in San Diego.

You will know you are arriving somewhere special when you cross the legendary San Diego-Coronado Bridge, with its distinctive curve and its over two-mile soaring sweep, onto quiet Coronado Island – a community know for its beautiful beaches, great shops and boutiques and a great variety of top-rated restaurants. Continue on, and you will drive through charming downtown Coronado, and in less than 10 minutes, you will arrive at the luxurious Loews Coronado Bay Resort, perched on its private, 15-acre peninsula with views of the shimmering bay waters and the San Diego skyline.

The Loews Coronado Bay Resort consists of five connected buildings, curving around the expansive pool deck, offering guests spectacular views, whether overlooking the surrounding waters or the lush landscaping in the pool and garden areas, where you will find an herb garden and a small orange grove.

The resort features three heated swimming pools, hot tub spa and dry sauna and fun outdoor games, plus three plexi-paved tennis courts. The resort’s state-of-the art fitness center will help you keep up your fitness routine while away from home, and the Sea Spa, a world-class spa offering signature treatments, therapies, and products, provides a place for relaxation and pampering. For those who love water and outdoor activities, the Loews offers on-site rentals of powerboats, jet skis, sailboats, stand-up paddle boards, kayaks and many types of bicycles. The Silver Strand Beach, situated an easy 5-minute walk from the resort, will be a unique and memorable venue for fun manufacturer- and dealer-sponsored party.

The convention golf tournament will be played at Riverwalk, one of San Diego’s top courses, featuring mature stands of palm, oak and eucalyptus trees framing the undulating fairways and manicured greens and numerous wetland areas, bunkers and scenic water features. A great course for players of all abilities combined with a fun scramble format promises a great golf and networking outing for our delegates.

The five restaurant outlets located on property serve everything from quick snacks and smoothies to fine dining with a fantastic view. More restaurants choices are a short drive away in downtown Coronado, or you can easily venture out to downtown San Diego, which will multiply your dining options.

Simply put, the Loews Coronado Bay Resort provides a fantastic, picturesque backdrop for our annual event which is all about business – learning about the latest trends in the industry, networking with people who can help take us to the next level and recognizing and celebrating the achievements of our industry.

The Loews Coronado Bay Resort welcomes families and has age appropriate amenities and programs for kids of all ages. In fact, it was voted one of the “10 Best Beach Vacations in the U.S. and Caribbean” by Parents Magazine (2010) and one of the “Top 15 Most Family Friendly Resorts in America” by FoxNews.com (2014). Why not combine business with pleasure and make the convention trip also a family getaway? Take advantage of all the family friendly attractions in and around San Diego, including the San Diego Zoo, SeaWorld, Balboa Park, and much more.

Room reservation are now being accepted online at the Loews for our event. Call (800) 235-6397 for your room reservation or visit us online at nwcb.org for a convenient room reservations link or point your browser directly to https://resweb.passkey.com/go/NorthwestWallCeiling. Our room rate is $229, and it is valid three days before and after our event. The resort charge has been waived for our group.

Plan now to be part of this powerful industry event and start planning on your convention trip to San Diego in April! Be sure to visit our website frequently for the latest updates on this must-attend industry event.
Designing and Building with Knowledge: How Technology is Enhancing Traditional Process

Kale Wisnia, AIA, NCARB

As an architect, I take pride in the knowledge that I bring to a project, and I strive to satisfy client needs and project functionality and complexity in poetic ways as best I can. However, I depend on the contractor and primarily the building sub-contractors to bring true knowledge of how a design is put together. Architects have a keen ability to see space in multi-dimensions and have always rendered ideas in perspective to persuade others to believe in a common vision. With the advent of technology, those ideas can be visualized and adjusted from every angle within and around a project. What was once only a tool used by architects to showcase grand concepts prior to construction has become an opportunity to build knowledge into the construction documents by those who understand how to put concepts into physical form long before anyone ever sets foot on the jobsite.

The wall and ceiling industry, with contractors on the ground, have been building the same way for centuries, and the knowledge of the most senior carpenters is worth a multiplier of their age in gold. Technology can’t take the place of experience, but it can offer a glimpse of what is to come and provide those with experience a way to forecast and give them an opportunity to lead and influence the outcome. It is with the combination of experience and technology that owners, architects, contractors and builders can aid the traditional process, establish control and deliver a project with confidence on time and within budget.

Trending Information

With a little research, it isn’t difficult to find the positive results stemming from the rise in technology being used to assist in design and construction. Additionally, with an increased popularity in one of the leading parametric computer-aided drawing (CAD) software packages provided by Autodesk Revit® and comparing it with the rising use of Building Information Modeling (BIM), one can speculate about their relationship. Over the last five to 10 years, the request for Revit® experience, knowledge of BIM and interest in Integrated Project Delivery (IPD) has flooded the industry. The growing popularity to integrate construction knowledge and design early in a project is changing the way the industry is thinking about projects and project team interaction. In 2004, (CURT) Construction Users Roundtable published a graph that shows the convergence of impact and cost during a project timeline (Figure 1). CURT sought to address the perception of inadequate, poorly coordinated AE drawings resulting in field-related issues leading to scheduling delays and, ultimately, project cost overruns.

The percentage of reduced project Requests for Information (RFI) and Change Orders (CO) have been attributed from 37 percent to 74 percent, anecdotally, by different projects reporting aggressive use of BIM over the last 10 years. This trend has institutions such as Michigan State and agencies such as the General Service Administration recommending the use of BIM on large projects and, in some cases, mandating it. In 2012, Cook Children’s Medical Center in Forth Worth, Texas, was able to implement identical building projects in a BIM versus non-BIM project comparison and experienced 12-month cost savings on the project utilizing BIM. In 2014, McGraw Hill reported that 74 percent of North American contractors showed a positive ROI, 25 percent rated the use of BIM as very high and 31 percent reported reduced rework.
While the industry at large is clearly adopting BIM, the last to the table is the wall and ceiling contractor. While the numbers show a positive ROI when BIM is used aggressively, not all projects require its use. The 2014 Smart Market Report showed only 25 percent of owners requiring BIM even though 69 percent believed it had an overall positive impact. Additionally, while the General Contractors (GC) are the predominant industry believers, less than half of them have a BIM implementation plan that would be considered advanced or expert, but even the ones that do, rate the drywall and ceiling contractors low on the list of BIM use and proficiency. This is old news of course. As most are aware, the mechanical trades have been using BIM for visualizing the parts and pieces for fabrication and calculations for over a decade. It is only recently that those same models are being combined with the models that architects used to showcase ideas to review building performance, use and constructability.

### Why might BIM be trending up?

- Who knows more about building than subcontractors?
- Drive cost down
- Improve performance
- Increase safety
- Client’s strategy for reduction in RFI (contractual)
- Passing or sharing the liability OAC, subcontractors, etc.

This presents an opportunity to the drywall and ceiling contractor that decides to implement BIM. Creating a plan, developing a standard for coordination and becoming an expert in the BIM aspects of walls and ceilings is in its infancy. At minimum, proficiency in BIM places the contractor ahead of a majority of the competition. And why shouldn’t the carpenter become the expert in coordination? Well, which building contractor on the project touches or is touched by nearly every other system and component and material in the project? And which building contractor is typically left to determine the detail requirements that will meet the design intent where most materials touch or intersect? The wall and ceiling contractors have more experience in addressing the intersection of materials outside their scope of work than any other subcontractor on a jobsite. I know this is true because I’ve spent the last 15 years working with or for them detailing those connections.

### Information Control

The information provided to build a project has not changed significantly for centuries. Possibly the quantity and complexity of information has increased, which, one might be able to argue, is the result of technology or increased code requirements or demands for proof of design intent, but the material information is delivered in the same way. BIM has presented a new environment for this information and, in some cases, acts as the central hub where all information is stored and reviewed. On most projects, there are can be a combination of information storage, synchronized folders and archives. Box, Dropbox, PlanGrid, SharePoint and many other online storage sites’ are now available to store and share project information. The larger GCs often require not only the ability to download from these sites to answer a Request for Proposal but also the requirement to upload, store and share information throughout the project design and construction timeline. The constructability review process still remains, along with the necessity to carefully gather, access, comment upon, distribute and track project information. What technology and the trend to integrate building systems with design prior to construction has done is combine or overlap the review process with the design process by making it possible to virtually see the building geometry and systems prior to construction. Bringing the contractor to the table (ideally with the architect) to review the design intent narrows the gap between constructability, design and field coordination, which comes at a premium cost.

In recent BIM coordination history (+/-8 years), Autodesk Navisworks (Navis Manage is the fully functional version) has been the tool of choice to review what is called a federated model. As the name suggests, it is a composite of many solid state models created by each contractor, designer or consultant. It can include as little as just the core and shell of a building or a model as detailed as to show valves on dampers, bolts in the seismic bracing and actual size and gauge of framing around a fire extinguisher cabinet. There can be variations of how the model is reviewed, but most commonly a detailer models their scope of work, uploads

*continued on page 30*
the models to a shared cloud-based location or server online where the GC BIM coordinator or facilitator then downloads the models or has a synchronized folder that downloads the current models and then combines them into the federated model. Often the facilitator may, in addition, run a clash between systems to determine potential issues. Weekly or bi-weekly meetings are arranged to review and resolve clash between systems, which can aid in minor or even major redesign decisions. Some of the best BIM implementation plans state very clearly that, in order for these facilitated meetings to run quickly and effectively, the people that are there must be representatives from every critical team member on the project. Additionally they must be given the authority to make decisions for the company or have the ability to quickly contact those that can. While the team is encouraged to upload their scope of the model as often as possible, it is common for there to be a delay of hours, if not days, as modelers make revisions, save work and export the appropriate geometries in a predefined format and naming convention to a shared site, and then the facilitator or other team members download upwards of ten to twenty, or sometimes more, models and append the federated model with the updated links for review.

As a solution to the obvious frustration the Navis coordination process delay takes, Autodesk has released BIM 360™ Glue, which is very similar to the Navis environment at surface value. The major functional difference is that Glue is first and foremost a plug-in to the native CAD or Revit model production software that is used to generate the original design content. This allows a modeler to synchronize or “glue” a current state of the model up to an automated federated model without leaving the modeling software. The federated model is then accessible via Internet and is, within seconds, visible to the team (modelers, facilitators, owners, architects) in real time. I want to re-emphasize this point. Once a modeler has established for example, a Revit “view” or CAD Layout with a name and origin point that meets the predefined set of “BIM guidelines,” it is takes 30 seconds or less to “glue” a current version of the model up to the federated model under constant review. While some of the tools and visibility are not currently as stable as the industry is used to experiencing with Navis, the basic environment and review options are identical. The fact that the team can model continuously and while on a conference call or in a virtual or physical “big room” environment presents the opportunity to save countless hours of waiting and guessing once a decision is made about a design move.

While this coordination evolution is a true game changer, it doesn’t remove the necessity for critical thinking with regard to priority systems, construction sequence review and schedule negotiation. In fact the knowledge of the design intent, constructability, sequencing, tolerances, clearances, material build-up, labor availability, safety issues and just simply tricks of the trade are even more important now than they ever have been. As project schedules are beat and the speed of design to implementation documents and construction accelerate, the ability to make decisions based on experience is even more critical. From the design professional to the field engineer, the stacks are higher than ever as decisions are made and executed within minutes.

—Kale Wisnia, AIA, NCARB, is owner and principal of CRKW Studio Inc. Kale holds a BARCH from the California College of the Arts in San Francisco. He has 37 years of experience in the construction and design industry. His primary focus of building type for the past 10 years has been California OSHPD hospitals and one hospital in Ohio. He has been a volunteer of the Detail Committee for the creation of OSHPD OPD since 2004.

This is the first of two articles discussing the use of the latest technology in the construction process. Watch for part two in the Winter/Spring 2016 issue of Higher Standard.
2017 NWCB Convention Location

See http://www.nwcb.org/conventions.html

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Gypsum Wallboard Supply in Tacoma is under new ownership. Paul Roman, Bret Ecklund and Kyle Grover have purchased the company from the founder Tom Falk. Paul Roman has been with the company since 1999 and has worked in virtually every position. Bret Ecklund joined the company in 2012 and has experience in all facets of the industry including contracting, manufacturing and supply. Kyle Grover has been with the company since its inception in 1992. The new owners say they intend to continue to provide the quality service the customers have come to expect. For more information contact Gypsum Wallboard Supply at 253.537.3310, or go to www.gypsumwallboardsupply.com.

Happy retirement to Tom Falk, who will be enjoying spending time with his family and traveling!

Valhalla Construction Products has moved into a new location at 4429 95th Street SW, Suite B, Building 8B, in Lakewood. The mailing address remains as PO Box 2883, Silverdale, WA 98499.

Valhalla Construction Products is the exclusive distributors of Rockfon ceiling tiles and systems. Rockfon is a manufacturer of stone wool acoustical ceiling tiles, which offer sound absorption, fire and water resistance, energy efficiency, dimensional stability, sustainability, design options and ease of installation. Rockfon’s latest acquisition, Chicago Metallic ceiling grid systems, allows Valhalla to supply a complete system to the customer.

For more information contact Kirby Barnes, sales manager for Washington, at 206.735.6606 or email kirby@valhallaproducts.com. In Oregon, contact Jim Borowczak, at 503.935.3696 or email jim@valhallaproducts.com.

Effective June 1, 2015, Dryvit Systems, Inc. announced changes affecting the Pacific Northwest. Salmon Bay Sand & Gravel in Seattle and Commencement Bay Construction Products in Tacoma are now the exclusive distributors of Dryvit products in Western Washington. The two companies are currently also available to supply Eastern Washington and Oregon contractors with Dryvit products from their two locations. Contact Kelly Carnahan at Salmon Bay in Seattle, phone: 206.784.1234 or email kelly@sbsg.com. Contact Steve Delvo at Commencement Bay in Tacoma, phone 253.572.3456 or email steve@cbccp.com.

Dryvit also announced that Larry Shipley is now the Regional Sales Manager for Dryvit in the Northwest. Larry is a veteran of the EIFS, stucco and waterproofing industries. He brings vast experience of these types products and knowledge of the contractor’s day-to-day challenges. Larry is also an expert in working with architects, owners and general contractors. Contact Larry at 214.235.9478 or email larry.shipley@dryvit.com.

Brad Stotts, a familiar face from Dryvit in the Pacific Northwest, will continue as a Technical Sales Associate. Brad’s 27 years at Dryvit and nearly 40 years’ experience with plaster materials make him a critical part of the Dryvit team in Washington, Oregon and Alaska. Contact Brad at 401.822.4100 or email brad.stotts@dryvit.com.

Brent Fisher, Business Development Manager for Dryvit, will have a more visible presence in the Northwest as Dryvit realigns its position with architects and specifiers and as the business development team works with architects, assisting in design and planning of projects with continuous insulation. Brent can be reached at 510.459.3978 or by email brent.fisher@dryvit.com.

Roger Peever, the Regional Sales Manager for the Northwest since 2012, has assumed sales and business development responsibilities for Dryvit International and Pacific Rim businesses.

Armstrong® World Industries, the nation’s largest manufacturer of acoustical ceiling systems, has named New West Gypsum Recycling (NWGR) of Kent, WA, an Armstrong Certified Construction & Demolition (C&D) Processor. NWGR will collect used ceiling panels that have been removed from construction, renovation, and demolition sites throughout the Seattle area. The company will then process the ceilings and prepare them for shipment to an Armstrong plant where they will be used in the manufacture of new ceilings in a closed-loop process. Armstrong designates new panels made with high levels of recycled ceilings as Ceiling-2-Ceiling™ panels. Ceiling recycling can also help building owners and contractors save money on container costs and landfill fees and can contribute to LEED® (Leadership in Energy and Environmental Design) credits for Construction Waste Management.

For more information on New West Gypsum Recycling, visit www.nwgyypsum.com. For additional information on the Armstrong Ceiling Recycling Program, visit armstrong.com/recycling, chat live, or call the Armstrong Recycling Center at 877.276.7876, press 1, then 8.

Mike Mehrer Retires

Mehrer Drywall announces the retirement of their longtime Chief Estimator Mike Mehrer. Mike came to work at Mehrer in 1966 scrapping houses. He left for several years while attending college and came back in 1974 with a degree in business from Central Washington University. Mike worked in the field as a nailer until 1974 when he came into the office to be trained as an estimator. Some of the jobs Mike is most proud of include: Escala, Roosevelt High School, Boeing 40-88, Regional Justice Center, First Hill Plaza, Continental Plaza, and the dozens of other small Boeing jobs.

“Mike’s knowledge in our business is unprecedented and will be sorely missed,” expressed Kurt Mehrer, Mehrer Drywall President. “We would like thank him for passing his knowledge and the passion for this industry on to us and would like to congratulate him on 49 years with Mehrer Drywall and wish him a long and happy retirement.”
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Rainscreen 10 Things to Know
Unintended Benefits of the 2012 Energy Code

Terry Kastner

Most recently, with the adoption of the 2012 Energy Code, an increased emphasis has been placed on the performance of the exterior building envelope. For a great number of years, the building code has required that the building envelope be designed and constructed in such a manner as to prevent water accumulation within the wall assembly. IBC Chapter 14 Exterior Walls, Section 1403.2 Weather Protection, states that, “Exterior walls shall provide the building with a weather-resistant exterior wall envelope. The exterior wall envelope shall include flashing, as described in Section 1405. The exterior wall envelope shall be designed and constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a water-resistive barrier behind the exterior veneer, as described in Section 1404.2, and a means for draining water that enters the assembly to the exterior.”

Although the code is specific in that the exterior wall envelope must be protected against the effects of moisture intrusion, only visual routine inspections by the code officials determine whether the entire building with all of the multiple intricacies will or should actually perform as required by the code. Unfortunately, even with code-mandated protection of the building envelope, it has not been and is not unusual to experience devastating moisture damage to wood structures in a relatively short period of time. All too often the damage occurs as a result of the improper installation of materials and not material failures or design deficiencies.

Recently, the NWCB was asked to participate in an investigation of water intrusion to a hotel structure that was less than five years old. The structure was constructed of wood framing members with OSB sheathing and a cladding of stucco. Shortly after completion, moisture intrusion was observed at the interior of the units, which prompted further intrusive investigation to determine the cause of the moisture intrusion and potential structural damage. The NWCB was called in because, as I mentioned, the cladding was stucco. It is all too common that building envelope consultants are quick to blame the cladding for water intrusion, especially when that cladding is stucco and there appears the occasional crack. That just happened to be the case here. Stucco was being blamed for the water intrusion because there were a few hairline cracks. What some consultants fail to understand, or to admit, is that the building code makes accommodations for incidental water intrusion, with any cladding, by mandating that the exterior envelope be protected with a weather-resistive barrier (WRB) and a means for draining of incidental moisture intrusion. As it turns out, the problem wasn’t with the stucco. The source of water intrusion, and subsequent structural damage, was a direct result of improperly flashed windows and incorrect window flanges to accommodate the specified caulk joint. When water penetrated the caulk joint, the moisture easily migrated to the inside of the units and behind the WRB intended to protect the sheathing or building envelope. The OSB sheathing was severely damaged and, in number of locations, the dimensional lumber also suffered damaged. Failure to properly install materials designed to protect the building envelope resulted in the complete removal of the stucco cladding to replace damaged sheathing and install properly flashed windows. A structure that should have performed well for many decades lasted less than five years.

Although typical moisture damage is serious enough to cause significant damage to structural members, the damage, as in this case, is normally discovered before an actual collapse of the structure and loss of life occurs. Such was not the case at Berkeley California in June of this year. A balcony collapse resulted in the deaths of six people and serious injuries to seven others. The building was only eight years old and had been subjected to regular inspections by the City of Berkeley building department during the course of construction.

The support for the balconies was by the use of engineered I-Joists. I-Joist beams are formed by encapsulating the web or OSB sheathing between a top and bottom plate of either dimensional lumber or laminated lumber. OSB is composed of flaked chips of wood that are glued together and compressed to form OSB panels. Although I-Joists are a strong, lightweight and economical alternative to traditional dimensional lumber or laminated beams, OSB and, in-turn, I-Joists are extremely sensitive to moisture. On the Berkeley project, the I-Joists were an extension of the interior support
members extending outboard of the exterior wall to provide support for the balcony. The I-Joists were protected with a “sheet material” followed by a waterproofing membrane and two inches of concrete. The underside was sheathed and cladded with stucco. No accommodations for ventilating the space were provided. Needless to say, a failure in the system permitted moisture to enter the confined space resulting in rapid dry-rot and decay to the I-Joists and the untimely collapse of the balcony.

In the first example, it became clear who and what was responsible for the damage. At the Berkeley project the building department has no plans to do an in-depth investigation. They have determined that water intrusion and the lack of venting were the primary contributors to the failure of the I-Joist members and will concentrate their efforts, for the future, on keeping water out. Rest assured building envelope consultants and lawyers will be moving towards discovering exactly what systems were installed incorrectly and who is responsible.

Prior to the adoption of the 2012 Energy Code, there were no code mandated procedures in place, other than visual inspections by code officials, to verify that the system was installed correctly. Now, as an indirect result of promoting energy savings through the adoption of the 2012 Energy code, the effectiveness of the air barrier will be tested to determine if the design, materials and installation meet the air infiltration levels instituted by the code. With air infiltration comes moisture intrusion. When there are no air leaks, there should be no moisture leaks. Without moisture leaks, there should be significantly less litigation and a longer life cycle for all structures.

As mentioned previously, most often the design is effective and the materials, when correctly specified, are effective as well. The breakdown typically comes through operator error. The increased complexity of the exterior building envelope, and subsequent testing, will require highly trained craftsmen to ensure that the building performs as mandated by the code. This, in-turn, works in the favor of our union contractors and highly trained union tradespeople who, together, continue to provide unsurpassed excellence on some of the most complex projects and systems.

—Terry Kastner is technical consultant for Northwest Wall and Ceiling Bureau.
Oregon
John Killin
NWCB Oregon Representative
Associated Wall and Ceiling Contractors
Executive Director

Yesterday, I read an economic update stating that U.S. construction spending is at its highest level since October of 2008, which means, by the end of the year, we may surpass of those peak levels.

In October of 2008, as the executive director of another association, I gathered the board to do a day of strategic planning. The stock market was showing signs of concern but hadn’t hit the cataclysmic cliff yet, and as we started the day, everyone’s backlog and revenue were as strong as they could possibly hope. We set ambitious goals that day, but what I remember most are the confused faces that came back into the room as we reconvened from an afternoon break. Several people told me that their marquee projects had been suddenly shelved. The projects would sit, half built, indefinitely. Many of you can remember a moment like this, and I can tell that these memories still resonate around the Oregon industry.

The downturn brought painful ways of doing business. It brought catch phrases like “the new economy” and “it is what it is” to describe just how tight times had become and how powerless we were to change anything. Everyone looked for faster, smarter and simplified versions of their business practices.

But here we are, back at the potential pinnacle of construction spending, and I am going to suggest two agenda’s that may at first seem at odds.

First, whether times are good or bad, organizations need to take on ambitious goals and stick to them. Don’t sit back because your backlog looks good today; it is hard enough to succeed even with consistent innovation and marketing.

Second, get lean. It is time our industry adopt processes long held sacred in manufacturing. “Lean” is the practice of purposely and intentionally working to simplify processes to their most efficient and productive end. Whether it is paperwork, marketing, prefabrication or field installations, now is a good time to get lean as we attempt to replenish a retiring workforce.

The Oregon chapter will be working with partners on lean issues and marketing this summer. Along with lean class development, we will deliver plaques to the owners, GC’s and architects involved in NWCB projects of the year. At the same time, we are sponsoring AIA and CSI golf tournaments and newsletters. And, for the first time in memory, we are publishing an insert in the Portland Daily Journal of Commerce celebrating our award winners and members.

These topics seem to be top of mind for many in our area. I hope everyone has a prosperous summer that lasts!  

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CALENDAR

NWCB NORTHWEST CHAPTER

Wednesday, September 2, 2015
NW Chapter Robert Drury Invitational Golf Tournament
The Golf Club at Redmond Ridge
1 pm Shotgun Start

Wednesday, October 21, 2015
Educational Seminar: “Controlling Sound in Commercial Construction”
Washington State Convention Center, Seattle

Wednesday, November 18, 2015
Washington State Convention Center, Seattle

Wednesday, December 16, 2015
Holiday Open House
NWCB Office, Seattle

Wednesday, January 20, 2016
Educational Seminar: “NWCB Technical Documents”
Washington State Convention Center, Seattle

Wednesday, February 17, 2016
Luncheon: “Product Showcase”
Sheraton Bellevue Hotel, Bellevue

Wednesday, March 16, 2016
Luncheon: “Construction Update”
Sheraton Bellevue Hotel, Bellevue

For more information on the events of the NWCB Northwest Chapter, please visit www.nwcb.org or call 206.524.4243.

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NWCB OREGON CHAPTER

Tuesday, September 22, 2015
AWCC Board / Membership Meeting
11:30 am

Thursday September 24, 2015
Golf Tournament
Langdon Farms Golf Club
Registration opens at 6:30 am; carts depart at 7:30 am.
Prize luncheon immediately following the tournament.

October Educational Seminar: “Controlling Sound in Commercial Construction”
Date and location to be announced

November Educational Seminar: “AIA Accredited Seminar on GA-600”
Date and location to be announced

Thursday, December 17, 2015
Holiday Party
Starting at 6pm
Downtown Hilton Tower, Portland

January Educational Seminar: “NWCB Technical Documents”
Date and location to be announced

February Luncheon: “Product Showcase”
Date and location to be announced

March Luncheon: “Construction Update”
Date and location to be announced

CONVENTION

April 28-30, 2016
The Loews Coronado Bay Resort
San Diego, California

The Loews Coronado Bay Resort
San Diego, California

NORTHWEST WALL & CEILING INDUSTRIES
CONVENTION & TRADE SHOW
SAN DIEGO • CA
APRIL 28-30, 2016
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