

Pinnell/Busch Partners with Portland State University for Managing Design and Construction

We are pleased to announce Pinnell/Busch's partnership with Portland State University to create a new professional education program entitled *Managing Design and Construction*.

Launching in early 2006, the *Managing Design and Construction* program will provide a unique, local opportunity to learn both essential and advanced skills for managing design and construction projects. It will provide practical tools and techniques for contractors, engineers, architects, construction managers, public works managers, facility managers, construction accountants, and construction lawyers. Participants will also earn Continuing Education Units from Portland State University.

Pinnell/Busch Celebrates 30th Anniversary

This winter, Pinnell/Busch will mark our 30th Anniversary! We hope that you will join us for an evening to celebrate. Look for details this fall.

Topics will include alternative contracting methods, claims avoidance, project management, scheduling, estimating, quality assurance and control, leadership, negotiation, and contract law. Interactive exchange of ideas will occur through case studies, role playing and discussion of current

projects. Pinnell/Busch, our partners at PSU, and our Advisory Council of industry experts are designing the first year's schedule of events.

Please join us by subscribing to our free email newsletter and receive the latest updates on the *Managing Design and Construction* program. To subscribe, please contact PSU Program Manager Vincent Fritzsche at vincentf@pdx.edu.

To participate in the Advisory Council with other industry executives and senior managers, or to volunteer as a possible instructor, please contact Steve Pinnell at steve@pinnellbusch.com.

Project News and Views

Construction Defects Investigations

Greg Mockford and John Costello continue to lead a number of construction defect investigations. Jack Levy, a Partner with Smith Freed Eberhard who has worked with Greg since 2000, says "Greg is a fantastic guy to work with. He knows what we want and gives it to us on time and on budget." Greg's work as an expert in construction management inspires confidence in his clients. Kevin Eike, an attorney with Davis Rothwell, finds Greg "very knowledgeable about all aspects of construction, keeping current through his own research on recent developments."

Schedule Preparation for Contractors

Blake Marchand, our lead scheduler, has provided over 25 baseline schedules and schedule updates so far this year. Dwight Gill, a Project Manager at Cisneros Construction, says: "Blake was very helpful in the scheduling and associated reports for the Bremerton Naval Shipyard project we worked on for a year and a half. He also advised us, from a scheduling perspective, in a way we wouldn't have thought of. He gave us recommendations for how to handle and prepare for a claim in which I was confident."

Schedule Review for Owners

Pinnell/Busch is assisting the US Army Corps of Engineers on two military housing projects that total over \$26 million. Jim Nakamoto, the Corps' Project Manager, "highly recommended Pinnell/Busch to his project delivery team to help with construction scheduling, cost impact analysis and partnering services for the U.S. Air Force." Jim attests to Blake's professional demeanor and appreciates his quick response to clients' needs. Jim also gives credit to Cathy Hastie who he says is a great Project Coordinator.

Owner Representative Services

John Costello, Director of Owner Representative Services, has supported Darien Loiselle of Schwabe for six years on large, complex construction litigation matters. This includes the current 88-mile gas pipeline project for which John is assisting the owner's legal counsel in mitigating defective installment and assessing damages. Darien says John "is a team player, very diligent and skillful in his communications. He prepares detailed and thorough testimony and trial preparation."

continued on back page

Scheduling Best Practices

To Avoid Changes, Delays, and Claims

For over 30 years, Pinnell/Busch has helped our clients reduce claims, resolve disputes, and improve their scheduling and we have developed Best Practices based on our experience. This spring, we surveyed industry practitioners to determine their experiences and recommendations to avoid changes, delays, and claims. We presented the results at the Project Management Institute College of Scheduling Conference in May. The report, a six-page summary, and the raw data are available on our website, www.pinnellbusch.com/library.html.

Contract Changes

Project owners and contractors both reported that construction changes averaged 10% of their annual volume of work. Building contractors reported 8%, heavy/highway contractors 10%, and subcontractors 12%. However, individual owners and contractors reported widely varying results:

- Nearly half of owners averaged 5% or less of annual volume.
- Nearly one-fifth reported 15% or more and some reported 50%.

Reason for Variation

The wide variation is due to more than a difference in type of projects and working conditions. It must be due to a difference in procedures and standards. In other words, some organizations do a better job of limiting change than others. More importantly, major improvements are possible through better practices.

Cause of Changes

Both contractors and owners reported scope change as the primary cause of changes. Design errors and differing site conditions were the next most frequent causes, followed by owner delays.

Reducing Changes

Owners have control, or at least influence in the case of design, over 85% of the reasons for change. With better practices, owners can significantly reduce the extent of changes and, therefore, of claims and delays.

We prepared a list of Best Practices to reduce claims, as summarized in the adjacent figure, based on the survey responses and our experience on projects.

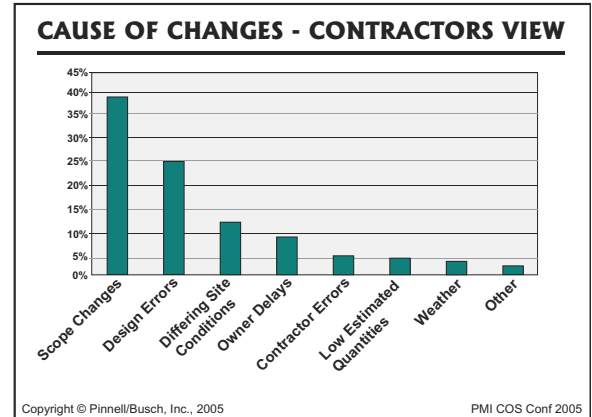
Claims

The percentage of changes that become claims varies widely – from zero to 50%, with an average of 6½%. The wide variance between individual organizations means that major improvements can be made. There is a strong correlation between a higher percent of changes and more of those changes becoming claims.

Best Practices to reduce claims include: (1) better people skills and attitude/trust, (2) prompt and fair negotiation and payment for changes, (3) fair contract administration, (4) timely notice of change, and (5) clear communication. We strongly recommend partnering as the best overall method to avoid claims and help settle those that do occur.

Most claims (85%) are settled in negotiation with the balance by mediation, arbitration, or litigation. Mediation, however, should always be used before arbitration or litigation to save time, cost and business relationships.

Project ReAlignment, formerly called Intervention Partnering, is a new means of saving troubled projects midway through construction. It 'wipes the slate clean' with one change order for all delays and claims to date. Project ReAlignment turns around a troubled project in 30 to 45 days using a small team of experts and in-house staff. The cost savings are enormous and, unlike mediation, based upon documented facts. The 'bleeding' is stopped and progress resumes in a positive environment.



BEST PRACTICES TO REDUCE CHANGES

- 1. Scope Change**
 - ♦ Better scope definition (programming and predesign)
 - ♦ Cost and scope management during design
 - ♦ User groups and operations & maintenance in design reviews
- 2. Design Errors**
 - ♦ Select best qualified designer with project management skills
 - ♦ Don't over-emphasize design fees – pay more, get more
 - ♦ Evaluate performance and use for future selection
 - ♦ Constructability reviews and value engineering
- 3. Differing Site Conditions**
 - ♦ Accurate as-builts of new projects
 - ♦ Risk analysis of site investigation cost vs. benefits
- 4. Owner Delays**
 - ♦ "If you want it bad, you'll get it bad."

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Delays

Half of all projects are delayed, with over 10% by more than 3 months. The variation between organizations is extreme: one-quarter of building contractors finished 95% of their projects on time, while half were 1 month late on 30% of their projects and 3 months late on 10%. Owners had similar records: 30% of municipal owners' projects finished on time, but 25% had frequent or severe delays.

The causes of delay mirror the causes of change: scope change, design error, and differing site conditions. Other causes were poor schedules, third party delays, and weather. Most delays are under the owner's control.

Best Practices to reduce delays include those for reducing changes plus: (1) training in critical path scheduling, (2) owners writing better scheduling specifications, (3) contractors preparing better schedules, and (4) owner representatives enforcing the scheduling specifications and tracking of progress more closely.

Scheduling

Scheduling performance by all parties (contractors, owners, and owner representatives) was abysmal.

Owners' Scheduling Specifications and Enforcement

Most owners (60%) were satisfied with their scheduling specifications, but only half required narrative reports which are essential to understanding schedule logic, tracking progress, and identifying pending delays. Only half required electronic schedules, which are needed for independent progress tracking and delay analysis, or contemporaneous time impact analyses to justify delays.

Contractors' Scheduling Procedures and Results

Most contractors (75%) were satisfied with their scheduling procedures and results – including many of those with frequent and/or severe delays. Owners reported that only one-third of their contractors were good schedulers, one-third were fair, and one-third were poor.

Subcontractors also had a dim view of general contractors' scheduling practices, which closely matched the owners' responses. Too few general contractors requested subcontractor input, prepared monthly updates, kept the subs informed, or prepared recovery schedules when delayed. Worst of all, most hid delays and caused trade stacking.

Owner Representatives Scheduling Skills & Practices

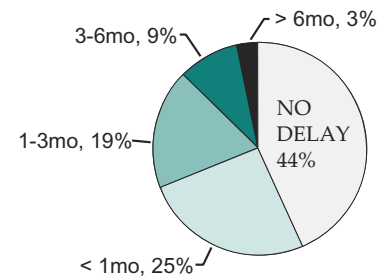
Contractors had a very different opinion than owners of owner representative practices. The most serious shortcoming was untimely and unreasonable responses to RFIs and change order proposals, which was also one of the major causes of claims. The survey showed a clear relationship between timely and fair responses and fewer claims.

Best Practices

Our recommended Best Practices include those mentioned above, plus: (1) partnering, (2) achievable schedules, (3) accurate recordkeeping, (4) increased staffing on troubled projects, (5) win/win negotiation and mediation to resolve disputes, (6) training owners and contractors in contract law and scheduling, and (7) more timely submittal of and response to requests for information, notices of change, and change order proposals.

For details, call Steve Pinnell or see the full report on our website: www.pinnellbusch.com/library.html.

PROJECTS WITH DELAYS - CONTRACTORS



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OWNER EVALUATION OF CONTRACTOR SCHEDULING PRACTICES

	Yes	No
Do your contractors submit monthly updates?	69%	31%
Do you carefully review their schedule updates?	86%	14%
If delayed, do they submit recovery schedules?	59%	41%
Do your contractors generally finish on time?	72%	28%

	Good	Fair	Poor
What is the quality of contractor schedulers?	35%	32%	32%

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SUBCONTRACTOR OPINION OF CONTRACTOR SCHEDULING PRACTICES

	Always	Usually	Sometimes	Seldom
Do they request subcontractor input?	5%	19%	62%	14%
Do they prepare monthly updates?	0%	33%	62%	5%
Do they keep subs informed?	0%	19%	43%	38%
Do they submit recovery schedules?	0%	19%	33%	48%
Do they hide delays and then accelerate the subcontractors?	10%	62%	19%	10%

	Good	Fair	Poor
What is the quality of contractor schedulers?	36%	28%	36%

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OWNER REPRESENTATIVE SKILLS AND PRACTICES - CONTRACTORS VIEW

	Always	Usually	Sometimes	Seldom
Are they well trained in scheduling?	0%	19%	53%	28%
Do they meet to review schedule?	11%	38%	42%	9%
Do they enforce scheduling specs?	2%	33%	40%	25%
Do they keep detailed records?	4%	18%	54%	24%
Do they respond timely to RFIs?	2%	37%	52%	10%

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Construction Cost Analysis

Accounting Manager, Jennifer Thorne, is providing cost analysis for a residential project where the contractor walked off the job, leaving behind a tangle of unpaid bills to investigate. She has also taken on a significant role verifying Davis Bacon and BOLI labor rates, contract compliance for material billings and cost allocation for a major public works project.

Information Technology Support

Pinnell/Busch has recently expanded to include computer and network support for small businesses. Our IT Coordinator, Patrick Melvin, helps clients at affordable rates with software and hardware selection, installation, customization and trouble-shooting.

Claims Support

Pinnell/Busch has supported clients in countries around the world, including Hungary, Mexico, Portugal, China, and Japan. One of our current projects is taking us to Puerto Rico where Steve Pinnell is assisting a local consultant and the architect with a major delay on a residential development in San Juan. Steve's expertise in schedule analysis and contract interpretation has been key in identifying the issues and evaluating the delay.

Construction Consulting and Other Services

The wide range of our projects include: an estimating manual for decommissioning LNG facilities, arbitration of projects in Alaska and Oregon, support of minority and women-owned businesses for the Port of Portland, management consulting for an HVAC contractor, advice on claims avoidance for a \$90 million condominium, review of business plans for a new equipment rental company, technical review of problems on a \$30 million excavation and blasting project in Arizona, and training for contractors, designers, construction managers, and project owners.

Career Opportunities

Pinnell/Busch is expanding our representation in the Seattle area. We are looking for additional support to compliment existing staff. If you are a senior construction consultant or construction manager we would like to speak with you.

In Portland, we are looking for additional consultants, including a senior scheduler with claims experience and a hands-on construction background, and a construction defects expert, preferably with design experience. In addition, we would like to speak with executive level Construction Managers interested in an ownership position.

THE PROJECT MANAGER™

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Project Management Consultants to the
Design & Construction Industry*

HIGHLIGHTS: Our Partnership with Portland State University for a new educational program on *Managing Design and Construction*; Project News; and Scheduling Best Practices to Avoid Changes, Delays, and Claims.

LET US KNOW: Call, write or fax this page to us if you're interested in more information on our services. Please tell us what subjects you would like to see addressed or who else would like to receive a copy.

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