



# PROJECT MANAGER TRAINING (PMT) SEMINARS

Troy Aichele



**Mechanical Contractors Association of America, Inc.**

1385 Piccard Drive Rockville MD 20850 T 301 869 5800 F 301 990 9690 MCAA.ORG

**PMT 101****Change Order Bootcamp**

This workshop is a must for all Project Managers, Assistant Project Managers and Estimators looking to learn and enhance their construction change order knowledge in the mechanical industry.

Participants will learn the following from this workshop:

- The different types of changes that occur on a project
- Change Order management methods, SOP's (Standard Operating Procedures) and Documentation
- Change Order risk management and notification strategies
- Change Order pricing methods (Lump Sum, T&M, and Forward Pricing)
- Types of Change Order impacts and productivity correction factors
- Sequential steps and best practices in identifying, pricing and selling Change Orders
- How to calculate Overtime and Shift Work Change Orders

**PMT 102****Mechanical Blueprint Reading**

Regardless of whether you work in the field or in the office knowing how to read blueprints is a critical skill every person in Mechanical Construction must learn and it is essential for estimating, project management, change orders and risk management. In this workshop, you will learn the fundamentals of not only reading Mechanical blueprint drawings but also learn how all the other sets of drawings (Architectural, Structural, Electrical, Civil, and Landscape) impact our work and what to look for within these drawings to mitigate this risk. Attendees will also participate in a drawing scavenger hunt as practice in locating key elements in mechanical drawings.

**PMT 103****Estimating**

This program is a must for all aspiring estimators, assistant project managers and project managers looking to learn the basics of the entire estimating process, performing a piping take-off and best practices in mitigating the risks of error in putting together a mechanical proposal or change order.

Participants will learn the following from this workshop:

Instructor walks all attendees through the gamut of Mechanical Estimating, from start to finish. All activities are manual, hands-on step-by-step training starting with estimating philosophy, types of estimates, the components of an estimate, and of course lessons learned from the instructor on all the things that can go wrong when performing an estimate. Attendees will learn how to manually count and consolidate a QTO (Quantity

Take-Off), apply MCAA Labor Units, learn about labor unit factoring (how to apply or not to apply), basic assumptions of the MCAA Labor Estimating Manual (LEM) and scope letter writing. Attendees will participate in a mock "rip and read" bid opening (utilizing the actual estimates created in class from the QTO activity) and end with an activity where attendees learn to how to calculate an estimate risk analysis that can be immediately added as one of your company's estimating department tools

This session also contains an estimating scenario activity where students must make difficult choices from real-life estimating scenario options that routinely occur. Scope letter basics along with instructor lessons learned will also be reviewed..

**PMT 104****Scheduling from an MEP Perspective**

Project Managers, Assistant Project Managers, Project Engineers, and Project Coordinators will all benefit from this workshop in learning all the different types of schedules used in construction, their benefits, and challenges along with how to optimize their uses. Best practices will also be discussed using real-life instructor project examples for building, maintaining, and managing them.

Participants will learn the following from this workshop:

- The basics of reading a CPM schedule, analyze logic, critical path, and float as well as how to break it down into a mechanical only schedule for manpower loading, documentation, equipment deliveries and installation planning
- How to build and manage a commissioning/project closeout schedule including controls installation progress monitoring
- Pull planning basics, how to run a pull planning meeting and best applications (design progress schedule, overall construction, and commissioning/project closeout schedules)
- Best uses for short interval planning schedules
- How to analyze and negotiate a mutually agreeable BIM coordination schedule that works with a fabrication schedule
- Common schedule terms and definitions along with schedule specific contract language to include and schedule specific contract language to avoid

**PMT 105****How to Build a Mechanical Schedule**

This workshop is for Project Managers, Assistant Project Managers, and Estimators looking to learn the basics of one of the most critical tasks in construction for mitigating project

risk, protecting your estimate assumptions, as well as estimated crew size, workflow, and productivity: How to build a Mechanical Schedule.

Participants will learn the following from this workshop:

- Top 10 items to extract and track from the Baseline CPM
- The Keys to a successful schedule
- What you need to build a Mechanical Schedule
- The steps in building a Mechanical Schedule:
  - Pre-construction / Pre-Project Planning
  - Estimate breakdown
  - Schedule framework
  - Defining and sequencing activities
  - Estimating task durations
  - Applying logic, relationships, and resources to tasks
  - Monitoring, measuring, and managing progress and productivity
- How to identify the Critical Path and analyze a resource loaded schedule
- Practice first-hand manually building (from Pre-Project Planning through Commissioning) a Mechanical Schedule using a case-study project and estimate
- Pull-Planning basics and how to apply towards building a Project Commissioning/Closeout Schedule

## PMT 106

### Managing the Fabrication, Shop Drawings & BIM Process

This workshop is a must for all Project Managers and Assistant Project Managers looking for a review of the entire process of Fabrication, Shop Drawings & BIM while learning best Project Management practices in optimizing efficiencies and cost control.

Participants will learn the following from this workshop:

- Review the importance of Fabrication, Shop Drawings & BIM to Mechanical Contractors and Construction Projects
- Learn the process and workflow in building a model and coordination with other trades
- Learn the deliverables and definitions of this process (Material Bill of Materials, Installation Drawings, Spool Packages, Penetration Drawings, In-Wall Rough-In, and Trimble)
- Learn Project Manager responsibilities and best management practices in:
  - Creating and managing a BIM Execution Plan
  - Tracking, documenting and defending detailing change orders
  - BIM, Coordination and Detailing contract review
  - VDC (Virtual Design & Construction) Kick-off meeting and weekly status update SCRUMS
  - Ensuring timely approved submittals (with adequate detail to allow inserting into the model)
  - Analyzing the BIM Coordination Schedule and understand its critical relationship to our deliverables and field installations
  - Maintaining accurate and easily accessible drawings, submittals and RFI's for detailers
  - Building the Material Matrix

## PMT 107

### Turnover, Kick-Off and Pre-Construction Planning Meetings

Every successful project starts with a successful Turnover / Kick-Off Meeting followed by an effective Pre-Construction Planning Meeting. A must for Project Managers, Assistant Project Managers and Foreman, this session will cover the importance of holding these meetings for every project regardless of its size.

Participants will learn the following from this workshop:

- The difference between Turnover / Kick-Off Meetings and Pre-Construction Meetings and how to best utilize their purposes
- Standard meeting agendas for each meeting, who should attend and their roles and responsibilities
- Critical topics to examine and discuss thoroughly with examples of each:
  - Insurance and safety requirements
  - Liquidated damages
  - Dispute resolution protocols
  - Contract review checklist and killer clauses to avoid
  - Notice requirements
  - CPM and BIM coordination schedules
  - Change order procedures
- Additional meetings to conduct before construction: Virtual Design and Construction (VDC) Kick-Off meeting, Below Ground Kick-Off Meeting, and Union Pre-Job Meeting

## PMT 108

### Project Interviews - Preparation is the Separation

Attendees will leave this workshop with presentation strategies and tips to implement for their next project interview. These best practices will not only maximize their chances of success for the current project for which they are interviewing, but also for the next as they build a reputation for excellent presentations.

Participants will learn the following from this workshop:

- Using a relationship matrix, learn how to classify your customers BEFORE the interview
- How best to conduct an effective interview preparation meeting and establishing and incorporating your company's Key Overriding Message (KOM) into your presentation
- Common pitfalls to avoid during the interview
- References and tips for improving your presentation skills by practicing in-class live mock presentations followed by questions and answers.



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#### **About the Instructor:**

##### **Troy Aichele**

Troy has spent 30 years in the mechanical construction industry, with extensive experience in office buildings, high-rise, hospitality, hospitals, casinos, and schools in both remodel and new construction environments. Troy is recognized as an effective team builder as well as a leader in business and sales planning, scheduling, cost-control, design, constructability, value engineering, and labor productivity. Troy expediently problem solves with personnel ranging from field workers, contractors, engineers, architects, accountants, purchasing, insurance and bonding agents, auditors, and developers on large scale projects that differ in teams, schedule, location, and design.

While Troy was growing his career as a mechanical contractor, he pursued his passion to contribute to both local and national mechanical affiliations and contribute to the education and training of current and future mechanical contractors. To serve the former, Troy served on Mechanical Contractors Association of America (MCAA) Board of Directors, John R. Gentile Foundation (formally MCERF) Board of Trustees and as Chairman of the MCAA's Career Development Committee overseeing more than 60 student chapters in North America and managing the annual National Student Chapter Competition.

#### **Awards**

- 2010, 2012 and 2018 Mechanical Contractors of Western Washington (MCAWW) Educator of the Year

#### **Publications**

- How to Perform a Commercial Building Water Audit (2016)
- Employee Reviews – MCAA Management Methods Bulletin (2016)
- Water Auditing Master Series (3-Part Webcast) – Forester University (2013)
- Calculating Payback Periods for Water Efficiency Upgrades – FacilitiesNet (2013)

#### **Contact Information:**

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#### **About the National Education Initiative (NEI):**

MCAA will bring lifelong learning directly to you! The National Education Initiative Seminars are our best MCAA/MSCA programs—brought to your local association or even your company. Our goal is to provide ongoing and advanced education and training in support of individual and association growth across the mechanical contracting industry. We offer standard and custom-designed classes exclusively for your association or company's unique needs and challenges. If you need training quickly or have a large group, we are here to help!

#### **For more information or to schedule a course:**

Contact **Priya Nirmal** at **301-869-5800** or [pnirmal@mcaa.org](mailto:pnirmal@mcaa.org).



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