



The Tool Box

Serving the Electrical, HVAC & Plumbing Industries Since 1912

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Why Can't the Construction Industry Stop Wasting Money?

By: Tom Frisby

Waste reduction improves profit and reputation and provides customer satisfaction. So why doesn't the construction industry do more to eliminate waste?

In the industry, waste is typically considered anything that adds extra cost. Waste can result from a number of "defects" such as:

- Drawing errors and omissions
- Re-work by the contractor
- Delays due to dilatory decision making
- Differing site conditions
- Ineffective scheduling and planning
- Adversarial relations
- Untrained, unskilled craftsmen
- Delays due to late submittals and deliveries
- Punch lists and warranty work
- Operational problems experienced by users.

The problem with the construction industry, however, is its fragmentation. How does a contractor implement an improvement plan if the drawings require countless requests for information to clarify and whose production is stifled waiting for decisions from the owner? How do the owner and the designer expect to get a first-class building from a contractor who does not have an effective quality plan and skilled workers to do the installation?

Part of our problem, also, has been the acceptance of the "cardboard on the garage floor." In Japan years ago one of my Japanese associates told me that the difference in quality perception between Americans and Japanese can best be described by the cardboard that's placed on the garage floor to catch the oil dripping from the American car and protect the concrete floor. He said in Japan there were no such pieces of cardboard under the car because the Japanese would never accept a car with a crankcase that leaks. In America, we tolerate it.

In construction, we accept errors and omissions as a part of the game. "There's no such thing as a perfect set of plans and specifications," is a common statement. Another is, "Well, you just can't get good craftsmen any more," to which everyone nods in unison.

Furthermore, punch lists and corrective work are accepted as part of the process, no matter how unnecessary or costly.

But the idea is to get rid of the cardboard on the garage floor, to put together teams that will work together from the outset of a project to eliminate the defects in the processes.

Think about it. Every day in this industry we are wasting money because of built-in defects and cardboard on the garage floor. We have proved that programs like constructability, design-build, effective partnering and built-in-quality (three steps) can reduce time, change orders, disputes and overall cost in terms of both capital construction and maintenance cost, sometimes by 10% and more. (Continued on page 4.)

INSIDE THIS ISSUE:

<i>Gregory Electric Company</i>	
<i>Mechanical Member Article</i>	2
<i>September Birthdays</i>	2
<i>Safety Tip</i>	3
<i>Employment Opportunity</i>	3
<i>Page 1 Article Continued</i>	4
<i>Congratulations Southeast's</i>	
<i>Top Contractors</i>	4
<i>Welcome New Members</i>	4
<i>Condolences</i>	4
<i>Birth Announcement</i>	4
<i>Anniversaries</i>	4
<i>NC Retainage Passed</i>	5
<i>Press Release</i>	5
<i>Urgent Notice</i>	5
<i>2007 Training Courses</i>	
<i>Registration Form</i>	6
<i>Sunrise Technology Group</i>	
<i>Associate Member Article</i>	7
<i>Area Meeting Calendar</i>	7
<i>Vision/Mission Statement</i>	8

**Mark Your
Calendars
For The
3rd Annual
MCASC
Piedmont Area
Scholarship Golf
Tournament
Friday, Oct. 19th
Link's O' Tryon
Gowensville, SC
Shotgun Start @ 9
Stay Tuned For
Further Details!**

Mechanical Member: GREGORY ELECTRIC COMPANY, INC.

Our work is different because our philosophy is different.

It is a reputation that has been more than 50 years in the making: the Southeast's preeminent electrical contractor. It is a position we work every day to maintain.

How do we do that? By focusing on providing professional service at every level of our organization. It is a commitment to quality that never waivers, no matter what our assignment. Whether providing wiring for a home entertainment center or designing a multi-million dollar long haul fiber optic cable system, every member of our team is focused on the same objective — meeting our customers' needs. It's why repeat business from satisfied, long-term customers (many for 30 years or more) is our most proud endorsement.

Today, Gregory serves clients throughout the Southeast in the commercial, industrial, residential, power and telecomm sectors. But it hasn't always been this way. Thomas Gregory and his brother, James O. Gregory, founded Gregory Electric Company in 1949. In the early years, the company served residential customers from a house on College Street in Columbia, South Carolina. Mr. Thomas Gregory recalls that while these beginnings were little more than "a few helpers and an old pick-up truck," meeting the needs of customers was always the Gregory goal.

With a reputation for "doing what we say we're going to do," the company grew to add commercial jobs. In 1956, Gregory Electric Company was registered as a corporation in the state of South Carolina. In 1967, Thomas Gregory bought his brother's interest in the company.

The company's current headquarters was built in 1968, just across the street from the house the company first considered home. Gregory Electric continued to grow, and in 1992, added Bob Livingston as vice president of engineering. He became president in April of 1993, with Mr. Gregory serving as chairman of the board. In 1999, the company moved to second-generation ownership under Livingston.

Today, Gregory Electric operates in nine states, has added new business sectors to its roster, including the utility and telecomm industries, and developed a 24-hour electrical preventative and protective maintenance division. The company has grown to 450 employees with revenues of \$52 million.

Gregory Electric Company, Inc.

P. O. Drawer 1419

Columbia, SC 29202-1419

Phone (803) 748-1122, Fax (803) 748-1102

SEPTEMBER BIRTHDAYS

Jerry Baxter	9/1	Tri-Star Constructors	
Greg Wheeler	9/4	Eastern Industrial	
Jake Shealy	9/5	Shealy & Sons Electric Company, Inc.	
Paul Clark	9/6	Colonial Supplemental Insurance	
Lisa Simpson	9/7	Honorary Life Member	Wife of Al
Jerry Johnson	9/8	Jerry's Plumbing, LLC	
Ned Forsberg	9/9	Metro Electric Company, Inc.	
Mary-Jane White	9/11	Walker White, Inc.	Wife of Bob
Art Brewer	9/12	Easley Mechanical	
Linda Burkett	9/12	ASAC	
Joan McMillan	9/12	First Carolina Insurance Associates	Wife of Jules
Robert McWilliams	9/12	Columbia Cooling & Heating Company, Inc.	
Tom Brock	9/15	Boykin Contracting, Inc	
Jim White	9/15	Elliott Davis	
Paul Roesel	9/20	The Sack Company	
Roddy Allen	9/23	H. R. Allen, Inc.	
Mitch Clark	9/24	RepSouth	
Del Laquiere	9/24	Triad Mechanical Contractors, Inc.	
Jan Hipp	9/25	Honorary Life Member	Wife of Charley
Lisa Rabon	9/25	Honorary Life Member	Wife of Jim
Dr. Terry Frame	9/29	Human Resource Development	Husband of Dr. Frame
Debbie Williams	9/29	Cashion Electricians, Inc.	Wife of John
Darlene McGee	9/30	Bryce Mechanical Contractors	

*Happy Birthday Members! We Would Like To Announce Yours.
Please call the Birthday Hotline at 803-772-7834 or Email to mflowers@mcasc.com*

“Tool Box Talks” - Safety Tip**LIFTING**

Do you realize you may be risking serious injury? It's true if you don't lift correctly. Improper lifting causes back injuries that can take months and even years to heal. Many times these injuries are permanent and disabling. A little know-how can help you to lift safely.

When you are preparing to lift, check the load. If it looks too heavy, don't be afraid to ask for help. If the object has rough or sharp edges wear suitable work gloves. They'll give you a good grip and protect your hands. Also wear proper footwear. There is always a chance of dropping something on your toes, or losing your footing.

Know that you can lift the load. Is it too heavy or too awkward? If so, get some help. Check your path and make sure it is clear. Check to see if you have enough room, that there are no obstructions in the way and that there is nothing overhead. Be aware of uneven surfaces.

When you make the lift, squat down and get a good grip on the object. As you rise, lift with your legs, keeping the load as close to your body as possible. Remember that your legs are much stronger than your arms. If you have to place the load to your left or to your right, don't twist your body. Move your feet instead. When you have to lower the load, simply reverse the procedure.

Remember these points when you lift.

- When lifting, get a firm footing, feet apart, one slightly behind the other for good balance.
- Stand close to the load.
- Always remember to lift with your legs and not your back.
- Carry the load close to your body.
- Never try to carry a load that is too heavy. Ask for help or get a machine such as a boom truck to do the heavy lift.

THINK - LIFT SAFELY!

By: Mel Rosas – RSS Safety, LLC
1122 Industrial Drive, Suite 109, Matthews, NC 28105
Telephone (704) 844-2519 Fax (704) 844-0291

EMPLOYMENT OPPORTUNITY**Instructors Needed**

Midlands Technical College - Continuing Education Department - Part Time Adjunct Positions

- HVAC
- Mechanical and Electrical Maintenance
- High Voltage Electrical
- Steam Boiler Operations
- Plumbing
- Custodial
- Carpentry
- Masonry
- Surveying
- CNC Operations & Programming
- Conventional Machining – Mills and Lathe

Extensive hands on experience required. Prior teaching and development experience preferred. Day and evening positions are available. If you are interested in learning more about these opportunities, please contact:

Richard Parker
Midlands Technical College
PO Box 2408
Columbia, SC 29202
803-691-3872
parkerr@midlandstech.com

(Continued from page 1)

These programs are intentionally aimed at defining the areas of improvement activity and analyzing the system to identify ways to reduce the gap between current performance and potential performance or desired goal.

A different management philosophy, one that has been highly successful in the manufacturing sector, is called "Six Sigma." The key improvement tool employed by the Six Sigma method of waste elimination is known as DMAIC:

Define the goals of an improvement activity.

Measure the present system or results.

Analyze the present process to see how the gap between present performance and desired result can be narrowed or eliminated.

Improve the process. Communicate to those who are performing the function.

Control the new process, get feedback, continue to improve.

Where do you begin to implement the Six Sigma defect reduction/elimination program? By examining three key areas that historically contribute to over 50% of the claims in the construction industry: conflicts and errors in the contract documents due to inadequate quality check and design discipline coordination; differing site conditions; and decision-making delays.

If I were a contractor, I would begin by taking a look at my cost codes and seeing which ones I historically overrun. I would examine my re-work and see how much I am spending on correcting the work, doing punch lists, staying on the job forever while I try to finally make right some of my defective work. I would look at my scheduling and planning functions and do some measurement of those jobs where there is exceptional pre-planning, scheduling and ongoing planning versus those jobs where these functions are not done so well.

And a p.s.: I am not advocating the full-blown adoption of a Six Sigma program in construction. I am simply suggesting that the concept of waste reduction is a valid one for our industry.

So, where are your areas of waste and what can you do to minimize them?

Congratulations to MCASC Members

Listed In "The Southeast's Top Specialty Contractors"

Gregory Electric Company

Port City Electric Company

Waldrop, Inc.

"*Southeast Construction* presents its seventh annual ranking of Top Specialty Contractors. Compared to last year's list, the Top Specialty Contractors ranking listed here is not quite as deep. Whereas the ranking published last year included 160 contracting firms, only 154 specialty contractors responded this year. Despite this, the \$6.9 billion collective revenue total for this year is yet another record. That figure just beats the previous high marked by last year's \$6.5 billion total."

For further information, go to www.southeast.construction.com

Birth Announcement

Tyler Allan Miller

Born August 18th, 1:40 AM, 9 lbs. 14 oz., 21 1/2 in.

Proud Grandparents: Richard and Florence Miller

City Plumbing Company of Florence

Welcome New Members

Better get recruiting!!!!

No new members this month.

Happy Anniversary

Mr. & Mrs. Ned Forsberg - 9/1

Mr. & Mrs. Bill Caldwell - 9/4

Mr. & Mrs. Mike Lewis - 9/9

Mr. & Mrs. Johnny Richards - 9/22

Mr. & Mrs. Will Thomason - 9/30

Condolences

Tommy & John Parker & Family

Parker Marine - Charleston

On the loss of wife and mother

Nina Parker

To all the staff of Robinson McFadden

On the loss of

David W. Robinson, II

North Carolina Retainage Reform Legislation Passed SB 1245 Helps Small Businesses

RALEIGH – Small construction businesses across the state gained a major victory Friday when Gov. Michael F. Easley signed into law Senate Bill 1245, which sets standards relating to retainage payments in public construction projects. The bill's sponsor was Senator Clark Jenkins (D-Edgecombe).

“The retainage system as it stood harmed small businesses, especially subcontractors and early finishing trades like concrete and foundation work,” said ASAC and SEAA Member, Eddie Williams of Buckner Companies. “Retainage increases construction costs by forcing some contractors to take out loans to absorb them, which can threaten their ability to compete for business and ultimately stay in business.”

Retainage is the withholding from contractors or subcontractors of a part of each periodic payment earned, but that is not paid until a construction project is completed. Retainage can be as high as 10 percent of the payment due on some projects, even though contractors and subcontractors often have profit margins of much less.

Currently in North Carolina, retainage is withheld at varying levels on almost every public construction project. To keep construction costs down, retainage levels need to be reasonable and uniform and that's the premise of Senate Bill 1245. Among other things, the new law prohibits retainage on public projects costing less than \$100,000, caps retainage at 5% on all public constructions projects valued at more than \$100,000, and permits line-item release of retainage for early finishing trades.

The bill has no impact on the many remedies that public owners have to ensure the satisfactory completion of a construction project, including payment and performance bonds and warranties that already guarantee satisfactory performance of the work. It also does not limit an owner's right to stop or limit periodic payments if work is not progressing satisfactorily.

NC Retainage Reform Coalition members praising the passage of S 1245 include: American Fire Sprinkler Assoc., American Subcontractors Assoc. of the Carolinas, Associated Builders and Contractors, Carolinas AGC, Carolinas Asphalt Pavement Assoc., Carolinas Electrical Contractors Assoc., Carolinas Roofing & Sheet Metal Contractors Assoc., Mechanical Contractors Assoc. of SC, Metrolina Wall & Ceiling Assoc., NC Heating & AC Contractors Assoc., NFIB, Painting & Decorating Contractors Assoc., Plumbing/Heating/Cooling Contractors of NC, NC Dept. of Admin. State Construction Office, Southern Building Materials Assoc., Steel Erectors Assoc. of America, United Minority Contractors of NC, University of NC and the Waterproofing Contractors Assoc.

More information and details of Senate Bill 1245 can be found at www.ncga.state.nc.us

Press Release

The Mechanical Contractors Association of South Carolina and the Associated Builders and Contractors of the Carolinas were recently awarded a Career Cluster Partnership Grant of \$150,000.00 from the South Carolina Department of Education. Initiatives by the collaborative efforts of these leading industry associations and the department of education will be focused upon the development of the next generation of workforce and the identification of career opportunities in the construction industry in South Carolina. Primary emphasis will be placed upon making middle and high school students, school administrators, teachers, counselors, and parents fully aware of the multiple career paths available within the construction industry. Further information on this effort can be obtained via the internet by going to www.ccp-sc.org

→ URGENT NOTICE

IBEW UNION ACTIVITIES IN THE CAROLINAS

Jobsites in the Carolinas have been recently targeted by the IBEW. They have been holding organizing meetings and are targeting the Carolinas for growth. Be sure to review your policies and procedures regarding access to your projects. Make sure your on-site project supervisors know how to deal with these activities and are able to communicate with your employees who may have questions. Be Vigilant!



MCASC 2007 COURSE REGISTRATION



COMPLETE AND FAX OR MAIL TO MCASC
 P.O. BOX 384, COLUMBIA, SC 29202
 TELEPHONE #: 803-772-7834 FAX #: 803-731-0390
 EMAIL: mflowers@mcasc.com WEBSITE: www.mcasc.com

NAME: _____ **COMPANY:** _____

ADDRESS: _____ **PHONE:** _____ **FAX:** _____

CITY: _____ **STATE** _____ **ZIP** _____ **EMAIL ADDRESS:** _____

NAME ON LICENSE: _____ **LICENSE NO.:** _____ **STATE** _____

Payment Method

Please Invoice

Check Enclosed for \$ _____

NOTE:
 WE OFFER A DISCOUNT
 IF YOUR COMPANY REGISTERS
 THREE (3) OR MORE
 FOR THE SAME COURSE.

NOTE:
 All Courses Will Be Held At
 The MCASC State Office
 Training Facility
 1504 Morninghill Drive
 Columbia, SC

NOTICE:
 ANYONE FAILING TO WITHDRAW FROM A COURSE
 TWO WEEKS PRIOR TO ITS START WILL BE BILLED
 FOR THE ENTIRE COST OF THE COURSE.

PLEASE PLACE A CHECK BESIDE EACH COURSE YOU WISH TO REGISTER FOR:

NC & GA APPROVED
 Piping Tips For Better
 Hydronic Systems
 October 3, 2007 - Columbia
 Time: 9:00 AM - 4:00 PM
 Member: \$175.00 Non-Member: \$225.00

NC & GA APPROVED
 T. G. I. M. - Thank Goodness
 It's Monday
 October 17, 2007 - Columbia
 Time: 9:00 AM - 4:00 PM
 Member: \$175.00 Non-Member: \$225.00

NC, GA & AL APPROVED
 Collections In The
 Construction Industry
 October 24, 2007 - Columbia
 Time: 9:00 AM - 4:00 PM
 Member: \$175.00 Non-Member: \$225.00

NC & GA APPROVED
 Pump Maintenance
 November 7, 2007 - Columbia
 Time: 9:00 AM - 4:00 PM
 Member: \$ 175.00 Non-Member: \$ 225.00

NC, GA & AL APPROVED
 Measuring & Maximizing
 Employee Productivity
 November 28, 2007 - Columbia
 Time: 9:00 AM - 4:00 PM
 Member: \$175.00 Non-Member: \$225.00

NOTE:
*Alabama Approval Pending
 On Some Courses*

NC & GA APPROVED
 T. G. I. M. - Thank Goodness
 It's Monday
 December 5, 2007 - Columbia
 Time: 9:00 AM - 4:00 PM
 Member: \$ 175.00 Non-Member: \$225.00

NC & GA APPROVED
 Boiler Installation
 December 12, 2007 - Columbia
 Time: 9:00 AM - 4:00 PM
 Member: \$175.00 Non-Member: \$225.00

NC, GA & AL APPROVED
 Surviving An OSHA Inspection
 December 19, 2007 - Columbia
 Time: 9:00 AM - 4:00 PM
 Member: \$175.00 Non-Member: \$225.00

**Associate Member:
SUNRISE TECHNOLOGY GROUP, INC.**

Sunrise Technology Group is the leading provider of software and technology solutions for the construction and service management industries. Serving as the direct representatives in North Carolina, South Carolina and Virginia for software produced and developed by national software company - Maxwell Systems, Inc. (www.maxwellsystems.com). Maxwell was recently identified as the developer of the top two national software solutions as represented by participants of the leading construction technology publication – the 2006 CFMA Technology Survey.

Since 1984 Sunrise has specialized in helping construction companies select, install and implement technology solutions for their businesses. We currently have over 600 contractors using our solutions in our region and direct sales and support representatives in remote locations as well as in our corporate office in Charlotte, North Carolina. We focus on taking a consulting approach to meeting with each construction company to understand their business processes and to then make recommendations on how our solutions can make a significant impact on streamlining processes, gaining efficiencies and strengthening the financial position of the company.

Our solutions provide contractors with up to date information on the profitability of their jobs, service workorders and the overall financial health of the company. Our products address all of the day to day accounting tasks including routing of vendor invoices, payroll, job and service billings, cash management, inventory, purchasing and project management. We also provide assistance on selecting the right computer equipment and on effectively using document management, imaging and remote access solutions.

Call or send an email to schedule a free technology and business assessment or to learn more about our products and services. Steve Maddox is the Regional Territory Manager and can be reached by calling 800-637-6288 ext. 101 or you can send an email to stevem@sunrisetechnologygroup.com

**Sunrise Technology Group, Inc.
8000 Corporate Center Drive, Suite 100
Charlotte, NC 28226-4212
Phone: (704) 523-0748, Fax: (704) 532-8485**

**Congratulations to our next Associate & Mechanical Members who will be
highlighted in the upcoming issue of “The Tool Box”:
Hilti, Inc., Columbia - Associate Member
H. R. Allen, Inc., Charleston - Mechanical Member**

SEPTEMBER 2007 MONTHLY AREA MEETINGS

MIDLANDS AREA

Thursday, September 6, 2007 @ 6:00 PM
Location: MCASC State Office, 1504 Morninghill Dr., Columbia
Sponsored By: Rental Service Corp.

Topic: Roll Out & Implementation Of The
Career Cluster Partnerships Grant Initiative
How Can Your Company Benefit?
By Team Leaders: Charlene Meetze & Gary Bishop

PIEDMONT AREA - JOINT MEETING WITH ABCC

Tuesday September 11, 2007 @ 5:30 PM
Location: 8345 Taylor Colquitt Road, Spartanburg
Sponsored By: Waldrop, Inc.

Topic: Roll Out & Implementation Of The
Career Cluster Partnerships Grant Initiative
How Can Your Company Benefit?
By Team Leaders: Charlene Meetze & Gary Bishop

PEE DEE AREA

Thursday September 20, 2007 @ 6:30 PM
Location: 1651 Hwy. 501, Myrtle Beach
Sponsored By: Ferguson Enterprises, Inc.

Topic: Roll Out & Implementation Of The
Career Cluster Partnerships Grant Initiative
How Can Your Company Benefit?
By Team Leaders: Charlene Meetze & Gary Bishop

COASTAL AREA

Tuesday, September 25, 2007 @ 6:00 PM
Location: 4447 Dorchester Road, N. Charleston
Sponsored By: ECK Supply

Topic: Roll Out & Implementation Of The
Career Cluster Partnerships Grant Initiative
How Can Your Company Benefit?
By Team Leaders: Charlene Meetze & Gary Bishop



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E-mail: mflowers@mcasc.com
www.mcasc.com

*Serving mechanical contractors in
South Carolina since 1912.*

MCASC Executive Board & Staff

Henry Poplin, President
Chris Cullum, Vice-President
Richard Miller, Jr., Treasurer
Steve Brewer, Secretary
Bob Jacques, Associate President
Mona Flowers, Managing Director

Mechanicals make it happen -
Be part of the best!

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PERMIT NO 750

MCASC Vision Statement

The Mechanical Contractors Association of South Carolina will be the leading construction association in South Carolina for specialty contractors and suppliers in the mechanical, electrical, and plumbing fields by serving its membership, the industry, and the community in a vibrant and harmonious fashion.

MCASC Mission Statement

The Mechanical Contractors Association of South Carolina will provide its membership with:

- current business/technical information and support
 - a proactive political/legislative agenda
- a joint industry collaboration to improve relative business practices
- an ongoing effort to offer training opportunities for both professional and craft personnel
 - educational scholarships for deserving students
- the development of industry related career opportunities

The Association's objective for this mission is to enhance the future of the Construction Industry in South Carolina.