



Metal Roof Consultants

105 Versailles Drive
Cary, NC 27511
919.465.1762 (o)
919.882.1744 (f)

Chuck Howard, PE
President of Metal Roof Consultants
January 1, 2015

Education:

- 1973 – Bachelor’s Degree in Civil Engineering from The Ohio State University, College of Engineering Licenses:
- Professional Engineering licenses in North Carolina, Virginia, South Carolina, Florida, Alabama, Missouri, Tennessee, Indiana, Ohio, Maryland, Tennessee, and Texas.
- Qualifier for General Contractor’s license in Virginia, North Carolina, South Carolina and Alabama

Contracting Experience:

- 1973 – 1977 Project Manager for a design/build general contractor in Ohio, specializing in pre-engineered metal building construction.
- 1977 – 1983 President and part owner of a design/build general contractor in Ohio, starting into metal roofing in 1979.
- 1983 – 1988 President and part owner of a design/build general contractor specializing in metal retrofit roof contracting.
- 1988 – 1992 Vice President of metal roofing division of a Raleigh, North Carolina general contractor.
- 1991 – 1999 President and owner of a metal roof contracting company with a GC license in VA, NC, and SC. Offices in NC, VA, and OH.
- 1999 – 2002 Vice President of metal retrofit roofing division of a metal roofing and siding contractor with offices in IN, NC, and GA. Was qualifier for GC license in VA, NC, SC, and AL. Performed metal roofing work in VA, NC, SC, GA, IN, ILL.

Metal Roof Consultants, Inc.:

- 2002 – Present Owner of Metal Roof Consultants, Inc., a professional corporation specializing in providing metal roofing design, contract administration, sales, marketing and legal services to building owners, contractors and metal roof manufacturers.

Summary:

- 41 years of design/build metal building and metal roofing experience. Designed and installed over 30 million SF or metal roofs, both new and retrofit.

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Contracting Awards:

- Armco Roofing Contractor of the Year
 - 1984 – 1988
- Metal Construction News, Reroof of the Year Award
 - 1985 – Olentangy Local Schools, Delaware, Ohio
 - 1990 – Brunswick County Schools, Leland, North Carolina
 - 1993 – King & Queen High School, King & Queen Court House, Virginia
 - 1996 – Mathews High School, Mathews, Virginia
- American Buildings Company
 - 1992 – Roofer-Salesman of the Year
 - 1994 – Roofer of the Year
 - 1993 – 1998 Largest Roofing Sales Award (yearly)
- INC 500 Magazine, Fastest Growing Companies Award
 - 1996 - 60th in USA, 1st in North Carolina.

Speaking:

- Howard Metal Associates
 - Full day seminar re: metal roof contracting.
 - 6 seminars around USA and Canada.
 - Systems Builders Association (now Metal Building Contractors and Erectors Association).
 - 8 seminars around USA on metal roof contracting.
- Metalcon International
 - Seminars on various metal roofing and contracting topics. 32 seminars in 20 years around USA.
- American Iron and Steel Institute
 - 5 seminars on metal roof contracting in USA and Canada.
- National Roofing Contractors Association
 - Seminar at the 1995 convention with regards to a metal roof project
- Oak Ridge National Laboratory and U.S. Department of Energy
 - Presentation in 1995 on article, “Metal Retrofit: A Twelve-Year Case Study”.
- American Buildings Company
 - Convention related speeches about metal roof contracting.
 - 8 speeches around USA.
- Steelox Buildings Company
 - Convention related speeches about metal roof contracting.
 - 10 speeches around USA.

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- Professional Engineers of North Carolina
 - Two (2) half day seminars about metal roof design and construction (2004, 2005, 2007, 2008, and 2013).

Consulting:

1985 – Present

- Consult with contractors, architects, engineers, owners and manufacturers with regards to metal roof issues or a particular project with problems.
- Provide sales and management consulting to sales driven Companies
- Provide professional metal roofing services necessary to specify a metal retrofit roofing project, complete with necessary specifications and drawings.
- Provide inspection and professional oversight of such projects.
- Consult with contractors concerning metal roof designs and construction in, North Carolina, Maryland, Tennessee, Florida, Alabama, Texas, Louisiana, Missouri, Ohio, Virginia, South Carolina, Indiana, etc. Over 5 million SF of roofs involved.
- Provided design, drawings, material selection, and field training and support
- Provide professional engineering services to prepare specifications, drawings and bid documents, as well as provide required field inspection and administrative services for a metal retrofit roofing project. Services provided to another design professional or directly to the building owner, depending on what best suits the circumstances of the project.

Partial Client List

- Fentress Architects, Denver, CO
 - RDU Terminal 2 construction, Raleigh, NC
 - 350,000 SF of stainless steel roof
 - Design and drawing support
 - Shop drawings and submittal review
 - Field Observations and Final Inspections
 - Archer Western – GC
- Mobile Press Register, Mobile, AL
 - Mobile Press Register retrofit roof
 - Lawsuit assistance as expert witness
 - 65,000 SF of metal standing seam roof

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- Design and drawings
- Shop drawings and submittal review
- Field Observations and Final Inspections
- Re-roofed existing facility while still in operation
- Winchester High School, Winchester, IN
 - High school metal roof retrofit project
 - Converted a flat roof to a sloped metal roof
 - 110,000 SF of metal standing seam roof
 - Provided design, drawings, and specifications.
 - Shop drawings and submittal review
 - Field Observations and Final Inspections
 - Re-roofed entire school while still in session.
- Watauga County Schools, Boone, NC
 - Mabel Elementary School
 - Re-roofing of the shingled roof with a metal roof
 - 52,000 SF of standing seam roof
 - Provided design, drawings, and specifications.
 - Shop drawings and submittal review
 - Field Observations and Final Inspections
 - Re-roofed entire school while still in session.

Expert Witness:

Act as a consultant/professional witness in numerous lawsuits regarding metal roofing issues.

Partial Lawsuit List

ReRoof America v USA Metal Buildings - 1995

- Oklahoma City, Oklahoma
- Federal Court
- Patent lawsuit regarding framing patent for metal retrofit roofs
- Depositions
- Trial w/ jury
- Ruled as expert witness for metal roofing

Shaw Shank Architects, Johnson City, TN -2003 through 2004

- Two (2) schools and one (1) church
- Metal roof problems with installed roofs
- Arbitration



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- Depositions
- Ruled as expert witness for metal roofing
- Attorney – Bill Alt, Chattanooga, TN

Virginia Machine Tool, Danville, VA - 2005

- Manufacturing building with failed retrofit metal roof
- Depositions
- Trial in Danville, VA
- Attorney for Virginia Tool – Phil Gardner, Martinsville, VA

Mobile Press Register, Mobile, AL - 2006

- Metal roof incorrectly installed, requiring total retrofit metal roof
- Attorney – Edward Sledge, Mobile, AL
- No depositions, case settled

Cram Roofing, Austin, TX - 2008

- Metal roof on school
- Depositions
- Arbitration
- Attorney for Cram – William Sommers

University of Nevada, Reno, NV - 2008

- PENTA Construction, GC
- Faulty metal walls and roof
- Matter settled without depositions or trial

MAR v Wild Dunes Homeowners Association – 2008

- Isles of Wight, SC
- Involved a metal roof with possible clip spacing and flashing problems.
- Depositions
- No trial- Settled out of court
- Attorney – Bill Woods, Lexington, SC

Westar Roofing v Kenbridge Construction – 2011

- Virginia State University, Richmond, VA
- Involved new metal roof installed on 3 story classroom building, with questions concerning panel design and installation.
- Depositions
- 15 day trial
- Attorney – William Lascara, Pender & Coward, Virginia Beach, VA



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Published Articles:

The following is a partial list of published articles, written by Chuck Howard, with regards to metal roof design, construction, and analysis.

- Metal Construction News
 - 1988 - Marketing Metal Roofs To Schools – An Educational Process
 - 2008 - What Green Means to Contractors
- Contractor's Guide Magazine
 - 1995 – The Nuts & Bolts of Retrofit Metal Roofing
 - 1996 – Success With Metal Roofing
- SNIPS Magazine
 - 2003 – Metal Roofing Contractor
 - 2009 – Metal Retrofit Roofing – A Solution in a Bad Economy
- Metal Marketplace Magazine
 - 2004 - Metal Retrofit Roofing
 - Series of 6 separate articles throughout year
 - 2005 – The Business of Metal Roofing
 - Series of 6 separate articles throughout year
 - 2006 – The Soft Side of Metal Roofing
 - Series of 6 separate articles throughout year
 - 2007 – 5 Keys to Successful Metal Roof Contracting
 - Series of 5 separate articles throughout year
- Metal Roofing Magazine
 - 2006 – Retrofitting an Entire District
 - 2008 – Do It Right The First Time
 - 2010 – The Winchester High School Success Story
- Metal Architecture Magazine
 - 2009 – Metal Roofing Over Metal Roofing
- The Metal Initiative (Division of MCA)
 - 2009 through 2010
 - Stretching Your Roofing Dollars With Metal Retrofit – published in approximately 25 magazines throughout US and Canada
- Interface Magazine (Roof Consultants Institute)
 - 2009 – The Basics of Metal Roofing
 - 2010 – Stretching Your roofing Dollars With Metal Retrofit (re-work of TMI article)

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- Low-Slope Reroofing Workshop publication
 - Oak Ridge Laboratory – May 1995
 - Sponsored by Oak Ridge Lab and U.S. Department of Energy
 - Chuck Howard article with regards to presentation made at workshop: Metal Retrofit – A Twelve Year Case Study
- Carolinas Roofing magazine
 - Metal Roofs vs. Weather – July 2011
 - Special report about metal retrofit roofs on NC schools: “Let The Wind Blow”
 - Technical report re: roof wind load design

Current:

- Inducted into the Metal Construction Hall of Fame in October 2014 in Denver, CO during METALCON 2014 convention.
- A member of the NC Building Infrastructure Committee formed by Professional Engineers of NC (PENC) to assist the NC Legislature deal with the growing infrastructure maintenance and replacement dilemma.
- One of three (3) individuals retained by Metal Construction Association (MCA) to research the actual expected longevity of Galvalume standing seam metal roofs by actual field testing of multiple sites around the USA over a three (3) year period (final report to be issued in early 2015).

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