



Masonry Design and Construction Fundamental Series

Fall 2008 – Winter 2009

Fall 2008

Managing Moisture in Masonry Walls and Sustainability in Masonry

November 5, 2008, 1:30-4:45 p.m.

Evaluation of Existing Masonry Structures – A Process Approach

November 12, 2008, 1:30-4:45 p.m.

Masonry Instant Answers and 2008 MSJC Special Inspection and Testing

November 19, 2008, 1:30-4:45 p.m.

Winter 2009

Masonry Software Design Solutions

January 21, 2009, 1:30-4:45 p.m.

Understanding Stone

January 28, 2009, 1:30-4:45 p.m.

Prestressed Masonry Structures

February 4, 2009, 1:30-4:45 p.m.

Continuing Education and Conference Center
St. Paul campus, University of Minnesota

Presented by:

University of Minnesota
Continuing Professional Education
College of Continuing Education

Department of Civil Engineering, Institute of
Technology

Cosponsored by:

International Masonry Institute

The Masonry Society

*Minnesota Concrete & Masonry Contractors
Association*

Minnesota Concrete Masonry Association

*Council of American Structural Engineers/
Minnesota*



UNION OF MASONRY CONTRACTORS
GENERAL CONTRACTORS & SPECIALTIES



Fall 2008-Winter 2009

Background

It is often difficult for design, construction, and inspection professionals to keep up with changes in the world of masonry design. This is especially the case as the demands on these systems and the entire construction delivery process require projects to be completed faster, better, and more economically. The Masonry Design and Construction Fundamental Series is designed to provide the most current information available on sound masonry practices for all design and construction professionals.

Series Purpose

- Provide current information on masonry topics of interest to the design and construction community
- Expand the body of knowledge regarding masonry methods and techniques
- Provide a forum for continuing education for the design and construction community

Benefits to Participants

- Stay abreast of the latest changes and applications in masonry codes and standards
- Learn about emerging technologies and new products
- Explore designing masonry for unique applications

Who Should Attend

This series is planned for design and construction engineers; practicing architects; project managers; specifiers; city, county and state building officials; and others interested in masonry design and construction.

Series Location/Time

Sessions will be held at the Continuing Education and Conference Center (CECC) on the St. Paul campus of the University of Minnesota. All seminars will be held on Wednesday from 1:30 – 4:45 p.m.; sessions include a 15-minute break.

Parking is available in the parking lot east of the CECC (S104 - \$6.00/day), the State Fairgrounds parking lot (S108 - \$3.75/day), and the Gortner Avenue Ramp (an hourly rate). A detailed parking map of the St. Paul campus can be found online at: <http://www1.umn.edu/pts/maps/spcolr.htm>.

Registration

The fee for the entire series is \$375, which reflects a \$75 discount. Please register by mail or fax to receive the series discount. The fee for each individual session is \$75. Fees include tuition, instructional materials, and refreshments. The book, *Masonry Instant Answers* for the November 19 seminar, can also be purchased for \$45 on the registration form. Refunds, minus a \$30 processing fee, will be issued if cancellation is received in writing at least five working days before the date of the seminar. Refunds will not be issued to those people who have signed up for the whole series but miss individual seminars. The University of Minnesota reserves the right to cancel seminars if necessary, in which case a full refund will be made.

Continuing Education Units

Each seminar session awards .3 CEUs. The entire seminar series awards 1.8 CEUs. One CEU is defined as 10 contact hours in an organized continuing education activity under responsible sponsorship, capable direction, and qualified instruction.

These seminars are approved for continuing education credit with the states of Florida and New York. You will need to provide your Florida Professional Engineer License Number for Florida credit.

AIA-member Architects attending will receive continuing education learning units through the International Masonry Institute, a registered provider under the AIA CES system. Please remember to bring your member number with you to the session. Others wishing documentation suitable for submittal to licensing agencies may request it when checking in at the session.



For Further Information Contact:

Kay Syme
612-624-4938 or cceconf4@umn.edu
College of Continuing Education
University of Minnesota
352 Classroom Office Building
1994 Buford Avenue
St. Paul, MN 55108

Fall 2008 Schedule

Wednesday, November 5, 2008

Managing Moisture in Masonry Walls and Sustainability in Masonry

Masonry wall design continues to evolve into the 21st century. Terms such as “air and vapor barriers,” “steel stud assemblies,” “rigid insulation versus batt insulation,” “over-size masonry units,” and “ventilation with weeps and vents,” are all used to describe today’s masonry wall. Add to this list “green” and “sustainable design” and you begin to understand the transformation that masonry has gone through over the last handful of years. This seminar will focus on how each of these items can and does have a direct impact on design and selection of wall reinforcing and anchoring systems. Topics will include reinforcement and anchoring systems for CMU and steel stud back-up systems; use of anchoring systems successfully with air/vapor barriers; seismic and high wind requirements for reinforcement and anchoring; design of building movement; moisture management products/systems (limiting mold problems); air ventilation in the cavity.

Presenter: *Christopher Bupp*, Hohmann & Barnard, York, Pennsylvania

Christopher Bupp has been involved in the construction industry for over 20 years, with the building envelope as his primary area of expertise. Chris has worked in sales, as a manufacturer’s rep, and as a national speaker and writer on the subject of masonry wall design and construction. He has been involved in projects such as Trump Towers in New York City, Liberty Place in Philadelphia, and the recently completed Museum of the American Indian in Washington, D.C.

Moderator: *Patricia Cole*, P.E.

Wednesday, November 12, 2008

Evaluation of Existing Masonry Structures – A Process Approach

In 2009, TMS is expected to publish a document that outlines a process approach to evaluating existing masonry facades and treating deficiencies and deterioration. The document will feature a primary document which outlines the process approach and eventually will include appendices on specific masonry-related topics such as terra-cotta and nondestructive testing, as well as references to direct the user to other existing documents. As chairman of the Existing Masonry Committee, Mr. Peterson will introduce the new document and describe its key elements. He also will provide information on the evaluation of masonry facades, appropriate investigative techniques, and common non-destructive testing methods.

Presenter: *J. Eric Peterson*, P.E., Whitlock Dalrymple Poston & Associates, Manassas, Virginia

J. Eric Peterson, P.E. is a senior associate in Whitlock Dalrymple Poston and Associates in their Virginia headquarters and has over 12 years experience in the evaluation and repair of exterior wall systems, investigation of failures involving masonry, and water leakage testing. He has authored numerous technical papers on topics such as masonry and non-destructive testing and is an active member of several industry organizations including TMS, ASTM, ICRI, and CSI.

Moderator: *Brian Pashina*, P.E.

Wednesday, November 19, 2008

Masonry Instant Answers and 2008 MSJC Special Inspection and Testing

This seminar will guide the audience through the 2004 publication *Masonry Instant Answers*, which addresses questions that arise at the job site during the course of masonry construction. Advance ordering of *Masonry Instant Answers* at a discounted price will be made available to all seminar attendees. A book signing will occur during the break. The second half of the seminar will focus on special inspection and testing requirements of the 2008 Masonry Standards Joint Committee.

Presenter: *Rochelle C. Jaffe*, SE, RA, CCS, CSISM, NTH Consultants, Ltd., Farmington Hills, Michigan

Ms. Jaffe is a senior vice president in asset preservation at NTH Consultants, Ltd. in Farmington Hills, Michigan. She specializes in investigation, evaluation, and rehabilitation of existing, deteriorated, and damaged masonry structures, and has more than 24 years of experience in this field.

Ms. Jaffe is a licensed architect and a licensed structural engineer. She is also a certified construction specifier (by CSI) and a certified special inspector of structural masonry (by ICC).

Moderator: *Sonny Fite*, P.E.

Winter 2009 Schedule

Wednesday, January 21, 2009

Masonry Software Design Solutions

This program features engineering software for load bearing masonry and hybrid masonry and steel structures. IMI and NCMA have teamed up to highlight a new, innovative structural software program to efficiently analyze load-bearing masonry buildings and/or demonstrate the new concept in “hybrid” structures — load-sharing reinforced masonry infill in a structural steel frame.

The software uses a whole building approach — not just the analysis of individual components. Learn how this approach leads to easier and faster engineering design of masonry buildings, even those with irregular configurations, wall openings, multi-story structures and structural infill panels in structural steel frames, and more.

Bruce Baumann, P.E., will lead a review of the popular Masonry Design Software developed by Dr. Russell Brown, providing tips on application.

Knowledge of FEM analysis and RAM Advanse software is not necessary, as the sessions will be lecture- and demonstration-based, not hands on.

Presenter: *Bruce Baumann, P.E., Anchor Wall Systems, South St. Paul, Minnesota*

Presenter: *David Biggs, P.E., Ryan-Biggs Associates, PC , Troy, New York*

Presenter: *Sam Rubenzer, Bentley Systems, Inc., Chicago, Illinois*

Moderator: *Olene Bigelow, C.S.I.*

Wednesday, January 28, 2009

Understanding Stone

Stone selection, testing, evaluation, and specification can be daunting whether the construction is contemporary veneer or historic loadbearing masonry. Learn the complete process: how various stone materials behave, how to pick the right stone for the job, stone anchoring systems, what the structural engineer needs to know about stone mineralogy and other issues affecting structural design. Also see a demonstration of patching techniques used on the job for both new construction and restoration.

Presenter: *Charles Muehlbauer, Marble Institute of America , St. Cloud, Minnesota*

Charles Muehlbauer is the technical director of the Marble Institute of America, which is headquartered in Cleveland, Ohio, and currently serves approximately 2,000 member companies in the natural stone industry. Muehlbauer has worked in the stone industry for over a quarter of a century, and his activities include design of exterior anchorage systems, design on load bearing stone pavement systems, fabrication, quarrying, international trade, industrial stone applications, and laboratory and field testing. Muehlbauer currently serves as the secretary for ASTM Committee C18 on Dimension Stone, and as the chairman for ASTM Subcommittee C18.08 on Dimension Stone Selection.

Presenter: *Mark Wickstrom, BAC Local #1 MN/ND, St. Paul, Minnesota*

Mark Wickstrom serves as the apprenticeship and training coordinator for BAC Local #1 MN/ND overseeing the training of nearly 300 apprentices in two states. He also is a master stone carver, having completed his own apprenticeship in that craft in Germany and France. Mark is also a preservationist and an expert on preserving and repairing historic stone and has worked on numerous contemporary stone structures.

Moderator: *Chris Hartnett, P.E.*

Wednesday, February 4, 2009

Prestressed Masonry Structures

This seminar presents an overview of post-tensioned masonry (PTM), including the background of the development of PTM, materials used in construction, and advantages of the system. The presentation also will discuss recent applications of PTM in the United States and findings from current PTM research. This presentation also will introduce the 2005 MSJC design provisions relating to post-tensioned masonry, and two design examples will be reviewed.

Presenter: *Jennifer Popehn*, Ph. D., OPUS Architects and Engineers, Minnetonka, Minnesota

Jennifer Popehn completed her Ph.D. in structural engineering at the University of Minnesota, where her research focused on the effects of out-of-plane loading on slender, post-tensioned masonry walls. She is currently involved in the Prestressed Masonry subcommittee of the Masonry Standards Joint Committee for the 2011 code cycle.

Moderator: *Craig Oswell*, P.E.

Planning Committee

Olene Bigelow, C.S.I.
International Masonry Institute
Minneapolis, Minnesota

Bill Bloemendal, P.E.
American Engineering Testing
St. Paul, Minnesota

Gary Botzek
Minnesota Concrete & Masonry
Contractors Association
St. Paul, Minnesota

Patricia Cole, P.E.
Wenzel Engineering, Inc.
Bloomington, Minnesota

Ron Ehresmann, P.E.
Ehresmann Wille Engineering LTD
Golden Valley, Minnesota

Sonny Fite, P.E.
Target Corporation
Minneapolis, Minnesota

Michael Fowler, P.E.
Clark Engineering Corporation
Minneapolis, Minnesota

Chris Hartnett, P.E.
Mattson MacDonald Young
Minneapolis, Minnesota

Craig Oswell, P.E.
Ulteig Engineers, Inc.
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Brian Pashina, P.E.
Wiss, Janney, Elstner Associates, Inc.
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University of Minnesota
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College of Continuing Education
University of Minnesota
St. Paul, Minnesota

Register yourself and a team of key people.

www.cce.umn.edu/masonry

Directions


From I-694: Take 35W south to the Cleveland Avenue exit (Note: exit to the left). Follow Cleveland Avenue to Larpenteur Avenue. Go east (left) on Larpenteur to Gortner, turn south (right) on Gortner and go to Buford Avenue. Turn east (left) on Buford Avenue.

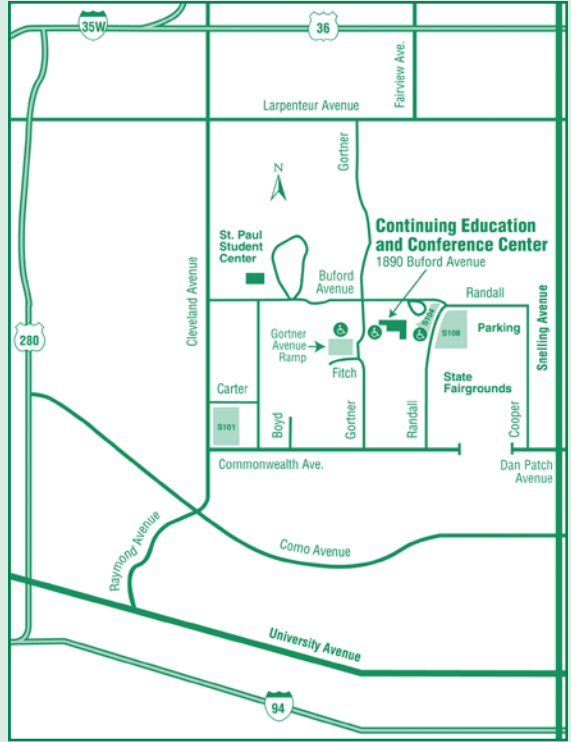
From I-35W: Take the Highway 36 exit and turn south on Cleveland Avenue to Larpenteur Avenue. Go east (left) on Larpenteur to Gortner, turn south (right) on Gortner and go to Buford Avenue. Turn east (left) on Buford Avenue.

From downtown St. Paul: Go west on I-94 to Snelling Avenue. Go north on Snelling Avenue to Larpenteur Avenue. Go west (left) on Larpenteur to Gortner, turn south (left) on Gortner and go to Buford Avenue. Turn east (left) on Buford Avenue.

From downtown Minneapolis: Go east on I-94 to MN-280, exit number 236. (Note: exit to the left). Merge onto MN-280 north. Exit at Larpenteur Avenue. Take Larpenteur east (right) to Gortner (3rd traffic light). Turn south (right) on Gortner and go to Buford Avenue. Turn east (left) on Buford Avenue to the parking area.

Parking is available adjacent to the conference center in lot S104 at a cost of \$6.00 or in the State Fair Lot S108 for \$3.75.

 = Handicapped access and parking



Continuing Education and Conference Center

1890 Buford Avenue, St. Paul, MN 55108

612-624-3275

1-888-501-2268

www.cce.umn.edu/conferencecenter

Other Related Programs

58th Annual Concrete Conference

December 4, 2008

www.cce.umn.edu/concrete

Structural Engineering Seminar Series

February 11, 18, and 25, 2009

March 4, 11, and 25, 2009

www.cce.umn.edu/structural

Professional Engineer Refresher Courses are also available.

www.cce.umn.edu/engrrefresher

Additional Education Offerings

Public and On-Site Professional Development Courses

The College of Continuing Education provides public and on-site professional development courses for engineering, technical, and business professionals. Examples of some of the array of courses are listed below. Also visit our Web site at www.cce.umn.edu and go to continuing professional development courses and events.

- Project Management
- Essential Management and Leadership
- Business Practices

Registration

Masonry Design and Construction Fundamental Series

181957 kf
181958 kf
181959 kf
181960 kf
181961 kf
181962 kf

November 5, 12, 19, January 21, 28, February 4

Please print or type

Last Name _____ First Name _____ MI _____

Company/Institution _____ Title/Position _____

E-mail _____

Work Address _____

City _____ State _____ Zip Code _____

Daytime telephone _____ Fax Number _____

I do **not** want to be listed on the registrant list for distribution to conference participants.

Please check the session(s) you plan to attend:

- November 5 Managing Moisture in Masonry Walls and Sustainability in Masonry (181957)
 November 12 Evaluation of Existing Masonry Structures – A Process Approach (181958)
 November 19 *Masonry Instant Answers* and 2008 MSJC Special Inspection and Testing (181959)
 January 21 Masonry Software Design Solutions (181960)
 January 28 Understanding Stone (181961)
 February 4 Prestressed Masonry Structures (181962)

Please mark amount enclosed or amount to be billed:

- \$375 all sessions (6 sessions for the price of 5)** \$225 three sessions
 \$75 one session \$300 four sessions
 \$150 two sessions \$375 five sessions

I would like to order *Masonry Instant Answers* by *Rochelle Jaffe* for \$45 (Please add this amount to your total). The book will be available for pick up at her November 19 seminar.

Method of Payment

- I have enclosed a check or money order payable to the University of Minnesota.
 Please bill my organization (purchase order or letter of authorization attached).
 Please charge the amount indicated above to my: VISA MasterCard American Express Discover

Card Number _____ Expiration Date _____ Total amount to charge _____

Name as it appears on card (please print) _____

Signature of cardholder _____

How to Register

Register online for **individual sessions** at www.cce.umn.edu/masonry. (*The most secure form of registration*)

Mail registration to University of Minnesota, College of Continuing Education, 20 Coffey Hall, 1420 Eckles Avenue, St. Paul, MN 55108

Fax registration with credit card or purchase order to 612-624-5359. (*This fax will be received in a secure location.*)

If your check is returned because of insufficient funds, closed account, or because you have made a stop payment request you will be charged a check-handling fee of \$20.

The information on this form is private data, used to identify and locate you, obtain payment, and enable instructors to better know their audience. Name, address, and payment method are mandatory. Information on this form may be shared with instructors and program co-sponsors.

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

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