# MASMS

# Minnesota Educational Facility Management Professionals August 2015 NewsLetter

## Take the time to attend 2015 MASMS Conference Your chance to learn and network!

## Wednesday Events September 30, 2015

Scholarship Golf Event Wapicada Golf Course Sauk Rapids, Minnesota Tee Off at 10:00 AM

5-8:00 pm Conference Registration 7:30 pm Business Member Appreciation Reception & Entertainment Mary Rowles, Comedy



## Thursday Events ~ October 1, 2015 CONFERENCE KICKOFF!

7:00 am Registration / Continental Breakfast
7:00 am MASMS Mentor Program, 1st Time Attendee
7:50 am Presentation of the Flag
8:00 am Keynote Speaker, Joe Schmit *"Silent Impact: Influence Through Purpose, Persistence and Passion"*



Joe Schmit~Author, award-winning broadcaster and community leader!

## Thursday Morning Educational Sessions

**9:00 am Sessions** (*Pick 1 of 8*) **How to manage your parking lots & other pavement.** Michael Remington, Inspec

**Chillers 101-Getting the Most!** Mike Lynch, Johnson Controls

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**Create Fair/Equitable Work Zones** Scott Haag, Hillyard

Irrigation Consideration for Healthy Turf & Water Savings Sam Bauer, Univ of Minnesota

Safe School Self Assessment Mike Christianson, MN School Safety Center

What is still missing from your construction project? Matt Lindberg, IEA

Learning Lab—Steam Trap Maintenance; Boiler Water Treatment, Dual Fuel John Bobence/Craig Kaufman, State Supply; Mike Comstock & Steve Norberg, Mulcahy Co; Paul Albinson, CenterPoint

Time Management Terry Lehman, Prior Lake/Savage Schools

## **Thursday Afternoon Events**

12:15 pm Lunch & Business Meeting1:00 pm Trade Show

## NEW THIS YEAR

Drawings for <u>ten</u> \$500 Building and Grounds Grants to be used for a B & G project of the school's choosing! If you registered for the conference, you are automatically in the drawing! A name will be drawn every 20 minutes starting at 1:15 PM on the trade show floor. <u>Must be present to win!</u>

## Contact the MASMS Office for registration forms!

**10:15 am Sessions** (*Pick 1 of 8*) **Team Buy In** Joe Schmit, Keynote

Requirements for Electrical Licensing Steven Dudley & Sheldon Monson, Dept of Labor

Maximizing automation system value thru effective troubleshooting of bldg systems. Jim Cooke, AKF Group

Your roof is how old? A low slope roof performance update. Gary Patrick, Inspec

**OSHA & MN Schools** ~ What's the target? Amy Satterfield, IEA

**Impact of air leakage thru the air distribution system.** Mark Litchke, Mavo Systems

Learning Lab—Steam Trap Maintenance; BoilerWater Treatment, Dual Fuel John Bobence/Craig Kaufman, State Supply; Mike Comstock & Steve Norberg, Mulcahy Co; Paul Albinson, CenterPoint

**Essential Mgmt & Care of Synthetic Fields** Mike McDonald, Univ of MN

#### VENDOR MEETING Business Members Should Attend Followed by Lunch at 11:45 AM in the Café/Legends Bar What is your safety "game plan" for extracurricular events? Dan Fitch, IEA

What you don't fix on your roof can hurt you! Gary Patrick, Inspec

**Community Solar Gardens** Margaret Bishop, Bishop Energy Engineering

What are the latest building systems, materials & energy design innovations? Troy Miller & Kevin Holm, LHB

Office Visitor Management Strategy Justin Haley, ICS Consulting & Mark Eisenbacher, Cambridge Schools

What is our energy management system telling us? Glen Birnstengel, So. St. Paul Schools

Asphalt Problems, Settlements & Potholes

Asphalt Problems, Settlements & Potholes Joe Hagen, JW Asphalt

## **Thursday Evening Events**

5:45 pm President's Reception6:15 pm MASMS Banquet & Awards

Entertainment



And this is just Thursday's Schedule! Go to Page 2 of this Newsletter for the Friday Conference Schedule!!

## INSIDE THIS ISSUE:

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## Interior registration forms: is (Pick 1 of 8) 11:15 am Sessions (Pick 1 of 7)

# NOTIS ZAUZU Friday Events –October 2, 2015

## 7:00 am Buffet Breakfast

## 7:30 am Retired Member & Past President Breakfast Gathering

8:00 am Idea Exchange Please join us for an interactive session and learn from your peers! Idea exchange topics for 2015: Strategic Planning ~ How can MASMS do more for you? What do you need from MASMS? What do you want from MASMS committees? ... and more!

## Friday Morning Educational & Round Table Sessions

9:00 am Sessions (Pick 1 of 8)

Field Safety is a Modern Day Concern Mark Nicholls, Turf Industry, Kiefer USA

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Capital Improvement Master Planning Mike Condon, Inspec

The Maze of Managing and Verifying Building Operations and Performance Kevin Holm, LHB

How to Select the Best Flooring for the Application Area Jeff Neyssen, Multiple Concepts Interiors

School Vehicles—Roundtable Discussion Sgt. Chad Dauffenbach, MN State Patrol

Workmen's Comp 101 John Isakson, SFM

PERA Roundtable Phil Coleman, Public Employees Retirement Association

Public Speaking Jim Leuer, Eden Prairie Schools

10:00 am Break & Networking

## 11:15 am Capstone Closing Session

Leadership ~ Scott Hogen, Mankato Schools & Mike Boland, No. St Paul-Maplewood-Oakdale Schools

## 12:15 pmLunch and networking!

Phil Coleman, Public Employees Retirement Association Choosing the Next Lighting Upgrade Wendy Fry, The Retrofit Company MASMS 2015 CONFERENCE PEOPLE + PART

PERFORMANCE

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## New MASMS Educational Members

**Bill Heger, Bloomington Schools** Paul Bell, Big Lake Schools Brian Thoennes, Big Lake Schools Troy Johnson, Stillwater Schools Steve Burt, Martin Luther College Tim Rambow, Martin Luther College Wade Greenwaldt, Martin Luther College

## **New MASMS Business Members**

Tucker Patty, Roof Spec Inc. Tim Kogler, Simplex Grinnell Brandon Kanuit, Archcon Cory Olson, SwedeBro Isaiah Wallfed, Floyd Total Security Tom Schneider, H & B Specialized Products William DeSchepper, American Door Works Chip Jacobs, Foster, Jacobs & Johnson Inc. Joe Larabee, Foster, Jacobs & Johnson Inc. Jon Paul, Foster, Jacobs & Johnson Inc. **Troy Miller, LHB Corporation** Phil Fisher, LHB Corporation Shane Butler, Wenck Construction, Inc. Todd Iverson, Wenck Construction Inc. Russ Schumacher, Nexus Solutions, Inc. Stu Sirjord, Nexus Solutions, Inc. Mark Korte, Nor-Son, Inc. Kellie Erickson, The Gordian Group Diane Cady, Graybar Electric

10:15 am Sessions (Pick 1 of 8)

Scoping out our schools; planning pest exclusion to stop pests before

Modifying Facilities for Today's and Future Traffic Demands

they enter our schools. Dr. Stephen Kells, Univ. of Minnesota

Mat Miller, Austin Schools & Maureen Mullen, Rockford Schools

Hands on IAQ Tools Jordan Cuzon, Field Environmental Consulting

MN Adoption of the IECC 2012 and its Impact

Don Horkey/Ruairi Barnwell, DLR Group

Staffing—Roundtable Discussion

**MASMS Certification Information** 

Scott Haag, Hillyard

Cliff Buhman, Inspec

**PERA Roundtable** 

Jeff Franklin, Pavement Resources Shaun Hopf, Forbo Flooring Systems



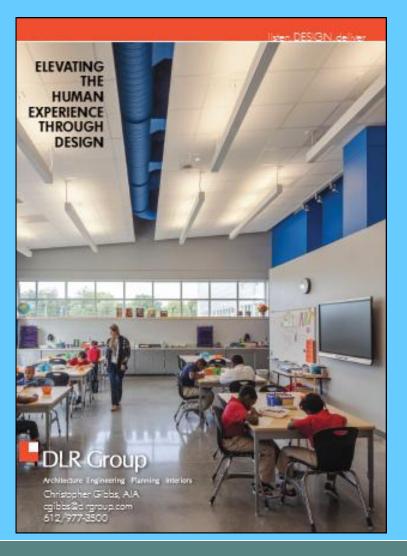




Mike Remington, Inspec MASMS Vendor Representative

Membership in MASMS a Great Value for Vendors!

Being a Business Member of MASMS is a great value for all vendors. In addition to all of the valuable networking opportunities MASMS provides at the monthly Chapter meetings, two State meetings, and the annual Conference; other benefits Business Members receive include: your business being listed in the annual MASMS Membership Directory, three free yellow page listings in the printed and online directory, opportunity to participate in the MASMS Speaker's Bureau and provide educational presentations at MASMS events. You should have recently received information for renewing your membership with MASMS, along with info on the Fall Conference and Trade Show. Membership forms must be received by August 15<sup>th</sup> to be included in the printed MASMS directory so don't wait, it's a great value!



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## Health & Safety Section

The MASMS Health & Safety Committee supplies information for this section each month. If you have a specific topic you would like to see covered, just let the MASMS office know (ruth@masms.org).

## FOAM PADDING AND THE MINNESOTA STATE FIRE CODE

Know the Codes, Ensure Compliance

## Author: John Swanson, Deputy State Fire Marshal-School Inspector-Plans Examiner

The State Fire Marshal Division has been receiving a lot of questions lately on foam plastic wall pads in school buildings. This article will attempt to address some of the questions we have received.

On February 20, 2003, a fire at the Station Nightclub in West Warwick, Rhode Island was one of the deadliest fires in American history. Pyrotechnics used during a performance started wall and ceiling mounted acoustical foam on fire, and the blaze spread quickly throughout the building, making the space untenable. One hundred people lost their lives in the fire and another 230 were injured.

Model building and fire codes are typically reactive when these events occur in an effort to address things that went wrong. Since the Station Nightclub fire, model building-and-fire codes have established additional, more stringent requirements for foam plastics used as interior finish.

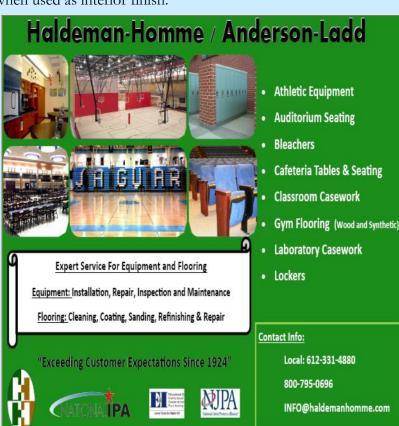
The use of foam plastic materials, including wall pad assemblies, has increased significantly in recent years due to its excellent sound-deadening characteristics and the cushioning it provides to protect from injury. Gymnasiums, wrestling rooms, seclusion rooms and 'quiet' rooms are some of the areas where these pads are commonly used, though often they do not fully comply with building and fire code requirements.

The Minnesota State Fire Code (MSFC) requires any material placed on a wall or ceiling to comply with a Class A (most stringent), B or C (least stringent) rating depending on its location in a building. Foam frequently complies with a Class A flame-spread rating when tested to the flame spread requirements; however, because of the Station Nightclub fire, the building and fire codes now include additional requirements for foam plastics when used as interior finish.

Foam plastics receives high marks on the flame spread test primarily because the product melts in the test chamber, leaving little to no test sample left to burn. In 'real world' applications, however, this presents a problem with melting and burning plastic raining down on occupants as they exit the building. Noncompliant foam plastics can also contribute to early flashover, where an entire room or area rapidly and suddenly progresses from partial fire involvement to being fully involved.

The MSFC allows foam plastics materials to be used as interior finish when compliant with the appropriate flame-spread rating from Table 803.3 (usually a minimum of Class C) and one of the following standards; NFPA 286, FM 4880, UL 1040 or UL 1715. These large-scale fire tests differ from the flame spread test because they try to address the proposed end-use configuration and application. It is important to mention that many of the foam plastics sold on the market comply with only the flame spread test and not to one of these other standards.

If you have any questions related to foam pads please contact the State Fire Marshal Division school inspector assigned to your area.



## **Secondary Fuels**

#### Submitted by Brett Stueland, RM Cotton

Natural gas is the primary fuel for most fuel fired equipment such as boilers in our part of the country. Secondary fuels may be required by some facilities like hospitals or schools to insure zero down time if the primary fuel fails. Utility companies offer reduced rates on natural gas to customers with the ability to shut off their natural gas usage and switch to a secondary fuel when asked to be curtailed. Regardless of the reason, below are some items to consider when looking at secondary fuels including options available, advantages and disadvantages.

Common secondary fuels are oil, propane and electricity. Different grades of fuel oil are available including number 1 through 6. However, number 2 fuel oil is probably the most commonly used. Propane can be used as straight propane or mixed with air to mimic the properties of natural gas. I know, electricity is not a fuel, but it is another energy source. In lieu of burning a fuel, electricity is transmitted through elements to heat water in a boiler.

Not so common secondary fuels are Bio Gas (Digester) and Bio Mass fuels. Digester gas is a byproduct of waste treatment facilities and consists of methane similar to natural gas but at a reduced BTU concentration. Bio Mass fuels could be any type of solid fuel including sawdust, wood chips, bark, coal, corn stocks, etc.

#### Fuel Oil

The Messenger

Fuel oil is the most used back-up fuel for larger commercial and industrial customers. Oil with its high heating value can provide a tremendous amount of heat as compared to the amount of storage space. The use of oil as a fuel, in some ways may be more a reflection of historical habit rather than economics or ease of use. In most cases legacy buildings like hospitals and schools were originally equipped with oil burning equipment, and maintained by baby boomers who cut their teeth on oil during their duties in WWII. The infrastructure for oil still exists in these facilities which makes it "easy" to continue to use oil as a back-up fuel. In some cases, old habits have been broken because of stronger environmental laws which have caused some customers to abandon their oil systems. For customers who continue to burn oil, there are still some all stainless steel condensing natural gas and #2 fuel oil boilers and some companies still manufacture full lines of standard efficiency steam and water boilers.

#### Propane

Propane is a "cleaner" fuel as compared to oil and requires less maintenance, has higher efficiency and no emission concerns. Propane used as a back-up fuel may be limited due to tank size. Boilers fired with propane may not require any more maintenance than when they are fired on natural gas. Propane can be stored for an unlimited amount of time without degradation. And its non-toxic, it won't pollute the ground water if there is a leak. Propane systems require propane tanks and piping. A vaporizer may be needed depending on the size of the system.

Propane can be used in condensing boilers and therefore efficiencies of over 95% are possible. Propane backup burners can have high turndowns depending on the boiler and burner manufacturer.

#### Propane Air

Propane air systems are similar to straight propane systems as they are much cleaner as compared to oil and require less maintenance, have higher efficiency and no emission concerns. The advantage to a propane air system is the changeover is at one point, not at each piece of equipment.

Propane air systems require propane tanks & mixing/vaporizer units. Since the properties of propane air are similar to natural gas, the propane air can be fired in most natural gas equipment thereby eliminating the need for additional boilers or dual fuel burners. However, not all equipment may be able to handle a propane air mix. Check with the manufacturer.

#### Electricity

Electricity is clean at the point of use, but power plants that generate the electricity are not. Electric boilers are very efficient as they typically operate at about 95% all year long. But electrical costs can be very high compared to the above fuels. Furthermore, backup boilers will be required as there are no dual energy natural gas / electric boilers currently produced. Thus equipment, installation and maintenance costs can double. High amp draws can limit the size.

## Secondary Fuels (Continued from Page 5)

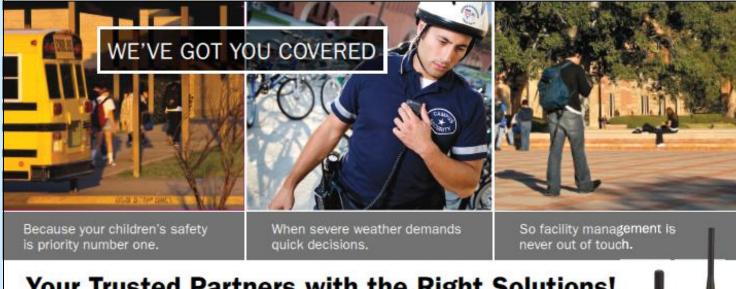
## Bio Gas (Digester Gas)

Digester gas consists of methane similar to natural gas but at a reduced concentration which can vary from 50-75%. Not only can the concentration vary at different locations, but it can actually vary at individual locations throughout the day. This fluctuation makes it difficult to fire in a burner and impossible to maintain peak efficiency. The composition of digester gas also includes: Carbon Dioxide, Nitrogen, Hydrogen, Oxygen, Hydrogen Sulfide ( $H_2S$ ), Water and other impurities. Consideration should be taken in order to clean and dry the gas prior to burning. The  $H_2S$  is very corrosive and further consideration should be taken regarding materials of the Burner, Gas Train and Boiler Heat Exchanger. An all stainless steel heat exchanger is strongly recommended. Depending on the composition, the boiler heat exchanger may need more frequent cleaning. Having a boiler with easy access to heat exchanger will minimize labor costs. An all stainless steel condensing boiler with swing open front door is a great choice for a boiler with digester as the primary or backup fuel.

#### Bio Mass

Solid fuels can be a good alternative to fossils fuels in the right application. However, some may overlook the cost of the fuel material and/or the cost of transporting the material. Unless it is free and already at the location to burn, this could be a significant cost. Another significant cost is the solid fuel boiler which is typically more expensive than a standard fossil fuel boiler. And unless you are manually shoveling, you will have the cost of the material handling equipment. Furthermore, both the boiler and the material handling equipment will require additional maintenance/cleaning which adds more cost. As with oil, the emissions can be an issue.





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## The MASMS Memo Board

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## MASMS OFFICE

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## **July 2015 Boot Camp Attendees!**

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## MASMS CALENDAR

September 30, 2015 October 1, 2015 October 2, 2015 October 28, 2015 October 28, 2015 November 10, 2015 November 19, 2015 December 8, 2015 December 16, 2015 December 17, 2015 December 23, 2015 Scholarship Golf Event MASMS 2015 Conference MASMS 2015 Conference Southern Chapter Meeting NW Chapter Meeting Metro Chapter Meeting Metro Chapter Meeting Metro Chapter Meeting Southern Chapter Meeting Northern Chapter Meeting Northern Chapter Meeting NW Chapter Meeting