

## Above Ground Concrete Walls Enjoy Increasing Awareness

It has been many years since the above ground concrete/ICF concept was first introduced and, to borrow a phrase, they've come a long way. ICF form manufacturers have responded to the needs and suggestions of distributors and installers, and more distributors are stocking forms so that customers can be satisfied rapidly instead of forced to wait for factory orders. Distributors are educating greater numbers of installers to supply the growing market demand. ICF installers today can be a concrete crew, the homebuilder, carpenters, block/masonry people, or just about

anyone who has the need and desire to learn. Residential concrete form contractors are also showing increased interest in the possibilities afforded by above ground forms. The result of progress in this relatively new market is a visible increase in the number of concrete homes and commercial buildings being built all across the country. And in Illinois!

After many months of careful research and deliberation, the Davis family started construction on their ICF home in Huntley, Illinois.

One Illinois ICF project that caught IRMCA interest is a new home being built in the Huntley area. Homeowner Jennifer Davis spent many months prior to breaking ground learning about concrete home construction—concentrating

(Continued on page 12.)

(Above Ground continued from front cover.)  
both on the advantages of concrete



## Pekin UTW Project a First For Peoria Area

By Dick Plimpton, P.E.  
Director of Marketing & Promotion

In early July, a casual conversation after church between restaurant owner Al Phipps and Randy Swenson of C&G Concrete Construction Co., Inc. has led to the first UTW of a commercial parking lot in the Peoria area.

Phipps was in the process of remodeling his Long John Silver restaurant in Peoria to include an A & W Root Beer franchise, and the increase in dining room size had caused a potential drainage problem. He was also tired of the 'five-year quick fix' program for his



Flowable fill is used to fill voids in the current pavement of the Long John Silver parking lot in Peoria, IL.

asphalt parking lot. So, Curt Slusher, also of C&G Concrete, explained that, in this case, a thin concrete overlay

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(Pekin UTW continued from front cover.)  
would provide a solution to the drainage problem, a longer pavement

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IRMCA Welcomes Its New Members

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Freeport, IL 61032  
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Products & Services: ready mix concrete, aggregates

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19342 E. Frontage Road  
Raymond, IL 62560  
217.229.3322  
Products & Services: ready mix concrete

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217.562.2013  
Products & Services: concrete contracting

Available From IRMCA

Membership pamphlets  
Legislative Booklets  
IRMCA directories  
Driver Safety Manual  
Hazard Awareness Manual  
Laying the Groundwork (video)  
And more...

Member Input Needed  
"5 Requirements of Residential Driveway Construction" and  
"Do's & Don'ts of Concrete Care"  
Will Soon Be Available

IRMCA has recently revised and revamped the popular "5 Requirements of Residential Driveway Construction." The format remains the same in that it specifies the proper steps for exterior concrete placement, finishing, and curing and it retains the perforated tear-off reminder to leave with the homeowner.



We have also



developed a "Do's & Don'ts" sticker that a contractor can inconspicuously post near a new driveway to remind the homeowner how to care for his/her new concrete.

HELP! These items are somewhat costly to produce and before we commit, we need feedback from our producer and contractor members. Are these items you or your customers would use? If so, how many would you want? Call us, fax us, or e-mail us and give us your thoughts.

We feel these two items can be valuable to producers, concrete contractors, homeowners - everyone! However, it's more important to know how you feel.

Field Report

By Dick Plimpton, P.E.  
Director of Marketing & Promotion

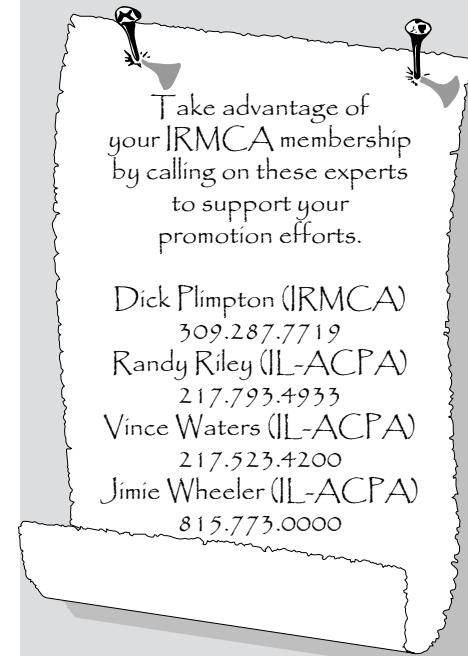
As of August 10, 2003, six ready-mix producers have designated a concrete contractor they wish to work with on the promotion of UTW for commercial parking lots. This has resulted in identifying six projects that have strong potential. If the promotion effort is successful, the potential cubic yardage will vary from 200 to 1000.

If you think this has to be a long process, consider the Long John Silver project in Pekin, Illinois. Initial conversation between Curt Slusher of C & G Concrete Construction and the restaurant owner began in early July and construction of the concrete repair began August 11. The contractor emphasized that relatively little effort resulted in 22,000 square feet of concrete paving, which represented 200+ cubic yards of concrete for producer member United Ready Mix, Inc.

How are your activities progressing?

A Great Opportunity for Producers

IRMCA just received permission to reproduce 100 sets of the Susan Harwood Safety Training materials and distribute them to 100 contractors in Illinois. We will be sending a complete set, along with instructions on how to best use them, to all of our current contractor members as soon as we have them available. In addition, we are inviting our producer members to send us the names and mailing addresses of two or three contractors that the producer feels would use these materials in their safety training. This is an important, industry-relevant, OSHA-approved training program which would be gratefully received by any contractor. We have a limited quantity and will honor requests on a first come, first serve basis.



Take advantage of your IRMCA membership by calling on these experts to support your promotion efforts.

Dick Plimpton (IRMCA)  
309.287.7719  
Randy Riley (IL-ACPA)  
217.793.4933  
Vince Waters (IL-ACPA)  
217.523.4200  
Jimie Wheeler (IL-ACPA)  
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Bekaert Corporation, bronze  
Industrial Systems, bronze  
NPC Bidco, bronze

Coming Events

September 2003

3 - Scholarship Golf Outing, Washington, Illinois

November 2003

20 - Board Meeting, IRMCA Office

January 2004

12-13 - Short Course, East Peoria, Illinois

February 2004

15-17 - Annual Convention, Orlando, Florida

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Mission

To be the voice for the ready mixed concrete industry in Illinois. To promote the use of quality ready mixed concrete through innovative educational programs. To accomplish common goals as an organization that cannot be done individually.

# Summer Meeting 2004

Eagle Ridge Resort in Galena, Illinois, once again hosted the Illinois Ready Mixed Concrete Association Summer Meeting, held this year on June 13<sup>th</sup> & 14<sup>th</sup>. The weather was perfect, the fellowship delightful, and the golf, well...interesting. Members and their families and guests gathered on the outdoor tented patio that overlooks breathtaking "Territory" scenery for a Friday night reception that preceded dinner at various Galena area restaurants.

The Saturday morning business session was both well attended



Above:  
At the outdoor opening reception, members mingle while enjoying the beauty of the Galena area.



Above: Dennis Oedewaldt (Prairie), Richard Plimpton (IRMCA), and Paul Flynn (Flynn Group) at the business session.



Left:  
Richard Plimpton (IRMCA), Kevin Rustemeyer (Illinois Cement), John Eckman (Lafarge), and Rich Sefried (Galesburg Builders) prepare to tee off..



Above: More than fifteen children, some pictured here at the closing dinner, attended the Summer Meeting. This event is for everyone!

and well received. Speakers included Roger Marquardt of ACPA, who gave an insightful, if not scary talk about the "Springfield Situation"; Randy Riley of ACPA/IRMCA, who reviewed his efforts with IDOT and its mechanistic design; Jim Amundsen of W. R. Grace, who reviewed IDOT's successful use of Self Consolidating Concrete in the Peoria area; Terry Murphy of Meyer Material, who reviewed specification concerns and predictions; and Paul Flynn of the Flynn Group and Jimie Wheeler of ACPA who reviewed progress in downtown Galena. Dick

(Continued on back cover)

(Summer Meeting continued from page 4.)  
Plimpton and Bruce Grohne talked very



# Weather Concerns

By Dick Plimpton, P.E., Director of Marketing & Promotion

Why talk about cold weather when many of you are still enjoying good concrete weather? Like it or not, cold weather is approaching and now is the time to prepare.

Is your hot water system ready for operation? Or, do you need to get the boiler inspected? What about chemicals for boiler water treatment? Is your supply adequate to start cold weather operations? What is the condition of the chemicals? If you heat your aggregates, is that system ready for operation?

Having been a ready-mix producer, I can strongly suggest that before you answer the above questions, you make a physical inspection to determine if you are ready or if you need to schedule inspections and/or order materials. It is much easier to schedule early than to panic later this fall.

- Slow strength gain- concrete



Cool weather is defined as day to day temperatures that are up and down but not down far enough to start heating water or aggregates.

A cold snap is a sudden drop in temperature when no one is prepared.

Cold weather, as defined by ACI 306, is a period when the average daily temperature falls below 40° F for more than three successive days, the average daily air temperature is less than 40° F, and the air temperature is not greater than 50° F for more than one-half day of any 24-hours.

## Whatever the temperature, each situation affects concrete

cylinders cured at 40° F will have about 20% less strength than concrete maintained at 73° F.

- Concrete should gain 500 psi of compressive strength before being subjected to its first freeze thaw cycle, i.e. the first night.
- One day of low temperature curing can lower cylinder strengths enough to cause a dispute.
- Increased time of set- rule of thumb, a 10° F drop in concrete temperature will increase set time about a third. A 20° F drop will approximately double the setting time.
- Variable slump/air contents- Now is a good time to be checking air contents a little more often. As the concrete temperature drops your air content will change even at the same rate of addition. It will help to know where you are now so adjustments can

be made in the future. Normally, you will need less air entrainment in cooler weather to maintain constant air content.

- Delayed finishing time & increased bleeding- retarded set times will prolong the duration of bleeding. Initiating finishing operations with free water on the surface will lead to a weak surface, and potential dusting, blisters and surface delaminations.
- Excessive or premature finishing may contribute to bleeding, reduces the air content at the surface and reduces the surface durability.
- It is not too early to do some checking of your plant operation. As you make calls on your customers, discuss the upcoming weather. This may be a good

# Eliminating "Expansion" Joints

## Joints in Concrete Pavements: Part II of III

By Randell C. Riley, P.E.

Back in the June 2003 issue of IRMCA News I went into considerable grueling detail explaining the phenomenon of pavement expansion. To paraphrase, I told you, "Assuming durable materials are used, a concrete pavement is never any longer than the day it is built." Now, let's talk about the proper use of "expansion" joints and why you should avoid them whenever possible.

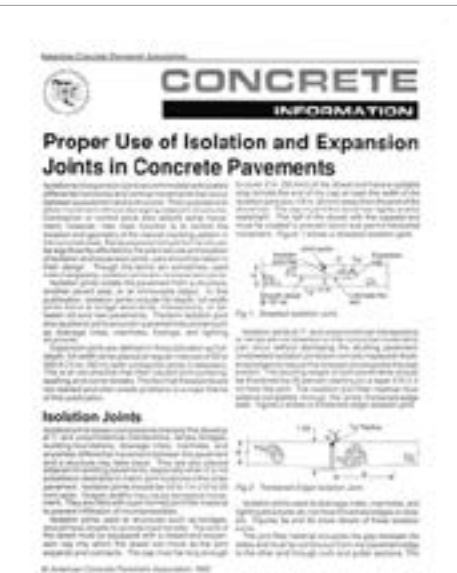
In 1940, the U.S. Bureau of Public Roads, (predecessor to Federal Highway Administration) conducted extensive tests of "expansion" joints. These tests found that "expansion" joints progressively close over the years causing greater opening at panels with adjacent contraction joints. This leads to spalling, loss of aggregate interlock and sealant failure. The conclusion of that study was that expansion joints are only needed when:

1. the pavement is divided into long panels (60-feet or more) without contraction joints in between.
2. the pavement is constructed while ambient conditions are below 40 degrees F.
3. the contraction joints are allowed to be infiltrated by large incompressible materials.
4. the pavement is constructed of materials that in the past have shown high expansion characteristics. (Ref: Proper Use of Isolation and Expansion Joints in Concrete Pavements, American Concrete Pavement Association, 1992, Skokie, IL.)

In parking lots and city streets in particular, our goal is to use aggregate interlock as much as possible, thereby

eliminating the use and associated expense of dowels and other embedded steel. To do so, we clearly do not want to include expansion joints.

But there are places in concrete pavement where a joint should be constructed that resembles the classic



Proper Use of Isolation and Expansion Joints in Concrete Pavements, American Concrete Pavement Association, Skokie, Illinois, 1992, IS 400.01P

expansion joint, i.e., it utilizes an expansion material and may or may not include dowels. Those locations are where it is necessary to isolate the pavement from fixed structures, light standards, manholes and other items which stick up through the pavement. In this case, the keyword is "isolate," (hence they are referred to by pavement engineers as "isolation joints.")

Isolating the pavement from these structures is necessary due to the fact that the structures usually penetrate below the frost line. The pavement

About Randell C. Riley, P.E.

Randell Riley is an Engineering Consultant for the Illinois Chapter – ACPA, Illinois Ready Mixed Concrete Association and the Great Lakes Cement Promotion Association. He is actively involved in the day to day promotion of long-life quality concrete pavements. He can be reached at 217-793-4933 or on the Internet at pccman@InsightBB.com.

is built above the frost line, and as the ground freezes in our sometimes bitter Illinois' winter the pavement is raised from the expansion of frozen ground. The fixed structures, with foundations below the frost line, do not move.

For those of you with concrete driveways (you all have them don't you?) you can see this phenomenon every winter as your driveway slab moves up and down relative to your garage entrance, particularly if you don't have a granular layer under the concrete. Were the slabs not isolated from the fixed structures, cracking and possible failure of the pavement slab would occur.

More information on joints and jointing can be found in the publication shown above from American Concrete Pavement Association.

Next time, joint spacing and the "tension-ring" concept in parking lot design.

The [Cook county Highway Department] asked the industry to propose some new solutions. The solution proposed was Ultra-Thin White-topping, but with a twist.



Proper dispersion of the fibers is essential in producing a mixture that is easy to finish and provides the needed structural characteristics. This blower does just that!

# Concrete Bus Pads: A New Market?

By Randell C. Riley, P.E.

Start - stop - squish. Start - stop - squish. The constant pounding of a couple of hundred buses a day combined with the hot Illinois' summers can take its toll on asphalt bus stops, and nowhere is the traffic any worse than Western Avenue in the City of Chicago! Rutting, shoving and pushing of the existing asphalt caused by the buses was a significant problem to the Cook County Highway Department, responsible for the design of repairs



Bus pads on Western Avenue are paved using vibrating screeds and a special concrete mixture containing 7.5 lbs. per cubic yard of synthetic structural fibers.

along this busy roadway section.

Though the Department's current practice is to replace the sections full-depth with concrete, the cost of replacement was becoming disproportionate to the surface area affected by the repair. To overcome the problem the Department asked the industry to propose some new solutions. The solution proposed was "Ultra-Thin Whitetopping," but with a twist.

The repairs along Western Avenue create some unusual demands compared to normal UTW projects. You see, not everything below the existing surface is asphalt. Substantial sections of the roadway consist of asphalt over the top of thick interlocked granite pavers. In

(Continued on page 13.)

(Concrete Bus Pads continued from page 7.)  
In addition, concrete patches are scattered

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# Legislative Report

By Jim Randolph  
Legislative Committee Chair

## Commercial Distribution Fee & Rolling Stock Exemption

One of the problems the new budget has created for the Secretary of State's Office (SOS), is "How are we going to collect all these new fees?" I was told at the meeting of the Truckers Advisory Board to the Secretary of State on August 5th, that we would be receiving a "Back Billing" for the new "Commercial Distribution Fee" (CDF) in the next 30 to 60 days. May I remind you that the funds from this 36% increase to our license fees will not go to the depleted road fund, but to the depleted General Fund? I questioned if this fee could possibly be paid in installments either bi-annually or quarterly. That request did not get a favorable response, but I hope will get consideration.

Some of us are impacted directly and some indirectly by the new Rolling Stock Exemption Ruling, or at least our transporters are. I have heard of freight increases of up to 3%-5% are to be expected from those who have had Rolling Stock Exemption in the past but will lose all or part of it from now on. There was much discussion on this new ruling as well. Representatives from the offices of the SOS and the Illinois Department of Revenue (IDOR) had unresolved discussion on what constitutes a "trip". The number of "for hire, interstate trips" in a year will determine how a trucker

qualifies for the sales tax exemption he once had under the Rolling Stock Exemption. Remember, he is also paying the new "CDF" fee. By the time our ready mix concrete gets to the end user, he will have to pay for losses of the Rolling Stock Exemption and add the new CDF fee on some of our transporters, and the CDF fee placed on our mixers. The CDF went into effect July 1, 2003 so these real charges are already upon us.

## Sales Tax Exemption on Ready Mix Concrete Trucks Retained

The best news is that we did not lose the Sales Tax Exemption on the purchase of Ready Mix Trucks or the components or replacement parts purchased for them. The same is true for Ready mix plants and components and in some cases Endloaders. The criteria for these exemptions are under the Manufacturing, Machinery and Equipment exemption under the Illinois Administrative Code, Section 130.330. Form ST-587 IDOR Equipment Exemption Certificate, is what you can provide to your vendors to receive this exemption. This form can be found on the IDOR Web site or the IRMCA office can send you copies.

## Packets of Forms & Rules

A packet of forms, rules, and information was mailed to each of our members from the IRMCA office on July 26<sup>th</sup>. If you did not receive this packet, or have questions about its content please contact the IRMCA office. Please note the new "Hours of Service Rules for Ready Mixed

Concrete Drivers" insert included with this newsletter.

## Commercial Drivers License (CDL)

There were previously 92 CDL testing locations compared to the 20 locations now available. All scheduling is handled through the Springfield office. There are currently 490,000 CDLs issued in Illinois.

## Uniform Speed Limit HB 1186

This bill that was passed overwhelmingly by both houses has been vetoed by the Governor. Lobbying efforts are underway to reverse this veto. Call your legislators office and tell them to support an override of the Governor's veto of HB 1186.

## Stormwater Fee and Air Emissions Fee

Also a result of the passage of the new budget it includes a new \$500 per location Storm Water Fee, and an increase in the minimum Air Pollution Permit fee from \$100 to \$200 per location.

## Weight Laws

There is nothing new to report other than we are optimistic that new legislation will be ready to present at the Spring Legislative Session. We will keep you informed.

## Safety Update

Steve Metz  
Safety Committee Co-chair

Since the presentation of the Training/Orientation manual in April, we have had a lot of feedback from producers on their uses of the manual. This feedback varies from the producer that is working to bring the information to their employees next winter in a training format with many changes, to the producer that has simply accepted the manual in its original format, copied it and given it to their employees. There are those that have decided to train only their new employees. Others are introducing the material to all of their employees. Some are removing parts of the manual and others are personalizing it and adding material that they have used previously. All of these uses fit the expectations of the Safety Committee. The committee had a goal of offering a good framework of basic ready mix specific information that could be personalized and used by the producers in any form that would best serve them. At the same time, they would not have to spend the time the

*This manual deals with Customer Relations, Quality Concrete, OSHA concerns and many other common sense topics such as Cement Burns, Slips and Falls and Mixer Rollovers. It takes the drivers from the Start of the Day, through the Loading and Unloading process, to the End of the Day.*

committee spent building the program.

If you have not had the opportunity to put the manual to work in your company or if you have not yet purchased the material I urge you to consider it (and talk to the IRMCA Office). The program was put together by producers just like you and those that are using it seem to be very pleased with their experiences. This manual deals with Customer Relations, Quality Concrete, OSHA concerns and many other common sense topics such as Cement Burns, Slips and Falls and Mixer Rollovers. It takes the drivers from the Start of the Day, through the Loading and Unloading process, to the End of the Day. It spends time on Truck Mixer Chipping and Concrete Testing and it gives you a solid Disciplinary Program with the ability to revise it and make it your own. All in all, this material is an eye opener for the people being introduced to the ready mix industry and a constant reminder to the veteran driver. It identifies responsibilities and asks for accountability. In many instances, producers may find very little "new" information, but it may offer documentation for the training that you have done and the information you have shared with your people, that you have not previously had.

Think about using this manual with your employees and understand that the material was developed as a "rough



draft" for your business. The CD that the program comes to you on allows revisions that are limited only by your imagination. When you review the material, note its segmented format. I suggest that you consider delivering it to your people in small doses over a period of time. This may tend to allow them better understanding of the material as it comes to them and it will keep good information in front of them on a regular basis over a longer period of time. This may bring increased comprehension, a better willingness to accept and use the material, and it will be a constant reminder of your company's commitment to a safe work place.

As Rita Mosley would say, "Have plans for tomorrow? Work safely today!" Whether your company's experiences with this material are positive or negative, please communicate those experiences to the IRMCA Office or a member of the IRMCA Safety Committee. "Your" direction allows us to determine "ours".

## IRMCA Environmental Program

Work has begun in earnest on the soon to be famous "IRMCA Environmental Program". Randi Wille of Meyer Material Company has created an extraordinary presentation on the first chapter of the program, which will deal with air pollution emissions and air permits. Work will continue through the fall and winter on this exciting program. The environmental committee is hoping to unveil the program at the 2004 convention.

About the program:

- The program will be designed as an "off the shelf" document that can easily be tailored to individual companies and plants
- The committee will include a "Frequently Asked Questions" (FAQs) section for each chapter of the program. Please send the IRMCA your FAQs now for air pollution permitting and NPDES permitting so that we may include them in each chapter's development.

Let us know your thoughts on the Environmental Program. How can we make it more user friendly for you?

## Environmental News & Notes

By Mitch Mariotti  
Environmental Committee Chair

Welcome to September from your IRMCA Environmental Committee! Allow us to update you on several active topics:—

### NPDES Storm Water Permits



The Illinois EPA's "General NPDES Permit for Storm Water Discharges from Industrial Activities" has been renewed effective June 1, 2003. According to the IEPA, if you were covered by the previous permit, which expired May 31<sup>st</sup>, 2003, you are automatically covered by the renewed permit. However, unlike previous versions of this permit, you will not receive written confirmation from IEPA that you are covered by the renewal. Therefore, if you would like a copy of the new permit you may download it from IEPA's Web site:

<http://www.epa.state.il.us/water/permits/storm-water/general-permits.html>

These permits are effective June 1, 2003, and will expire May 31, 2008. Significant changes were made as a result of comments received during the public notice period. The changes, summarized below, will be addressed in detail in the next newsletter:

which prohibits coverage of industrial activities to biologically significant waters pursuant to 35 Ill. Adm. Code 302.105 (d)(6).

Individual permits must cover these activities.

- Section C.4. was added to explicitly prohibit violations of applicable water quality standards.
- Section D.9. was added to require submission of a Notice of Intent to continue coverage after expiration of this permit.
- Section E. 1. was modified to include a design storm event to be incorporated in the Storm Water Pollution Prevention Plan (SWPPP).
- Section E. 10. was modified to clarify that SWPPPs are to be available to the public at any reasonable time upon request.
- Section H.1. was modified to clarify what conditions may be considered when determining if an individual permit is required.
- Section I was added to advise permittees that this permit may be reopened due to various circumstances.

Permit fees of \$500 have been introduced for this permit. You may find additional information on permit fees at the IEPA Web site:

<http://www.epa.state.il.us/fees/>

- Section B.8. was added,

## Tech Notes

A Specifications Committee Update  
By Terry Murphy  
Specifications Committee Chair

1. There is a new spec for IDOT handicapped ramps & sidewalks.
2. There is a new gradation spec for bridge deck pumping with min 45% passing 1/2. (This one may require two sizes of aggregate to comply, but should aid in pumping, especially with limestone mixes where the AGCS system has allowed the producers to scalp out the - 1/2' material for chips.)
3. This fall in District One, there is still talk of PCC Level III Classes to do our own



Mix designs for IDOT (more when I hear).

4. In a meeting with IAAP's (Illinois Association of Aggregate Producers) Tech Committee, the subject of gradation disputes between R/M, Hot Mix Producers and IDOT has been brought up. It appears some Hot Mix producers are using nonstandard stockpiling and sampling procedures and getting failing gradations at the plants. This causes disputes, and IDOT sometimes gets in the middle and rejects stockpiles. This is not supposed to happen. If there is a dispute, it is in our best interest to settle it with our supplier and keep IDOT out of the picture. We need to review our sampling and stockpiling procedures to avoid problems. A little attention here could save a lot of problems.

5. If you have anything you would like the specifications group to address, please let me know.

Please support the Associate Members of the Illinois Ready Mixed Concrete Association.

A. Anderson Building Systems  
Advance Mixer, Inc.  
Ameren Energy Fuel & Services  
Arkalite  
Arrow Magnolia  
Barnes Industrial Group  
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Solomon Colors  
Stuart Tank Sales Corporation  
Truck Country  
Viking Trucks & Equipment Sales, Inc.  
Vulcan Materials Company  
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The IRMCA staff regrets any omissions from the above list.

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and also studying the work force and distributors available in her area. Working with Dave Zimmerman of Wisconsin Insulated Forms, a stocking distributor in Brodhead, Wisconsin, the Davis's and their designer settled on an ICF concrete home plan that included the Davis' providing the work force and Zimmerman providing the Reward forms and the expertise. Concrete for the 9000 square foot, five-car garage home was delivered by IRMCA member Ozinga Illinois. The Davis's are pleased with the concept and with the completion of the below and above ground concreting.

At the July 2003 Insulating Concrete Form Association Summer Meeting in Kansas City, industry leaders from the ICFA and the Portland Cement Association, along with seminar presenters, exhibitors, dealers, and installers from all over North America, enthused about the increasing market in above ground concrete housing. Manning a booth in the exhibition hall was a good friend of the IRMCA, Christy Martin, Executive Director of the Concrete Promotion Group of Greater Kansas City. Working with the PCA, Christy and her Association actively promote ICF housing in the area; they have seen over 240 ICF homes built and know of plans for at least that many more.

The use of above ground concrete for homes and for commercial buildings is rising and IRMCA is committed to keeping its membership current on the new developments. We have, within the IRMCA several valuable and informed resources who have volunteered to answer member questions-particularly concerning

Christy Martin of the Concrete Promotion Group promotes concrete houses at the Insulated Concrete Forms Association Summer Meeting in Kansas City.

ICF concepts and contractors. They are Bill Marcordes (CEMEX), Ed McLean (SI Concrete Systems), Paul Rider (Lone Star Industries), and Allan Anderson (Lone Star Industries). If you need contact information for these members, just check your IRMCA directory or get in touch with the Association office.

The Insulating Concrete Form Association Web site is [www.forms.org](http://www.forms.org). From that site you can access new developments as well as locate an ICFA member in your area. There also seem to be more and more traditional basement contractors pursuing above ground concrete. The Web site for the Concrete Foundations Association is [www.cfana.org](http://www.cfana.org). Finally, a great source for information on concrete homes is the Portland Cement Association at



The Davis home, as seen from the backyard, provides a view of the two-story five car garage in this 9000 square foot concrete home. Forms were assembled and concrete was poured using the homeowner's crew.



[www.portcement.org](http://www.portcement.org).

The primary goal of the Illinois Ready Mixed Concrete Association is promoting the increased use of quality ready mixed concrete in Illinois. We encourage you to be aware of the possibilities of above ground concrete walls, both residential and commercial, and to consider this growing market as part of your promotion plan. We are also interested in hearing from you about success stories and/or marketing possibilities; let us know - we're here to help.

randomly throughout the roadway.

Usually when building new concrete pavements or overlays, we count on uniformity of the existing platform to provide uniform support. Clearly, along Western Avenue that is impossible. And it is further aggravated by the fact that until you remove the asphalt, you do not know what you will encounter.

To deal with this unusual set of circumstances, unique new fiber-reinforcement technologies have been employed along with a "belts and suspenders" design approach. First, analysis of the likely stresses to be induced by bus and truck traffic was accomplished using the program ISLAB 2000 with the assistance of the engineers of ERES Division of Applied Research Associates, Champaign, Illinois. Materials parameters were based on rough estimates of the materials properties provided by Illinois Chapter, Inc. - American Concrete Pavement Association.

The ISLAB 2000 program is a "finite-element" analysis program geared specifically to concrete pavement. It allows the engineer to estimate stresses under unusual loading conditions. Joint spacing, axle configuration and load, thickness of the pavement and bond or lack thereof to the underlying layer can all be considered in the analysis.

Based on the stress analysis the IL ACPA recommendation to Cook County Highway Department was for a four-inch concrete pavement section built with a four-foot transverse by 40-inch longitudinal joint spacing. The unusual 40-inch longitudinal joint spacing was chosen to control slab size while fitting within an unusual 10-foot lane width. The dimensions of the bus pads are 10 feet wide by 100 feet long.

Though the slabs have been sized to control stresses, Cook County wanted added assurance that the solution would have a long life and be unlikely



A Chicago city bus drops passengers off at one of the new and improved concrete stops.

to exhibit problems. To achieve this objective while dealing with the uncertainty of the supporting platform, the decision was made to incorporate a new generation of synthetic structural fibers into the concrete mixture. These fibers, manufactured and marketed by W.R. Grace as Strux 90/40, are specifically designed to replace mesh reinforcement. They have yielded impressive results in testing performed under the direction of Jeff Roesler, Ph.D., P.E., Department of Civil Engineering, University of Illinois at Urbana.

The fibers were added at the addition rate of 7.5 lbs. of fibers per cubic yard, a quantity significantly above that of conventional practice in the use of fibers in UTW of 3 lbs. per cubic yard. To both the contractor, E. A. Cox, Chicago, and the producer, Aztec Material Service Corp., Chicago, the addition rate of the fibers raised unusual questions as to the ability to produce, place and finish the concrete. As it turns out, none of these items became a major issue. Part of the reason for this was the use of a new fiber-insertion system provided by W. R. Grace that ensures that the large quantity of fibers are well distributed within the concrete mixture.

The insertion system works by "re-fluffing" the prepackaged bagged product and blowing them into the ready-mix truck prior to charging of the drum. This ensures adequate distribution and minimizes the

likelihood of "balling" of the fibers, a common problem when large quantities of fibers are used in a mixture.

Potentially this concept has widespread application throughout the paving market served by IRMCA's producer members and Illinois Chapter - ACPA's contractor members. Many city streets, county roads and parking lots have the potential to be resurfaced using these techniques and materials. In Cook County alone the potential is for 1,000 such bus pad replacements. And the square yard cost is just slightly above one-third of that of the full-depth concrete replacement option!

For more information contact Jimie Wheeler, IL - ACPA, Richard J. Plimpton, P.E., IRMCA or Randell C. Riley, P.E. IL ACPA/IRMCA.

## January 2004 Illinois Concrete Conference Will Kickoff 100th Year of ACI

ACI-Illinois Chapter has developed an exciting 2004 Illinois Concrete Conference, set for January 22-23, which will be a great kickoff to the 100-year anniversary of ACI.

The Westin Hotel River North in downtown Chicago (across from the House of Blues) will be the site of the conference, which will be held over a span of two days. Technical sessions will be offered in two concurrent tracks. The first track will be related to concrete materials & techniques and troubleshooting. The second track will be related to concrete repair. The topics will range from the basics up to more advanced subjects of interest. A schedule of this event will be available shortly.

Attendees will also be given the opportunity to meet with material suppliers, manufacturers, and other concrete-related companies exhibiting at the conference.

If you would be interested in attending or exhibiting at the conference, please contact Jim Clarke ([jimclarke@ozinga.com](mailto:jimclarke@ozinga.com) or 708-479-3080) or Paul Gaudette ([pgaudette@wje.com](mailto:pgaudette@wje.com) or 312-372-0555).

Insert Lone Star ad here

### IRMCA Family News

Our condolences to the family and friends of Josephine Raspolich (mother of Ray and Joyce Raspolich, Raspolich Material) and Stan Metz (brother of Steve Metz, Acordia Insurance).

Raymond and Joyce Raspolich wish to thank their IRMCA friends for the kind thoughts.

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**Submission deadline for next issue: November 7, 2003**



Far left: The Long John Silver parking lot prior to Ultra-Thin Whitetopping overlay.

Left: The Long John Silver parking lot after Ultra-Thin Whitetopping.

Right: An area of the parking lot project that required flowable fill. This flowable fill was only twenty-four hours old when a truck drove over it. Notice the tire tracks through its center.



life with lower maintenance costs, and, as an important added benefit, would provide a lighter, brighter pavement surface. Phipps remarked, "The concrete option was more expensive, but in my final analysis it was a better investment. Since we already had the lighting standards, the lighter, more reflective surface was especially attractive for us and our customers."

But since remodeling of the facility was already underway, could a concrete overlay meet his opening date? Jon Vrabel, General Manager of United Ready Mix in Peoria, assured Phipps that a concrete mix could be designed to meet his time frame.

On August 11, construction started with excavation for added parking, removal of existing asphalt surface to correct the drainage problem, and filling remaining trenches with flowable fill. On August 12, forms were set, grades established, and pavement cleaned for the first placement. A week later, the fourth and final placement was made on the 22,000 sq. ft. project.

As Slusher stated, "This may be a small lot, but it is only the beginning



in this new market. We plan to do many more. We had attended several UTW seminars, understood what was required, and so were ready when presented with an opportunity."

The above photo shows the initial pour. The entire project was poured in only seven days.



briefly about IRMCA promotion plans and upcoming events.

Following the morning session, golfers headed for the South Course, sunbathers found lawn chairs, shoppers headed downtown, riders hit the horse trails, ballooners got high, and a certain executive director and a certain past IRMCA president... well, would you believe they worked? (Don't.)

Saturday night, sunburned and happy IRMCA members and guests assembled in the Lodge for a reception and excellent buffet dinner. Golf prizes were awarded as were a few for non-golfers. The meeting officially adjourned following dinner and while some decided the night was still young, most seemed to think that a good night's sleep was in order. A big thank you is due the committee who made this meeting a success and also to Eagle Ridge for their superior accommodations and arrangements. The Summer Meeting Committee and the Board of Directors will soon make decisions concerning arrangements for the 2004 gathering. If you want to have input, just contact the office.

**Many members continue to use our former mailing address. Please note that our new address is: 303 Landmark Drive, Suite 1-A, Normal, IL 61761**

## Short Course

January 12 & 13, 2004  
PAR\*A\*DICE Hotel & Casino  
East Peoria, Illinois

\*Terry Holland discusses troubleshooting hardened concrete.

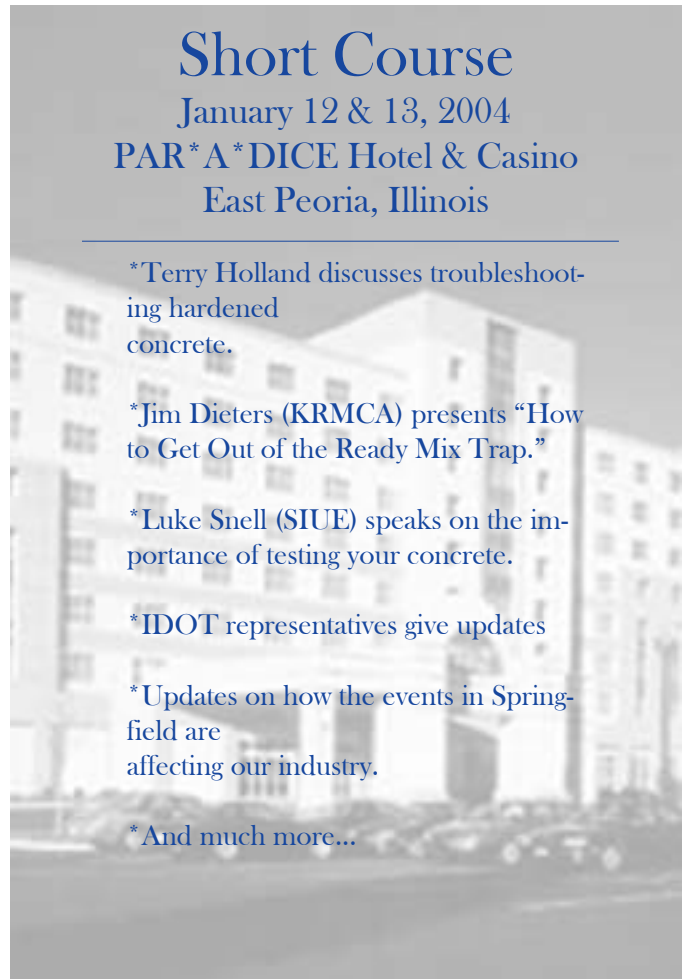
\*Jim Dieters (KRMCA) presents "How to Get Out of the Ready Mix Trap."

\*Luke Snell (SIUE) speaks on the importance of testing your concrete.

\*IDOT representatives give updates

\*Updates on how the events in Springfield are affecting our industry.

\*And much more...



## Annual Convention

Hilton at the Walt Disney World Resort  
Orlando, Florida  
February 15-17, 2004

*(Followed by World of Concrete)*

**Reserve your  
room now!**

**Call 1-407-827-4000**

(Rooms are being held for meeting dates ONLY. Additional nights are first come, first serve)



Tee times at five Disney championship golf courses can be made ninety days in advance, but only AFTER room is reserved.

