

The

READY-MIXER

Virginia Ready-Mixed Concrete Association
630 Country Green Lane
Charlottesville, VA 22902-6478
Phone: 804-977-3716 Fax: 804-979-2439

READY MIXED



CONCRETE 2000

newsletter

FEBRUARY 2004

Thanks, Paul



Paul Kluender with SW Va. Council Chairman's Service Plaque

Paul Kluender of Lynchburg Ready-Mix handed over the leadership reins in January to George Kuhn of Marshall Concrete Products. During Kluender's chairmanship, the SW Va. Council continued several successful promotion programs, such as the breakfast seminars for construction managers and the annual VMI seminar for engineering students.

The Council also initiated a working relationship with the local AIA chapter, and had Bob Nablo visit a Carolinas Ready-Mixed Association ICF demonstration with the hopes of bringing a similar event to Virginia. This visit may develop into "air cannon" ICF demonstrations throughout the state. Council members thank Paul for his time and efforts toward VRMCA promotional activities.

REGISTER NOW!



VRMCA
SPRING CONVENTION
MAY 15-18, 2004

The hotel reservation form is enclosed. To register for the convention, call VRMCA headquarters at 434-977-3716.

Look for the schedule of events in the March newsletter!

**Visit
www.VRMCA.com
for the latest
General Assembly
Update!**

Virginia Streets and Local Roads Initiative Underway

A joint effort is underway in the ACPA-NE Southern Region with the Virginia Ready Mixed Concrete Advisory Councils which focuses on smaller, local concrete pavement projects. This initiative is designed to establish grassroots support for concrete paving by establishing and/or renewing owner confidence in concrete pavement construction and performance.

The initiative will be executed in "Highways 2000 fashion" through the Advisory Council Paving Committees, ACPA contractors and staff. In addition to calls on owners and specifiers, the primary tools used will be a "how to" intersection manual and local lunchbox seminars. The manual is under development and will include a section on Virginia projects. This manual should also serve as an easily adapted tool for the rest of the Chapter area.

The organizational meeting for this initiative will be Friday, February 20, 2004 at 10:30 a.m. in Richmond. For more information, contact Bob Long at (804) 272-6337.

Concrete Paving Primer

Informative Articles About
Paving with Concrete

In this issue we explore paving highway intersections with concrete. See:

"Tips: Traffic Control Critical During Intersection Reconstruction" Page 3
"On the Job: Whitetop Paving Wows DOT in Alabama" Page 3

Tips: Traffic Control Critical During Intersection Reconstruction

When building or rebuilding an intersection, the new concrete pavement should cover not only the physical area of the intersecting roadways, but also the entire functional area of the intersection.

The functional area includes the longitudinal limits of any auxiliary lanes. The distress caused by heavy vehicles braking and turning will normally occur within an intersection's functional boundaries. It is important to evaluate the existing pavement condition before choosing limits for the new concrete pavement.

On busy routes, it may be desirable to extend the limits for the new concrete pavement beyond the intersection's functional boundaries. Traffic congestion at a busy intersection may increase the area where vehicles start and stop, which may extend the length of distressed pavement. The length that pavement distress extends beyond the intersection's functional boundaries will depend upon the number, speed, and type of vehicles that use the intersecting roadways.

A similar extension of the distressed area is possible where trucks cause damage while accelerating or decelerating up or down a steep grade near an intersection. If significant changes to an intersection are required, extend the new pavement to the boundaries of the intersection's new functional area.

Traffic patterns change with modifications to an intersection's through-lanes, auxiliary lanes, and acceleration and deceleration tapers.

Therefore, the location where vehicles cause damage also may change from the location in the existing intersection configuration.

Some agencies extend the new concrete pavement 100-200 ft on each leg of the intersection for all traffic lanes.

Concrete Paving Primer

Informative Articles About
Paving with Concrete

Others extend the new pavement on the approach legs farther than the leave legs of the intersection. In these cases, the concrete lanes approaching the intersection may begin 200-400 ft from the intersection's physical area, while lanes leaving the intersection terminate about 50 ft beyond the physical area.

For intersections carrying moderate traffic volumes and a low percentage of heavy vehicles, 50-100 ft of new pavement on all intersection legs is usually sufficient to replace the distressed pavement.

For more information about concrete intersections, refer to "*Concrete Intersections - A Guide for Design and Construction*," ACPA catalog number TB019P. To order, call toll-free 1-800-868-6733.

On the Job: Whitetop Paving Wows DOT in Alabama

Plagued by rutting and shoving, the intersection of US-31 and the Southern Bypass in Montgomery needed a longer-life fix. "The intersection had become a continual maintenance problem for my District. Each summer, my maintenance crews were milling humps and filling ruts," stated Mark Waits, District 3 Engineer.

Although the Sixth Division of the Alabama Department of Transportation had not constructed a sizeable concrete project since I-65 and I-85 were built in the 1960's and 1970's, the decision was made to reconstruct the intersection with concrete.

Cores from the intersection indicated that lanes had been added through the years with varying base materials. "Based on the core data we decided that a **Nine Inch**

Whitetopping was the best solution because the existing asphalt section would be left in place as part of the base," stated Craig Taunton, 6th Division Assistant Pre-Construction Engineer.

On July 1, 2003, with all eyes on the project, a Gomaco slipform paver began paving Quadrant A with a 24' wide pull. "I have never seen that much concrete placed that fast in my life," proclaimed Todd Jackson, Project Engineer. Four days later, R.E. Grills was ready to begin paving Phase 2. Due to the high volume of traffic and no detour routes available, phased construction was required.

The major challenge on the project was the maintenance of traffic during the phased construction. Due to the 9" drop-off, an asphalt wedge was required to maintain traffic (see Figure 1). After construction of Phase 1, the asphalt wedge was removed during phases 2-4.

The contract had an incentive/disincentive of \$10,000 per day with 40 calendar days allotted for construction. R.E. Grills completed the project by placing 6,000 cubic yards of concrete in 22 days. "This type of incentive/disincentive indicated that the DOT wanted us to complete the project as rapidly as possible. I believe we exceeded their expectations." Bob Newton, Project Manager, R.E. Grills.

Plan to Attend!
the
**Capital Home &
Garden Show**

February 26-29, 2004

Dulles Expo &
Conference Center
4368 Chantilly Center
Chantilly, VA 20153
703-376-0910



Concrete Intersection in Manassas

The four-way intersection at Route 28 and Manassas Drive (Route 213) in Manassas Park, Virginia, (left) was the first of its kind in the state to be reconstructed entirely with full-depth concrete pavement. The project used 10 inches of Portland Cement Concrete over 8 inches of aggregate base. Major challenges during the project included daily maintenance of traffic for 45,000 vehicles per day with 8 percent truck traffic, raising grades by 2.7 feet in the center of the intersection, maintenance of access for 33 businesses along the project, and schedule conflicts with utility relocations. The project was selected by National ACPA as the finalist (runner-up) in the 1999 awards program in the Municipal Streets and Intersections category.

Northern Virginia 2004 Lunch Box Presentations*

Location	Contact	Date	Topic
Rust, Orling & Neale, Architects 1215 Cameron Street Alexandria, VA 22314	Sharon Brumleve Phone: 703-836-3205	January-13-04	Tilt-Up
Morgan Gick & Associates 131 W. Great Falls St., Suite 300 Falls Church, VA 22046	Jacquie Wise Phone: 703-538-7100	February-18-04	Tilt-Up
Wisnewski Blair & Assoc. 625 Slaters Lane, Suite 300 Alexandria, VA 22314	Susan Perales Phone: 703-836-7766	March-17-04	Tilt-Up
Hinckley Shepherd Noden, PLC 9 Culpeper St. Warrenton, VA 20186	Sarah Dabkowski Phone: 540-347-4232	April-14-04	Tilt-Up
Rust, Orling & Neale, Architects 1215 Cameron Street Alexandria, VA 22314	Sharon Brumleve Phone: 703-836-3205	April-20-04	Stamped & Pattern
Helbing, Lipp, LTD., Arch./ Eng. 8032 Leesburg Pike, Suite 201 Vienna, VA 22182	Richard Garrett Phone: 703-556-0700	May-25-04	Tilt-Up
Lukmire Grant Germano Evans 2700 S. Quincy St., Suite 300 Arlington, VA 22206	Rick Pinskey Phone: 703-998-0101	June-30-04	Tilt-Up
AIA Northern Virginia 205 S. Patrick Street Alexandria, VA 22314	Debbie Burnes Phone: 703-549-9747 This presentation will be promoted by AIA Northern Virginia	July-7-04	Tilt-Up
LeMay Erickson Architects 11250 Roger Bacon Drive, Unit 16 Reston, VA 20190	Julie Bolling Phone: 703-471-7555 This presentation will also be promoted by AIA Northern Virginia	August-11-04	Tilt-Up
BMK, PC- Architects 209 Commerce Street Alexandria, VA 22314	Thrisa del Ninno	September-22-04	Tilt-Up
Kerns Group Architects, PC. 3030 Clarendon Blvd. Suite 100 Arlington, VA 22201	Nikki Allison Phone: 703-528-1150	October-13-04	Tilt-Up

* If you would like to attend these presentations, please call Hessam Nabavi at 703-966-6743.



WHEN SO MUCH IS RIDING ON
YOUR CHOICE OF CEMENT,
MAKE THE **RIGHT** CHOICE

THE **RIGHT** PRODUCT & SERVICE
IN THE **RIGHT** PLACE
AT THE **RIGHT** TIME

Roanoke Cement has supplied ready-mix producers and the construction industry with consistent, dependable, high quality cement for over 50 years.

A superior product, backed by excellent customer service, the latest technology, and reliable distribution shows our commitment to serve our customers.

When so much depends on your cement, choose Roanoke Cement. Call 800-782-7622 or 540-992-1501 today.

ROANOKECEMENT™
A TITAN AMERICA BUSINESS

The Smart Road bridge, at 175 feet tall, is Virginia's tallest bridge. Approximately 9,647 cubic yards of high-strength concrete were used to construct the 2,000-foot long bridge.