

SCANNER

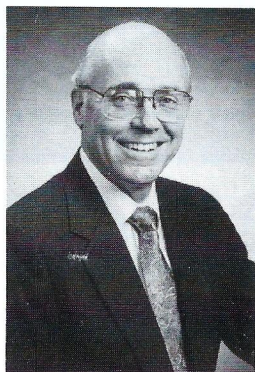
NEWSLETTER OF THE AMERICAN SOCIETY OF
HIGHWAY ENGINEERS



July - 1993 - 2

President's Message

by Roland Nesslinger, P.E.



Looking over the past year, it seems we have had enough excitement across our country and around the world to last a decade. How quickly change comes upon us.

This excitement has been reflected, on a smaller and more peaceful scale, within our own highway industry, and even within our American Society of Highway Engineers (ASHE).

The single biggest event for our industry is the implementation of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). Even though the Act is not yet fully funded as authorized, certain significant changes are under way.

Consequently, state DOTs are hurriedly trying to identify a new 155,000 mile National Highway System. During the preliminary stage of highway project development, we are placing avoidance of wetlands and hazardous substance sites on a higher priority than avoiding private residences. In order to justify highway projects, we are striving to meet Clean Air Act requirements, and we are designing massive noise barriers.

As industry professionals, we must explore and provide improved quality in our highway designs, in construction results, and in maintenance programs. The objective is efficiency, longer life and better performance.

Within ASHE, we too are changing the way we do our work.

Our 1993-1996 Long Range Plan is complete and in distribution. It is a blueprint—a document to guide change over the next three years. Potential new sections include Atlanta, Indianapolis, Lansing, and others. We discussed changes in ASHE's budget, and the potential need for a modest dues increase. We are contemplating an organizational change to include a structure of nine regions, to strengthen the local sections and to serve them more effectively, and creating the position of Executive Director. To enhance our position in legislative and industry affairs we joined with the Highway Users Federation (HUF), and we have maintained close contact with the American Association of State Highway and Transportation Officials (AASHTO), the two most influential highway organizations at the state and national level. The list of topics goes on and on.

Why is it important to address what is going on in the highway industry, and what was discussed at the ASHE National Board of Directors' meetings? Because these issues, and others like them, will set the tone for where we are headed this next year. I envision that ASHE can aggressively address issues we already know about and lead our membership through the maze of changes now identified.

In fact, at the national level, our main tasks will be to stay focused and to provide well thought out policy direction for ASHE's nearly

4,000 members.

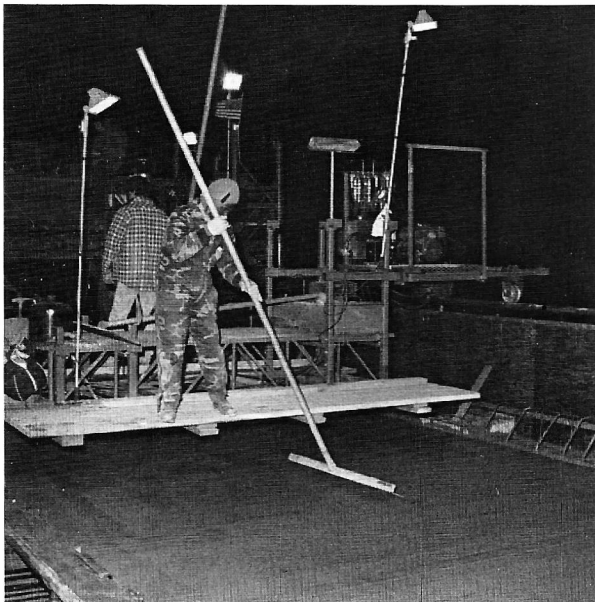
At the 1992 National Convention, we heard Dean Carlson, Executive Director of the Federal Highway Administration (FHWA) tell us The Power Is Yours. He could have added "the responsibility is yours." Carlson stressed the dual approaches of flexibility and partnership. Surely our ability to cope with changes will test our skills in being flexible. Carlson's other challenge, partnership, is also one of the newest techniques in our industry; we call it partnering. In essence, partnering openly confronts stumbling blocks such as the perception of conflicting objectives, adversarial roles between team members, and the threat of liability. It then builds an attitude of mutual trust, respect for the roles for all building team players, recognition of risks inherent in each role, and creates a project atmosphere where the traditional goals of quality, pride, and profit can be met. At least figuratively, partnering seems like a suitable approach for ASHE.

I recognize that though we are united in the industry we serve, there are many diversities within the organization. Among our sections there are urban and rural, small and large, newly established and long established. We need to address individual state issues, regional issues, and national issues.

Yet one thing remains certain—change is inevitable. As your President, and with the National Board of Directors, I look forward to helping guide ASHE into this exciting era. ■



I-95 BRIDGE RECYCLED USING THE SOLITE SOLUTION.



We live in a time when tight budgets make bridge recycling the call of the day. And for bridge rehabilitation the solution is a new deck of Solite Structural Lightweight Aggregate Concrete.

Reduced Dead Load. Solite weighs up to 30% less than conventional concrete, reducing the bridge deck's dead load, which allows increased traffic load without modification to existing structural members, piers and footings. Increased width or even an extra lane has been added in some applications without major structural modification.

Durable. A performance record of almost 40 years has proven Solite structural lightweight concrete's resistance to freezing and thawing is equal to or better than ordinary concrete.

Economical. You'll find total rehabilitation cost will be held to a minimum because with the use of Solite lightweight concrete the main structure will require little or no modification. And with a Solite bridge, future maintenance costs will also be minimal.

Consider the advantages of Solite lightweight aggregate structural concrete. Contact the nearest Solite office for performance data and engineering expertise.

Project: Millard E. Tydings Bridge, Interstate 95, Havre de Grace, MD. Bridge deck removed to bare steel and replaced with full depth Solite lightweight aggregate structural concrete with no additional wearing surface. **Engineers:** Maryland Transportation Authority Engineering Division. **Contractor:** Dick Corporation, Pittsburgh, PA. **Concrete Producer:** S&G Concrete Company, Edgewood, MD. **Owner:** Maryland Transportation Authority.



Offices: P.O. Box 437, Mt. Marion, NY 12456, (914) 246-9571 • P.O. Box 27211, Richmond, VA 23261, (804) 329-8135 • P.O. Box 987, Albemarle, NC 28001, (704) 474-3165 • P.O. Box 297, Green Cove Springs, FL 32043, (904) 264-6121 • P.O. Box 39, Brooks, KY 40109, (502) 957-2105
Plants: Saugerties, NY • Leaksville Junction, VA • Brems Bluff, VA • Aquadale, NC • Green Cove Springs, FL • Hubers, KY

EAST PENN SECTION AWARDS SCHOLARSHIP



Vicki Brown presenting scholarship check to George Kulp, father of winner Dan Kulp. Robert Donovan, Chairman of Scholarship Committee, is at center.

The East Penn Section of the American Society of Highway Engineers at its recent monthly meeting awarded a scholarship to Daniel S. Kulp of Schuylkill Haven, Schuylkill County, Pennsylvania.

The scholarship was established in honor of the late Robert L. Brown in appreciation of his many years of friendship and dedicated service as one of the founding members of the East Penn Section in 1965.

This year's recipient, Daniel S. Kulp, is a senior at Schuylkill Haven Area High School. His achievements as a student not only includes high academic performance, ranking second in his class, but also as a student athlete in basketball and baseball and as a student leader serving as president of his senior class and president of the student council and as the recipient of many student honors. Dan will attend Lehigh University in the fall.

Due to illness Dan could not be present for the presentation of the scholarship, but his father, George Kulp, accepted the award in his absence from Vicki Brown, daughter of Robert L. Brown.

Bettigole Andrews & Clark, Inc.



1 University Plaza
Hackensack, NJ 07601
Tel 201-489-8080
Fax 201-489-9755

Offices:
New Jersey
New York
New Hampshire
Connecticut
Maryland
Massachusetts
Pennsylvania
Florida

The EADS Group

CORPORATE OFFICES
Altoona (800) 626-0904

NEILAN ENGINEERS DIVISION
Somerset (814) 445-6551
Pitcairn (412) 856-1510

GENERAL ENGINEERING DIVISION
Clarion (814) 226-8440

engineers • architects • surveyors • scientists



McTISH, KUNKEL & ASSOCIATES.

2402 Sunshine Road, Allentown, PA 18103
215-791-2700



alfred benesch & company

CONSULTING ENGINEERS

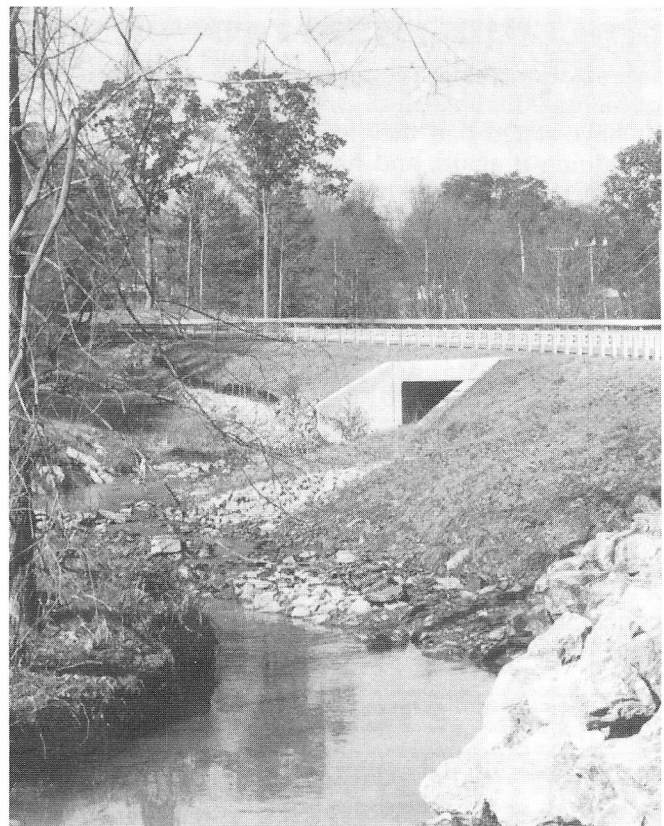
P.O. BOX A • 474 NORTH CENTRE STREET • POTTSVILLE, PA 17901
717/622-4055 • FAX 717/622-1232
Corporate Office: Chicago, IL



412/ 856-6400
FAX 412/ 856-4970

Full-Spectrum Engineering Consulting Services

- ▲ Civil
- ▲ Environmental
- ▲ Geotechnical
- ▲ Structural
- ▲ Mining
- ▲ Environmental Studies
- ▲ Highways and Bridges
- ▲ Traffic and Transportation
- ▲ Construction Monitoring



Pittsburgh, PA Orlando, FL Raleigh, NC Charleston, WV Mt. Laurel, NJ Ft. Wayne, IN

DELAWARE VALLEY SECTION CAREER AWARENESS PROGRAM

Several years ago, the Delaware Valley Section introduced a Career Awareness Program that has had tremendous success in making young students aware of opportunities in the engineering profession, particularly as it relates to the highway industry. Seven members of our organization have used the resources that we were able to obtain at a minimal cost and have made 44 presentations to over 952 students at various schools and organizations, ranging from Cub Scouts through seniors in high school. The success of this program is clearly evident where many of our speakers have been asked over the years to return on an annual basis to speak to different groups. Our members have coupled their personal experience and personalized presentation materials with some excellent promotional material which has been made available to us through the American Society of Civil Engineers and the National Society of Professional Engineers. We have an 8 1/2 minute video, titled "Engineers: Turning Ideas Into Reality", that captures both the student's attention and imagination. Without exception, the members of our organization that have taken their personal time to make these presentations have stated that they look forward to doing it again, and have found the experience to be extremely rewarding. The success of this program can best be summarized in a small sampling of the comments we have received from students which we have presented to.

"You taught me about something I didn't know about, but I now find it very interesting."

Dave Bush, student
Valley Forge Intermediate School
Wayne, Pennsylvania

"I enjoyed coming to your class. I appreciated the information you gave me, because I am considering becoming an engineer."

Margaret Kappus, student
Holy Family School
Phoenixville, Pennsylvania

"I never knew how important math was to us."

Michell Bahn, student
Valley Forge Intermediate School
Wayne, Pennsylvania

"After your speech I know I really want to become an engineer."

Jonathan, student
Saint Agnes School
West Chester, Pennsylvania

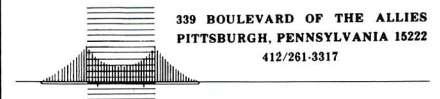
"We would like to thank you for allowing us to participate in the Career Day and inspiring us with ideas for our future plans."

The students of Assumption
B.V.M.School
West Grove, Pennsylvania

In addition, several members of our organization have gotten actively involved in the judging of science fairs and our chapter has made avail-

able to the prize winners, plaques and savings bonds. If anyone would like information on how they might get started in the Career Awareness Program, feel free to contact either Steve Lester, District Engineer 6-0, PADOT, 215/964-6660; Jack Seber, Career Awareness Chairman, Councptual Planners, 215/631-5606; or Edward M. D'Alba, Urban Engineers, Inc., 215/922-8080. ■

KOZEL ENGINEERING CO., INC.



339 BOULEVARD OF THE ALLIES
PITTSBURGH, PENNSYLVANIA 15222
412/261-3317

Civil - Structural - Environmental - Architectural - Planning
Inspections - Design - Management - Highways - Bridges
Buildings - Water Treatment - Municipal - Industrial - Recreation



HDR Engineering, Inc.

Transportation Specialists
Bridges • Highways • Tunnels • Transit
Planning • Railroads • Airports

3 Gateway Center
Pittsburgh, PA 15222
Tel: (412) 497-6000



- Highways
- Bridges
- Landscape Architecture
- Traffic Engineering
- Inspection/Surveys
- Hydraulics/Hydrology

Consulting Engineers
4909 Louise Drive,
Suite 106
Mechanicsburg,
Pennsylvania 17055
717-790-9839

- ▲ Transportation
- ▲ Environmental Planning
- ▲ AM/FM
- ▲ Bridge Inspection
- ▲ Construction Management



Headquartered in York, PA:
717 843 5561
Other offices throughout the East Coast

Yes!

I know how important good highways are to the Commonwealth. I want to join PHIA and receive newsletters promoting highways and bridges for the economic development of Pennsylvania.

☐ Payment enclosed ☐ Bill me

Name _____

Company _____

Address _____

Questions: Call (717) 236-6021

Dues Structure

(Check one)

- | | |
|--|--------------|
| <input type="checkbox"/> Individual | \$30 minimum |
| <input type="checkbox"/> Service organizations | 100 |
| <input type="checkbox"/> Business | 150 to 499 |
| <input type="checkbox"/> Sustaining | |



"Driving for
Better Roads."

Return to:
PA Highway Information Association
800 North Third Street
Harrisburg, PA 17102
Bob Hetherington,
Managing Director

PRE-EMPTION: IT SAVES LIVES AS WELL AS MONEY

When an emergency vehicle responds to a call, one minute can be the difference between saving lives and property or losing them. Time is the critical factor during any emergency situation. Emergency vehicles must be allowed to respond quickly at a minimal risk to both motorists and the emergency personnel. As the average traffic density increases, the response time is compromised and confusion of the motoring public occurs. Pre-emption allows emergency vehicles to respond more safely and efficiently, resulting in clarity and lives and dollars being saved.

PRE-EMPTION: What is it?

Pre-emption, a system installed at a signalized intersection, is used by emergency vehicles only. System activation gives the green indication signal for the approach of the emergency vehicle and gives the red indication signal to all other intersection approaches. Allowing for the elimination of queuing problems on the approach to the intersection, the

motorists yield to the emergency vehicles legally. Conflicts with traffic coming from the opposing direction are also eliminated by activation of the pre-emption system. For example, the emergency operator need not worry about a motorist turning left in front of the emergency vehicle or yielding to opposing traffic when trying to turn left to gain access to a side street. Another safety consideration offered by the pre-emption system is a "first come-first serve" basis. Whereby, the emergency pre-emption call on one approach is serviced completely prior to servicing a second emergency call. A red signal will remain for the second emergency vehicle operator until the first caller has traveled through the intersection. Then, and only then, will the second call be serviced. Preventing overlapping of pre-emption calls will eliminate the need for emergency vehicle operators to be on the lookout for other emergency vehicles. After the emergency vehicle has passed through the intersection, the intersection returns to normal operation.

A simple system, pre-emption, is being utilized by large cities as well as small towns throughout the United States. It consists of emitters in the emergency vehicles, detectors mounted on the signalization support structures such as mast arms or pedestals, and the associated wiring and hardware for the traffic signal located in the control cabinet. The system is easily adaptable to existing intersection signalization. However, the system works better with solid state electronic controllers rather than the older electro-mechanical controllers.

Safety & Reliability

While providing for safer access through the signalized intersec-

tion, pre-emption has proven to be very reliable. Motorists are conditioned to responding to traffic signals, one of the most respected traffic control devices on today's roads. When a red signal indication is given on all approaches, the traffic will come to a stop and allow the emergency vehicle to travel through the intersection unimpeded. No confusion occurs on the part of the other drivers so the emergency vehicle is given safer access through the intersection. Controls are in the hands of the emergency vehicle operator instead of relying on motorists. One push of a button activates the system allowing the emergency vehicle operator to concentrate on driving and the job at hand. Now the emergency vehicle driver does not have to worry about conflicting traffic.

Response time is reduced when pre-emption is set up at every signalized intersection between the emergency response center and the destination. This enables the emergency vehicle to travel through all signalized intersections totally unimpeded. Reduction in response time has been documented in several studies conducted in various metropolitan areas including Houston, Texas and Denver, Colorado. These studies evaluated the Opticom Priority Control System, a pre-emptive system developed by 3-M. The Houston study indicated that the response time of the fire stations evaluated decreased and the employees of the fire department experienced feelings of less stress and greater safety. Knowledge of the proven reliability and effectiveness of the pre-emption system provides a sense of security and safety.

One additional minute of response time can be the difference between saving lives and property or losing them. For instance, a fire can double in size every 17 seconds. Therefore, a fire in the workplace can have severe effects on a community's outlook and citizen's personal income and security. Quick response time is a necessity of fire emergency vehicles as well as ambulance services and the police. In all cases, members of the community benefit from the time saved during the response to these emergencies.

PYRAMENT CEMENT CANNOT BE MATCHED

A complete system for concrete offering:

- Ultra-rapid curing
- High early strength
- Extreme durability

Needs no admixtures

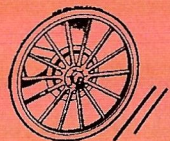
Call 1-800-633-6121 for technical information
and product data sheets.

 **Pyrament**

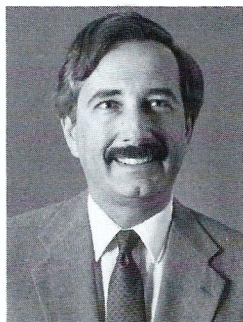
© Copyright 1991. Pyrament is a registered trademark of LoneStar Industries, Inc.

Continued on page 7

As the Wheel Turns...



ASHE BOARD MEMBER STARTS NEW FIRM



Michael R. Martin, P.E. announced the formation of Martin Enterprises & Associates located in Reston, VA.

MARTIN ENTERPRISES & ASSOCI-

ATES (MEA) was incorporated to provide transportation engineering, traffic engineering, value engineering, and economic financial analysis for both public and private sector clients. Mr. Martin is a registered Professional Engineer in multiple states, and is also certified as a Value Engineer. His numerous years of technical/managerial experience in both public and private sector employment will allow him the full breadth of experience necessary to provide assistance for any project work effort.

Mike is currently a National Director for the Potomac and Old Dominion Sections. He has been very active in both Section activities, the Legislative Review Committee, New Section Committee and the Reorganization committee for the National Board.

GOODKIND & O'DEA, INC. ACQUIRES CAPITOL ENGINEERING

The acquisition of Capitol Engineering Corporation, a 40-person Pennsylvania-based civil engineering firm by Goodkind & O'Dea of Rutherford, N.J. has been announced. Both firms have provided services to their clients for more than 40 years and now with the combined resources provide a broad base of expertise. Both firms have active members in ASHE and have supported our Society over the past years.

ADVERTISING AND COPY DEADLINE FOR THE NEXT SCANNER ISSUE:

August 31, 1993

MAIL TO: ASHE SCANNER

c/o Al Kozel

339 Blvd. Of The Allies

Pittsburgh, PA 15222

THE SCANNER

• Published quarterly • Over 3,500 Circulation

30% are State D.O.T. Employees

37% are Engineering Consultants

19% are Contractors

13% are Related Professions

42% of the membership have a professional status.

RATES/SIZES

	Full Page	1/2 Page	1/4 Page	Bus. Card	Want Ad
1X	\$250	\$130	\$75	\$40	\$40
2X	235	120	70		
3X	225	110	60		
4X	200	100	50		

Spot Color - Add 15%

Full Page 7 5/8 x 10"

Half Page - 7 5/8 x 5"

3 13/16 x 10"

Qtr. Page - 3 13/16 x 5"

Bus. Card - 2 1/2 x 1 1/2"

Want Ads - 20 Words or Less

Special Ads, call Editor.

*Note: Spot Color is determined by the color used in the issue.

PME CONSULTANTS, INC.

STRUCTURAL ENGINEERS PHONE 412-327-7297
117 SAGAMORE HILL ROAD
PITTSBURGH, PA 15239

BRIDGES • DAMS • SPECIAL STRUCTURES •
STRUCTURAL INSPECTION & EVALUATIONS



SCANNER ADVERTISING INSERTION ORDER

TO: ASHE SCANNER
Al Kozel, Managing Editor
339 Blvd. of the Allies
Pgh., PA 15222

From _____

Contact _____ Phone () _____
Authorized _____
Signature _____
Date _____ Section Affiliation _____

TOTAL RUNS

☐ 1x ☐ 2x ☐ 3x ☐ 4x ☐ TFN*

*Till Further Notice @ 4x Rate

Ad Size

☐ Full Page ☐ Half Page ☐ Quarter Page ☐ Business Card ☐ Want Ad ☐ One Color

NOTE: Ads are black-and-white unless color is specified.
Colors are coordinated with issue press run color

Scheduled Issue
For Insertion

☐ Winter ☐ Spring ☐ Summer ☐ Fall

Rate / Insertion \$

Total \$

Camera-Ready Art

☐ Attached ☐ To Follow

Want Ad Text

☐ Attached

☐ Payment Enclosed
☐ Bill Me

Make Check Payable To ASHE

The First Name in Transportation

PB PARSONS BRINCKERHOFF

100 YEARS OF SERVICE

- Engineers
- Planners
- Construction Managers

Washington, DC
(202) 637-8150
Contact: Gene McCormick
60+ Offices Worldwide

PRE-EMPTION: IT SAVES LIVES AS WELL AS MONEY

Continued from Page 5

Increased Service Area = Cost Savings

Quicker emergency vehicle response means an expanded service area for the emergency center. A study done in Houston shows this. The decrease in response time was from 16 to 23 percent allowing the service area to be increased by the same amount. With an increase in service area size, the need for additional response centers can be reduced or eliminated, hence, a substantial cost savings to the public.

In some parts of the country, the need for quicker emergency response times is factored in when determining which roadway improvement projects are to be pursued by local or state government. The implementation of pre-emption can reduce the need for various roadway improvements or the construction of new roads. It should also be noted that pre-emption can be installed quickly while roadway improvements typically take years to design and finally construct, which again means reduced costs.

Life Safety Increased, Legal Action Decreased

Quicker response time protects the lives and property of the community. Safer access through signalized intersections protects both the lives and equipment of the emergency services as well as the motorists. Reduction in the number of accidents involving emergency vehicles has been documented in several studies including the study of the 3-M Opticom system installed in St. Paul, Minnesota. The study shows once the system was installed, the number of emergency responses **without an accident** increased dramatically. Pre-emption's added protection to both the emergency personnel and equipment as well as the motoring public results in a reduction of costs to the community by reducing the public liability. It acts as a tool to deter lawsuits, workman's compensation claims and escalating insurance costs. This is an important detail to consider when verdict awards of one million dollars plus are common in cases which involve accidents.

Equipment Savings: Cost Reductions

Installing pre-emption also allows emergency vehicles to undergo less stop-and-go patterns since the signal

will be green once they arrive at the intersection. Less wear and tear to the vehicles is less maintenance and down time. This is especially true for the braking systems of the vehicles. Substantial cost savings can be realized by reducing purchases of brake sets for fire emergency vehicles that can cost approximately \$300.00. Fuel costs for the emergency vehicles are also reduced. Dollars saved on maintenance, parts replacement and fuel help the strain on municipal operational budgets and help pay for the upfront pre-emption system purchase and installation costs.

Federal Funding: Available for Pre-emption

Obviously, there is a cost involved with the implementation of the pre-emption system. In the State of Pennsylvania, it can cost approximately \$10,000.00 to install the 3-M Opticom system for a four approach intersection and provide emitters for a couple of emergency vehicles. However, with the recent passing of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, a funding mechanism is available to assist in financing the implementation of the pre-emption system. The federal government will pay 100% of the total installation cost.

A unified effort is required in the application process in order to receive this funding. Members of the fire department, municipal officials, legal representatives and the traffic engineer all must contribute to the compilation of a justification statement at a local municipal level. This statement can include accident information at the location, discussing the disadvantages of accidents such as workman's compensation, accident damage, liability, insurance costs, etc. Penn D. O. T. District Traffic Engineer is then approached to authorize an engineering study to be conducted. Penn D. O. T. then prioritizes the project and submits it to Central Office with the study and a recommendation. Federal funds have been turned over to the individual states to decide to which projects the money is to be allocated.

Improved Traffic Management = Improved Transportation

Improvements to traffic management is the most cost effective approach to improving the transportation system as a whole. Rather than build additional

emergency response centers such as firehouses or new roads, more effort is needed to develop ways to better utilize the network already in existence. Pre-emption is a tool that allows State DOTs and local municipalities to get more for their money while protecting the health, welfare and safety of the community. ■

Submitted by: Jim Renaud, P.E.
Traffic Planning & Design Oaks, PA

"Help Wanted"

ENGINEERS ROAD & BRIDGE

PE Prefer. Send resume.

E.O.E. M/F/V/H

P. JOSEPH LEHMAN, INC.

CONSULTING ENGINEERS

OLDE FARM OFFICE CENTRE

POST OFFICE BOX 419

HOLLIDAYSBURG, PA 16648



HIGHWAY ENGINEERS

Progressive and growing employee owned Engineering Firm serving North Central Pennsylvania seeking **Project Manager** and **Highway Design Engineer** with experience in the design and administration of highway projects. Knowledge of PennDOT environmental procedures and policies a must. Position includes project management client contact and designing streets and highways.

Project Manager - Minimum of 4 Years Experience

Designer - Minimum of 2 Years Experience

Full benefit package, competitive salary and ownership opportunity. Resumes will be treated in confidence. Submit to:

Kenneth C. Larson, P.E.

Hunt Engineers, Inc.

P.O. Box 487

Williamsport, PA 17703-0487

Phone (717) 323-6603

EQUAL OPPORTUNITY
AFFIRMATIVE ACTION EMPLOYER



The Seventh Annual CONFERENCE & ROAD SHOW

December 5-7, 1993
Pennsylvania Convention Center
Philadelphia, PA

*A Practical Applications Forum
of Current Technology
Exclusively for Road and Bridge
Industry Decision Makers*



4R Conference Topics

- Pavements
- Contracting Out
- Pen-Based Computers
- Asphalt Rubber
- Base & Soil Stabilization
- Surface Treatments
- Recycling & Reclaiming
- Traffic Operations in Maintenance
- ISTEA Requirements for Management Systems
- Cold Planing & Recycling
- Bridge Decks
- Maintenance Management Systems
- Drainage & Erosion Control
- GIS/GPS
- Going Metric — Federal Requirements
- Environment/Work Zone Safety

PLUS a series of Roundtable Discussions—small, informal group conversations that may help you find a solution to your specific construction problems.

Information that Works for You

Plan to attend this 3-day program of practical interpretation of the latest technology presented by the industry's leading experts.

These case histories, agency studies, and real-life work experiences present information that you can put to use right now! Each session is planned and designed to help you improve performance, cut and control governmental costs, or increase contractor profits.

The Road Show — Your Marketplace

Meet the manufacturers and suppliers of the materials, computerized management systems, engineering services, work zone and safety systems, and equipment you need for current and future pavement projects. It's your opportunity to see the products, compare the value, and make the best buy for your pavement repair and maintenance needs.

NETWORK with other knowledgeable contractors, public works professionals, or consulting engineers long on experience, and looking for ways to get the job done faster, better, and more economically.

Send for registration information today!

Find out about the significant savings available when groups of 3 or more register for the **4R Conference**.

Complete the coupon below
and mail or FAX it to:

Registration Manager
4R Conference & Road Show
380 E. Northwest Highway
Des Plaines, IL 60016
Phone (708) 298-6649
Fax (708) 390-0408

☐ **YES!**

Send me registration information for the



☐ **YES!**

Send me information about purchasing display space in the **4R Road Show**.

Name _____

Position/Title _____

Company/Agency _____

Address _____

City _____ State _____ Zip Code _____

Telephone _____ FAX _____

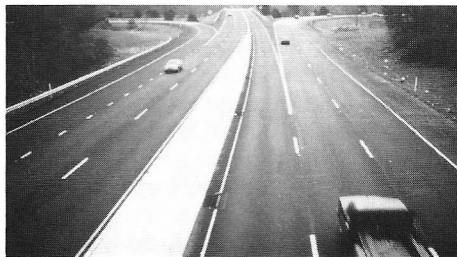
Product to be exhibited _____

RECONSTRUCTION OF I-95 & WOODHAVEN ROAD

The interchange of I-95 and Woodhaven Road in Bucks County is the busiest interchange of I-95 in Pennsylvania. During rush hours, long traffic backups were daily occurrences with resultant numerous accidents, including an alarming number of fatalities.

Under an FHWA safety improvement program, the Pennsylvania Department of Transportation contracted with the consulting firm of Greiner Inc. - Mid Atlantic to redesign the interchange. One ramp was widened to accommodate two lanes. Two ramps were realigned to eliminate their existing S-shape. Two other ramps were deleted. All acceleration and deceleration lanes were widened and lengthened.

Because of the significance of this project to the traveling public, the community, and adjacent shopping complexes and industrial parks, it was important to have the interchange constructed in as short a time as possible. Accordingly, an Incentive/Disincentive (I/D) clause was included in the project specifications to encourage early completion. An amount of



\$30,000 per day was established as the I/D value.

The successful low bidder was James D. Morrissey, Inc. of Philadelphia, PA. The Notice to Proceed date was May 13, 1992.

The contractor hit the project running and never eased until construction was completed, working an extensive amount of overtime including holidays and weekends. The contractor planned the project well and received approval to revise the phasing and staging plans to continue gaining time on the schedule, resulting in completing the project in the unbelievable time of only ninety (90) calendar days, thus earning an incentive payment of \$2.94 million. The 90 day time frame is more astounding when one considers the quantity of work that was performed

while maintaining traffic, such as:

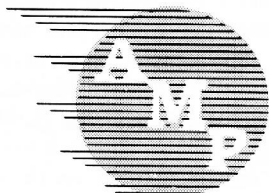
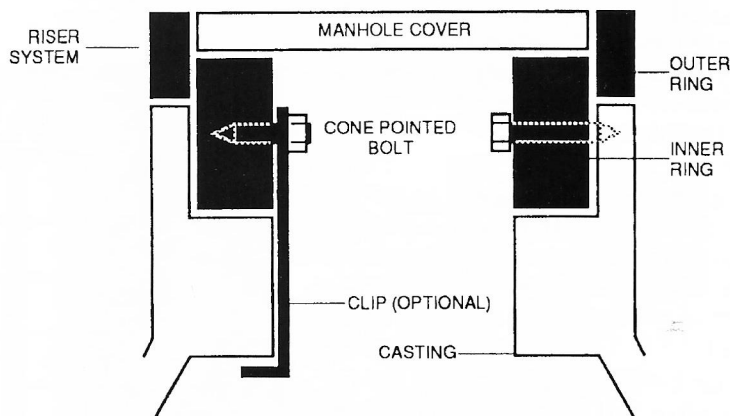
- Bridge widening and redecking
- 72,000 C.Y. Excavation
- 9,500 C.Y. Concrete
- 21,000 Ton Bituminous Material
- 48,000 L.F. Concrete Barrier (Temporary & Permanent)
- 14,500 L.F. Underdrain

The redesign of the interchange has proven to be a renowned success. Congestion has been virtually eliminated and accidents have been greatly reduced. The interchange operates much more efficiently and can accommodate future growth. The project has been roundly praised by elected officials, community groups, professional organizations, neighboring residents, and most importantly, by the motorists themselves.

ASHE congratulates Greiner Inc. - Mid Atlantic, James D. Morrissey, Inc., the staff of PADOT, District 6, the inspection personnel from McTish, Kunkel and Associates, and the construction management team from Urban Engineers, Inc., for their dedication and ability to work together to complete such a significant project in record time. ■

YOU CAN SAVE CASTING GRADE ADJUSTMENT DOLLARS WITH THE MOST DEPENDABLE RISER SYSTEM AVAILABLE

- Complete Line Of Catch Basin, Curb Inlet, Manhole, and Monument Box Risers
- Available in 1/4 Inch Height Increments
- State Approved Steel Frames and Grates
- American Made by American Craftsmen
- Domestic A-36 Steel Construction
- Fabricators of Ferrous and Non-Ferrous Products for the Highway Industry



ANDREWS METAL PRODUCTS, INC.
745 Andrews Avenue • Youngstown, Ohio 44505
(216) 744-3900 Fax (216) 744-1044
1-800-837-3901

NATIONAL BOARD NEWS

The National Board met three (3) times since the last issue of the Scanner (March-1993-1). A regular Board Meeting was held at Bedford, PA on April 16, 1993 and the Annual Meeting was held in Baltimore, MD., both of which were presided over by A.W. Kozel, Past President. The first regular Board Meeting, for the new fiscal year was held at Bedford on June 11, 1993 which was presided over by the Society New President, Roland A. Nesslinger, P.E. The following Committee actions and reports were presented at these meetings:

NEW SECTION COMMITTEE:

The chartering of a new section in Atlanta is progressing very well and interest in a new section in Charleston, S.C. is very favorable. The Committee stated that the Society can expect multiple chartering in future years based on the interest in many states. The new VCR presentation was viewed by the Board and was agreed by all to be an excellent video to be used for new sections and membership drives; several copies are available for Section's use. A special thanks to R. Petrucci and R. Nesslinger for the efforts in the preparation of the video. Contact the National Board for obtaining the video for your Section's program.

MEMBERSHIP COMMITTEE:

The George K. Hart Award for the largest percentage increase in membership and the Gene G. Smith award for the greatest numerical increase in membership in 1992-93 were both awarded to the North Central New Jersey Section. The Society commends the Section for the efforts to increase membership in ASHE.

TECHNICAL COMMITTEE:

The Board will send a letter to each Section regarding the policy adopted for a Technical Committee being established as a standing committee in each section.

CONVENTION COMMITTEE:

The 1993 Annual Convention in Baltimore, MD was a success for ASHE and the Chesapeake Section. A special thanks by the Society is given to Convention Chairman Dave Greenwood and his committee for an excellent convention. A overview report was presented at the last Board meeting which indicated very favorable results.

The 1994 Convention in Atlantic City is progressing very well.

Chairman J. Charles said that any member who submits an advance registration prior to October 11, 1993 will qualify for a change of an upgrade executive suite with a jacuzzi (valued at \$258.00 per night) at the TropWorld. A. Kozel attended a Section Meeting at the TropWorld and reported to the Board that the facilities are excellent for the Convention.

The 1995 Convention report was presented by L. Williams who indicated the Pittsburgh Section is progressing very well with the convention planning. He stated that several major prizes will be available for attendees at the convention.

SCANNER COMMITTEE:

A. Kozel reported the advertising in the Scanner is improving. However, recognizing the cost of each publication of the Scanner is approximately \$4,500 and the present income of \$1,400 per issue, the need to get additional advertising is critical to the Scanner becoming self-supporting. Kozel reminded the National Directors of the Sections' goal established by the Board for obtaining ads for the Scanner.

REORGANIZATION COMMITTEE:

The reorganization process as described in the last Scanner requires that any comments for Sections and

the membership be submitted to the National Board by August 1, 1993. The Committee will review all comments and provide a report to the Board at the October Board Meeting. The Committee will also present guidelines for implementation and procedures to set the policy for the reorganization plan. The Sections are requested to submit their comments as soon as possible.

ASHE DIRECTORY:

A. Kozel reported that the compilation and preparation of the 1993-1996 Directory is progressing. Membership rosters have been received from all sections. The response of many firms for the limited number of ads in the Directory has been good. Printing and mailing of the Directory is anticipated in August, 1993.

We would like to welcome to the new members on the National Board:

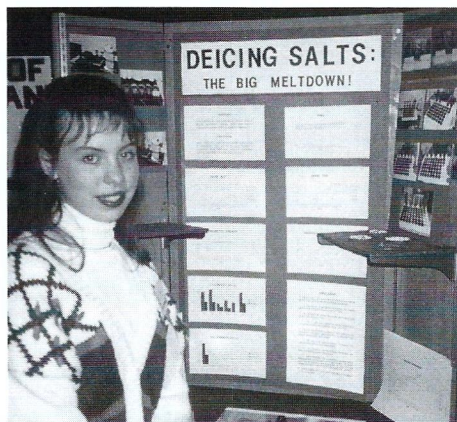
Robert M. Peda, P.E. - is completing the one-year Director for Benjamin D. Rocuskie, Harrisburg Section.

Read M. Beachman - National Director for Williamsport, East Penn and North East Penn Sections.

Bruce G. Baandstetter - National Director for Central Ohio, North West Ohio and Triko Valley Sections.

Patrick M. Welsh - National Director for Cuyahoga Valley, Lake Erie and Western Reserve Sections. ■

SCIENCE FAIR PROVIDES OPPORTUNITY TO SOW SEED



Keely Beil displays the results of her experimentation.

Encouraging young people to explore careers in Engineering was the goal of Ohio's ASHE Sections recent sponsorship of the State's Science Fair.

Taking ASHE's 1st Place Award was Keely Beil, Sophomore at Dayton Christian High School, for her experimentation with various deicing chemicals and their effect on roadside vegetation. Sowing grass seed in soil containing various deicing chemicals (NaCl, CaCl, CMA), at varying concentrations, Keely found that deicing salts did not kill the seeds, however growth of the vegetation was slowed at higher concentrations of chemicals.

Receiving the 2nd Place Award was Dotty Lynn Hammersley for her experimentation with Calcium Magnesium Acetate (CMA) as an environmentally safe deicer for highways.

The Ohio Sections of ASHE wish to congratulate these two young women for their hard work and outstanding contribution to the highway industry. ■

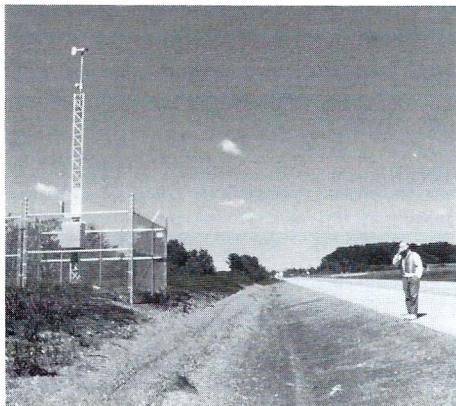
PENNDOT EXPANDS USE OF PAVEMENT ICE DETECTION TECHNOLOGY

By: **Brian S. Yedinak, P.E.**
Member - Franklin Section

PennDOT Engineering District 1-0, in northwestern Pennsylvania, participated in an experimental project to place a pavement ice detection system along Interstate 80 in Venango County, in 1989. Since that time, the information provided by the system was evaluated as to its impact upon winter snow removal operations within that region of Venango County. A two winter analysis showed significant cost savings are possible using this technology.

Each pavement ice detection location includes sensors placed in the pavement, as well as atmospheric sensors, which all transmit data via phone lines to a central dispatching location. The information is received by a computer at the central dispatching station, and is updated frequently as conditions change.

Based on the success of the initial experimental site, Engineering District 1-0 has recently hired a contractor to install ice detection equipment at five additional sites throughout the District. These sites consist of Interstate locations, and principal two lane traffic routes. These five locations are expected to be fully operational for the winter of 1993/1994.



An additional project is currently in design for the installation of seven

remote ice detection locations along Interstate 80 across the entire State. It is hopeful that some of these sites can be operational for the winter of 1993/1994, with the remainder being installed the following year.

This equipment can be particularly effective during times of anticipated freezing rain, or when rain changes over to snow. In certain cases, it can be snowing outside with an air temperature below freezing, but the pavement sensors will show a temperature well above freezing.



This information allows the dispatchers to effectively predict when the roadway may be subject to freezing conditions. This in turn, allows them to call out the operators for snow removal at precisely the right time, rather than perhaps several hours early. The result, savings in manpower, equipment, and material. Also, the pavement and bridges should last longer due to reduced salt applications.

Of course, there are some rela-

CENTRAL OHIO SECTION GOES MINING



A goal of the Central Ohio Section is to provide opportunity for continuing education through the vehicle of annual field trips. These field trips provide an opportunity for ASHE members to learn about the various manufacturing processes used in the development of products for use in highway construction.

This year, ASHE members found themselves touring a state-of-the-art aggregate processing facility. The aggregate facility, owned by The Olen Corporation, processes sand and gravel by using the latest in computer technology. The production capacity of the facility is 1300 tons per hour with an annual production of approximately 2 million tons of aggregate. The tour of the facility entailed the full scope of aggregate production, from dredging to sand classifying. Also included was a brief tour of an asphalt concrete production facility owned by the Kokosing Materials Co.

The Central Ohio Section wishes to thank The Olen Corporation and Kokosing Materials for their hospitality. ■

tively intangible benefits in the use of these systems which relate to improved public perception, and improved safety for the traveling motorists. ■

For additional information relative to the use of this technology in Pennsylvania, please feel free to contact Brian S. Yedinak, P.E., at 814-432-3115 during working hours.

OFFICERS 1993-1994

Roland A. Nesslinger, P.E. President
 Raymond Petrucci, P.E. 1st Vice President
 Thomas J. Haslett, P.E. 2nd Vice President
 Albert W. Kozel, Jr., P.E. Past President
 Terence D. Conner, P.E. Secretary
 Robert E. Yeager, R.S. Treasurer

DIRECTORS

3 year
 Read M. Bachman
 Bruce G. Brandstetter
 James W. Charles, P.E.
 Pasquale A. Dougherty
 Robert E. Pearson, P.E.
 Patrick M. Welsh

2 years
 David Greenwood, P.E.
 Lawrence O. Opalisky, P.E.
 John Ralston, Jr., P.E.
 Lisle E. Williams, P.E.

1 years
 Frank S. Lopez, Jr.
 Michael R. Martin, P.E.
 Robert M. Peda, P.E.

Return Address

THE ASHE SCANNER

Al Kozel, Managing Editor
 339 Blvd. of the Allies
 Pittsburgh, PA 15222

Bulk Rate
 U.S. Postage
PAID
 Pittsburgh, PA
 Permit No. #282

LITTLE CRACKS MEAN THE START OF SOMETHING BIG!

On a highway, airport runway or parking lot, small cracks can often go unnoticed. Early detection with PASCO high technology pavement management surveys provides information which can prevent little cracks from becoming expensive problems.

Find out how well we can serve you with pavement management surveys or pavement data analysis. Call or write today.



PASCO USA Inc.

4913 Gettysburg Road
 Mechanicsburg, PA 17055
 800-445-4789
 FAX 717-691-8211

Membership

Altoona.....	176
Carolina Triangle.....	195
Central Florida.....	230
Central Ohio.....	142
Chesapeake.....	129
Clearfield.....	96
Cuyahoga Valley.....	115
Delaware Valley.....	444
East Penn.....	132
First State.....	65
Franklin.....	218
Harrisburg.....	335
Lake Erie.....	110
Mid Allegheny.....	61
N. Central NJ.....	66
N. Central WV.....	29
N.E. Penn.....	104
Northwest Ohio.....	50
Old Dominion.....	93
Pittsburgh.....	421
Potomac.....	63
S.W. Penn.....	149
Southern NJ.....	102
Triko Valley.....	94
Western Reserve.....	53
Williamsport.....	152
Total.....	3,824

PROFESSIONAL STATUS	= 45%
DEPARTMENT OF TRANS	= 29%
CONSULTANT	= 41%
CONTRACTOR	= 17%
OTHER	= 13%

The Lytle Corporation

Lytle, Matulich & Associates, Inc.

Human Resource Consultants
 Drug-Free Workplace Act • Employee Assistance Programs
 Drug Testing Programs • Supervisor Trainings
 Stress Management Presentations

1-800-327-7713

The Lytle Corporation
 Hollidaysburg, PA
 Steven E. Lytle
 President

Lytle, Matulich & Associates
 Lakeland, FL
 Matthew A. Matulich
 President



Urban Engineers, Inc.

- Transportation
- Structural
- Airports
- Construction Management
- Mechanical
- Electrical
- Port Facilities

300 North 3rd Street Philadelphia, PA (215) 922-8080
 Pennsauken, NJ (609) 663-5550
 Erie, PA (814) 453-5702
 Buffalo, NY (716) 856-0350

Quality Transportation Services

Bridge/Highway Design • Transportation Planning • IVHS
 Traffic Engineering • Environmental Studies
 Construction/Program Management

EBASCO INFRASTRUCTURE

A Division of Ebasco Services Incorporated

One Oxford Valley, Suite 215, 2300 Lincoln Highway East
 Langhorne, PA 19047
 Tel: (215) 752-8595