Michiganite

FALL 1991 VOLUME XXVI, NUMBER 3

OFFICIAL PUBLICATION OF THE MICHIGAN SECTION OF THE INSTITUTE OF TRANSPORTATION ENGINEERS

PRESIDENT'S COLUMN

FROM THE DESK OF .....

Ken Tsuchiyama

GOLF!

ite Educational Fund

Now that I have your attention, I would like to tell you about something I consider quite significant for the future of transportation professionals in Michigan. And, yes, golf does have something to do with it.

Your Executive Board recognizes that our profession, like most others, is constantly changing due to changing technology. We also recognize that the future of our profession lies not only in the technological changes that impact how and what we do, but also in the quality of our future transportation professionals and their development as well. The technology is useless, however, without professionals who know how to get the most out of existing technology and continually push the limits of that technology to force new technology. The technological push to the future must consider the ever-changing social and environmental issues before they can be truly effective.

What can we do to prepare our future transportation professionals to not only cope with this new reality, but take an active part in shaping it? I'm glad you asked.

In 1991, the Executive Board established an Education committee. In essence, the committee will provide a means for furthering transportation professionals through educational activities including scholarship awards. The Executive Board has also established and education fund for this purpose.

So, how does golf fit in? I'll get to that in a minute. The education fund has three primary revenue sources. The Board established a voluntary program for Section members to contribute funds directly to the education fund. We have included a request for a contribution as part of the annual dues notice. The second funding source is revenue generated from Vendors' Day. The Board has changed Vendors' Day from an annual event to every other year beginning in 1991. Any profit from the Vendors' Day activity will go directly into the education fund.

You're still waiting for an explanation of how golf fits into this? Okay, here it is. Beginning in 1992, and every even-numbered year thereafter, the Michigan Section of ITE will hold a spring golf event for the purpose of generating revenue for the education fund. We will have the inaugural golf event on May 21, 1992 at the Bogie Lake Golf Club . We have planned an all-day event with a prize list that should generate much interest and participation. If you enjoy golf (and even if you don't) this golf outing should provide a lot of fun and an opportunity for you to contribute to the development of future transportation professionals.

Your Executive Board is providing an opportunity for you to shape the development of future transportation professionals. The success of the Board's efforts is really dependent upon Section members to participate and contribute, either through he voluntary contribution program or participation in the 1992 Golf Day, or the 1993 Vendors' Day. Please take this opportunity to give back a little something to your profession.

MICHIGANITE

Official Publication of the

MICHIGAN SECTION

Institute of Transportation Engineers

1991 EXECUTIVE BOARD

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TREASURER'S REPORT

1. INCOME *(since July 18, 1991)*

Dues	$ 839.00
Interest	137.60
Michiganite Ads	875.00
July Meeting	961.00
September Meeting	798.00
November Meeting	630.00
December Meeting	1,209.00
Adjustment to Previous Balance	- 237.13
Total Income	**$ 5,212.47**

2. EXPENSES *(since July 18, 1991)*

Postage and printing	749.88
Printing	47.32
Supplies	17.99
Prizes for Golf Outing	35.36
Sept. Golf Outing Meals, ect.	665.15
Student Paper Awards and Plaque	223.06
Michiganite	940.00
July Meeting/Meals	938.08
ITE District III Dues	142.50
November Meeting Meals, ect.	687.83
Refunds and Other	56.50
Outgoing President plaque	82.80
December Meeting Meals, ect.	1,470.00
Total Expenses	**$6,056.58**

Balance as of July 18, 1991	$3,503.78
Balance as of Dec. 11, 1991	$2,659.67

EDUCATION FUND

Balance as of July 18, 1991	$3,530.00
Contributions	50.00
Education Fund Subsidy/ MSU Students (TRB)	- 300.00
Balance as of Dec. 11, 1991	$3,280.00

Incident Management Fund Balance $ 4,583.65
(from Nov. Conf)

Respectfully Submitted, Samual Lawson, Jr. Treasurer

1991 COMMITTEE CHAIRPERSONS

Technical Program:	
William Hartwig	517/373-2316
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MICHIGANITE is published quarterly by the Michigan Section of the Institute of Transportation Engineers. It is distributed to more than 300 ITE members and over 100 cities and counties in Michigan. Address communications regarding the Michiganite to the Editor, Michael F. Kobran, 1312 Kings Coach Circle, Grand Blanc, Michigan 48439; 313/695-8942.
Send change of address to: Barton-Aschman Associates, 26261 Evergreen, Suite 480, Southfield, Michigan 48076-4480.

Michigan Section - Institute of Transportation Engineers
1992 Meeting Schedule

DATE	LOCATION	HOST	COMMENTS
Feb. 13	Ann Arbor	Nancy Gibson	Lunch/Technical Session
Mar. 13	Lansing	Ken Johnson	Lunch/Technical Session
May 21	Bogie Lake G.C.	R. Walther and others	Benefit Golf Tournament
July 2	East Lansing	Tom Maleck	Dinner/Technical Session
August	Washington D.C.	International ITE	Annual Meeting
Sept. 10	Saskatoon, Alto	Gere Meredith	Golf/Dinner
Nov.	Indianapolis, IN	Indiana Section	District III Annual Meeting
Nov. 5	Battle Creek	Max Phares/John Start	Lunch/Technical Session
Dec. 10	Metro Detroit	Open	Lunch/Technical Session and Section Annual Meeting

Michigan Section - International Municipal Signal Association

DATE	LOCATION	HOST	COMMENTS
Feb. 20	Jackson	Ron Blake	Technical Meeting
Mar. 14	Detroit	Jerry Carrier	Couples Night
April 23	Grand Rapids	Ron Dressander/Lowell Baker	Technical Meeting
June 4	Lansing	Norm Hettinger/Dean Derks	Technical Meeting
July 17-19	Mt. Pleasant	Board of Directors	Family Weekend
August 1-8	Cherry Hill, NJ		International Meeting
Aug. 15	Coldwater		Board Meeting
Oct. 6-9	Cadillac	Fall Conference	Vendor Demonstration and Signal Certification
Dec. 3	Ann Arbor	Art Cuendet Gary Fitzgerald Herb Henry	Annual Meeting

IN MEMORIAM
EDWIN H. MILLER

Edwin H. (Ed) Miller, P.E., veteran District Traffic and Safety Engineer with the Michigan D.O.T., Kalamazoo District, died suddenly on September 3, 1991 at his home in Kalamazoo.

The transportation profession, the Michigan D.O.T. and his fellow workers and associates have lost a nationally recognized traffic engineer and a good friend. Ed was widely known across Michigan as the "Dean of Traffic Engineers" to those in state government and his profession. He brought honesty, integrity and fairness to his dealings with everyone.

Ed was a life-long resident of Kalamazoo. He was a veteran of World War II and was honorably discharged from the U.S. Army in 1946. He received his BSCE from the University of Michigan in 1951 and MBA from Western Michigan University in 1974. Mr. Miller was a registered professional engineer in Michigan and started his career with the "Michigan State Highway Department" in February of 1952 as the Assistant District Traffic Engineer and became the District Traffic Engineer in 1960.

Ed was an avid gun collector with extensive knowledge of the history of firearms and enjoyed many evenings with his "Antiques Interest Group." He also relished his many trips about Michigan and his trips to Europe. He is survived by his wife, Yvonne, a daughter, Pamela, son, Bruce, and several grandchildren. The members of the Michigan Section extend their condolences to his family. We are all much richer for having known Ed as a fellow worker and friend.

NEW MEMBERS:
Michigan Section I.T.E.

by Michael F. Kobran

First, my apologies to Sonny Jadun and Brett R. Kach whose names were misspelled in the last Michiganite. One new member and fifteen student members were approved at the November 1991 Michigan Section I.T.E. Board meeting following a review of their applications. Some information about the new members is listed below as an introduction to the rest of the membership.

Earl D. Jarmol is a graduate of Michigan State in Civil Engineering and an MBA from Northern Michigan. He is the marketing engineer for Engineering Services, Inc., in Elm Grove, WI. Earl is a commercial affiliate.

Neal K. Liddicoat transferred from the Barton-Aschman Associates, Inc. office in Pasadena, CA to their Michigan office in Southfield as a principal associate. Neal is a graduate of Michigan State University and lives in Bloomfield Hills. He is also a member of the International I.T.E. and is a registered P.E. in California.

Rise L. Rasch is a Transportation Engineer with the Grand Rapids District of the Michigan Department of Transportation. Rise lives in Grand Rapids and is a graduate of the University of Michigan.

The following are new student members from Michigan State University; Laura Aylsworth, Matthew J. Brown, Lori Lee Heron, Deborah L. Hornbeck, Jeffrey J. Kilmer, Martin R. Kane, Roger Marks, Sorawit Narupiti, Gary C. Piotrowicz, Marie Pullins, Najim Salman, Brent M. Schriner, Bradford B. Snyder, Robert C. Wagner, Fred J. Nazar, David Chenault, Chad Alan Gamble.

Welcome to I.T.E. and may your profession and your careers benefit!

MICHIGAN SECTION VOLUNTARY FUND DONORS AS OF NOVEMBER, 1991

The ITE Michigan Section Voluntary Fund was created by the Section Board for the purposes of:

* Providing free attendance at Section meetings for student members.
* Providing awards for student paper competition.
* Providing assistance for defraying student costs to attend ITE or TRB national meetings;
* Providing a student scholarship fund.

The following have contributed since the last *Michiganite:*
Paul F. Miller *Frederick J. Pilgrim Jr.* *Michelle A. Barnes*

What we give of ourselves to those who follow us in our profession recognizes the assistance that we ourselves received and is a commitment to our profession's future.

FRANKENMUTH HOSTS DISTRICT III ANNUAL MEETING

by Don Weirtella and Micheal Kobran

More than sixty ITE members from the Michigan, Ohio, and Indiana Sections who attended the October 17-18, 1991 District III Annual Meeting in Frankenmuth enjoyed some gorgeous mid-Michigan fall weather, an interesting and informative program, good fellowship during the two-day affair, and some hearty Bavarian food. The hosts were Roger Walther of the Saginaw County Road Commission and Michael Kobran of Barton-Aschman Associates. Inc. The meeting site was the Bavarian Inn Lodge . District III Director John C. Niehaus greeted us with "Welkommen," stressing the importance of transportation in our daily lives by noting that 25 cents of every dollar we spend goes to some form of transportation. The following is a summary of the presentations:

Status of Surface Transportation Act

George Ostensen, Division Administrator for the Michigan Division of the Federal Highway Administration, gave the audience an update of the tortuous path of the new Surface Transportation Act through the U.S. House of Representatives and Senate. Mr. Ostensen earned his BSCE from Southeastern Massachusetts University in 1969 and MSCE from the University of Maryland in 1978. He has served with the Federal Highway Administration since 1969 and has been in his present position since April, 1991.

The previous act expired September 30, 1991, and the only Federal highway funds available are unspent balances from the previous act and some temporary funds authorized for the beginning of the new fiscal year. A Senate-House Conference Committee has to come to terms with such major differences as the House's extensive list of demonstration projects and the total funding. Apparently the proposed "nickel for America" Federal gas tax increase is dead.

Economic Development and Transportation

Liane Zimny from the Michigan Department of Commerce gave a thought provoking look at the relationship between economic development and transportation programs. Zimny graduated from the University of Chicago and began working for the City of Lansing's Planning and Municipal Development Programs. In 1985 she began a dual role in

Continued on page 8

NOVEMBER MEETING IN GRAND RAPIDS

by Michael Kobran

The Michigan Section of ITE moved to the western part of the State for its November technical session which was held November 14. 1991 in Grand Rapids at the new Radisson Hotel. The hosts were Tim Haagsma of the Kent County Road Commission and Pete LaMourie of WBDC Group. The following is a brief summary of the presentations:

Corridor Coordination in Grand Rapids

Theresa Petko, staff member of the Grand Rapids and Environs Transportation Study (GRETS) described the process used in the Grand Rapids metro area to coordinate corridor studies. There are several committees formed in the area. The most active ones are the East Beltline (M-37) Corridor Committee and the 28th St. (M-11) Corridor Committee between which there is some overlap of agencies and policies. The 28th Street committee has a somewhat different focus on implementing the results of an earlier WBDC study of the corridor and fostering landscaping and controlling signing. Other corridors covered are M-45 and Alpine Avenue (M-37).

The committees monitor land-use development for 660 feet either side of the centerline of the corridor highway. There are memos of understanding between the various jurisdictions involved. The committees look at the following criteria:

- conformance to the existing land use plan (from 1978)
- impacts on traffic
- compatibility to adjacent land uses
- conformance to present zoning
- likelihood of precipitating additional land use changes

After review, the committee typically issues an advisory to the local agency whose jurisdiction the proposed land use is located. In the comment period, Ed Swanson pointed out that the local agencies will use the process to get a negative advisory to be used for rejecting projects.

Theresa Petko of the Grand Rapids and Environs Transportation Study, talking about corridor coordination in Grand Rapids.

Access Management Guidelines

Brad Strater, Senior Planner for the WBDC Group in Grand Rapids explained some guidelines that had been put together for managing access to roadways. He was helped by Pete LaMourie, Traffic Engineer for the WBDC Group. Brad talked about the symptoms of poor access management, namely too many driveways, poor spacing between them, insufficient spacing from intersections, poor geometrics, poor driveway or street offsets, and insufficient ROW or setback to accommodate widening of the pavement.

The predictable results are high accident rates, congestion, economic decline, abandonment of buildings, and expensive retrofitting with limited funding.

The causes of these types of situations, according to Mr. Strater, are lack of coordination between the road authority and local government planning and zoning agencies, inconsistent review procedures, lack of a long range transportation or corridor plan, the expectations of developers, legal issues, and the lack of standards or regulations. 'The goals of access management are to coordinate long range land use and transportation planning by doing the following:

- Prohibiting direct access to single family homes fronting on major arterials
- Making the site plan review and driveway permit plan concur rent
- Limiting the number of driveways to what is reasonable
- Regulating the spacing of driveways and their distance from intersections
- Requiring deceleration and passing lanes when appropriate
- Promoting alternate access (frontage roads and shared drive ways)
- Ensure adequate sight distance through zoning controls prior to local approval of lot splits.
- Protecting ROW for future widening through setbacks

Brad had a number of slides from all over the state which illustrated both good and bad examples of access management. He also enumerated the tools which planners have available to do the job properly. These include design standards and ordinances for driveways, corridor plans for alternative access, zoning ordinances that require setbacks and site plan review, requiring traffic impact studies, putting sight distance criteria in land division ordinances and lot orientation in subdivision ordinances, establishing ordinances for private roads, and setting up a defined process for concurrent review of site plans and driveway permits.

Grand Rapids South Beltline

Robert Kirkbride of the Michigan Department of Transportation gave the audience a status report on the Grand Rapids South Beltline project which was one of the thirteen new freeways named in Act 327 of 1972 to be constructed as funds became available. In 1982 Act 327 was amended to add 6 more freeways and priority was given to three other routes in the Grand Rapids area (M-44, M-37, and M-11). In 1984 MDOT did a corridor and location profile study and in 1985 an Urban Impact Study was done by Schempler Corradino for MDOT to decide if there should be new highway construction, where it should be, and what it should be. The study looked at development patterns, public revenues/expenditures, employment, transportation, consistency with local plans and policies and effect on development plans.

A consensus developed within MDOT and the affected communities that new construction was necessary and that a freeway or boulevard in the southern part of the corridor would be desirable. Following two years of interdisciplinary environmental and engineering studies, MDOT recommended an alignment for the 19.4-mile long corridor from I-196 in the west in Ottawa County to I-96 in the east in Kent County with four-lane freeway, two lanes in each direction. There will be, besides the two freeway-to freeway interchanges, 6 other interchanges along the route. The total cost is presently estimated at $ 225 million.

A freeway was chosen instead of a boulevard because of improved level of service, faster travel time, safety, control of development, and local preference. The recommended alignment was chosen because of the location of the Grand Rapids airport, the presence of wetlands (Thornapple River), the location of a municipal boundary, the length of alternatives, and the location of a golf course. The next step is to complete a final Environmental Impact Statement by June, 1992. A consultant win be hired to do survey, design, and right-of-way. Right-of-way acquisition is expected to start in 1995 with advance acquisition possible for key parcels. Construction is expected in 1997 but new revenue sources are needed by the State to adhere to this schedule.

Local road improvements win also be necessary and staging options are currently being considered with the section between US-131 to I-96 being a good possibility for the first section constructed.

Grand River Belmont Bridge Crossing

Dave Groenleer, engineer with the Kent County Road Commission, went through the planning process that was followed to bring a new crossing of the Grand River in Plainfield Township, just north of Grand Rapids. The project is over twenty years old and involves 3.14 miles of future County primary road. A audio/slide presentation Prepared by a consultant for the Road Commission was used at a public healing in the summer of 1991.

The new roadway and bridge will relieve traffic congestion on an existing crossing of the Grand River just to the east and will connect Post Drive at the US-131 freeway to Plainfield Avenue north of Four Mile Road on the north side of Grand Rapids.

Neighborhood Traffic Control

Dave Young of the City of Grand Rapids spoke on the City's efforts to resolve neighborhood traffic issues when the citizens bring problems to the attention of the City' s traffic engineers. Dave said that the usual complaints are the following (his comments on each following in parentheses):

- speed (usually proves to be 32-37 mph average)
- accidents (usually few or none)
- traffic volumes (usually 500-2500 ADT)
- through traffic (usually 10-30%)
- trucks (very little)

The solutions typically advocated by the citizenry include all-way stops, signals, speed bumps, speed limit signs, and "Children Playing" signs. The solutions suggested by the city staff typically include police enforcement, notice to trucking companies, culde-sacs/diverters/chokers, and one-way streets. Mr. Young gave several examples of neighborhood traffic problems he has dealt with in the recent past. The Grand Rapids policy is to have special assessment districts for the costs of ally such solution with a majority of the residents affected being in favor, and a mandatory trial period.

Terrace Street Connector

Gerald Bartoszek of the City of Muskegon described this project development in the City of Muskegon. More is not available on his presentation because the Section Board meeting was held at the same time.

Dave Young of Grand Rapids explaining the nature and resolution of neighborhood transportation problems.

Continued from p. 5

the Department of Commerce as Director of the Communities of Economic Excellence Program and as an Account Executive linking expanding industries to state economic development resources.

She traced the history of the dependence of economic development upon good transportation. From 1800 to 1950, early "highways" and water routes were the main connectors between rural areas and small villages. From 1850 to 1900, steam power and the railroads became dominant and connected industrial centers with sources of raw materials. This development began the movement of people from the farm to the industrial and financial centers. The first 50 years of this century saw the development of a cross-country road network. At present and into the future we are seeing the development of a "multi-modal" transportation becoming increasingly important if we expect to make the U.S. competitive on a world-wide scale. She touched on the need to manage development so it does not dilute scarce transportation funds. It was obvious to those present that a continuing dialogue between transportation and developmentpment professionals (and between public and private sectors) would be helpful in resolving some serious funding shortfalls for transportation programs.

High Speed Rail

Dr. Constantine N. Papadakis, Dean of Engineering at the University of Cincinnati and a member of the Ohio High Speed Rail Authority, brought us to date in what was happening in high-speed rail worldwide and especially in Ohio. He received his diploma in Civil Engineering from the National Technical University of Athens in Greece. His master's degree in CE was from the University of Cincinnati and his doctorate from the University of Michigan in Ann Arbor. During the past three years he has served in the Governor's Council on Research and Economic Development, the Ohio Science and Technology Commission Advisory Group and is presently a member of the Ohio High Speed Rail Authority.

Ohio plans to develop and promote interstate high speed rail. A study of the technical feasibility has been completed with a ridership study detailing two different routes linking the southern and northern parts of Ohio. Two different propulsion systems were also evaluated. Magnetic levitation seems to hold great promise for the future in promoting an efficient high speed and smooth ride for inter-city transit trips but much more development work needs to be done. Ohio has made an impressive commitment to making use of the technology as it develops. Other states with a head-start in high-speed rail include Florida, Texas, and California.

Robert L,. Kuehne, Supervisor of the Surface Systems Unity within the Bureau of Transportation Planning of the Michigan Department of Transportation, followed with an account of Michigan's long term program to upgrade the rail service in the 280 mile Detroit-Chicago corridor. Mr. Kuehne earned his Bachelor of Architecture degree from the University of Michigan and a Master's in Urban Planning from Michigan State University. He is a member of the Interstate High Speed Rail Compact Technical Committee and Manager of the Detroit-Chicago Blueprint Project.

The Detroit-Chicago corridor connects the nation's 3rd and 6th largest metropolitan areas including 13 million people. Rail ridership in this corridor is presently in excess of 380,000 passenger trips annually.

MDOT has divided the program into phases. "Mainline 90" is a short range project to prepare the corridor for higher speed rail whose major elements include push/pull equipment, increased frequency, upgraded track and sidings, grade crossing protection, on-board amenities and increased promotional efforts.

The "Detroit-Chicago Blueprint Project" is an effort to optimize transportation and socio-economic benefits, minimize financial risk, explore private sector participation, create a high performance, cost efficient system, and determine the potential for high speed rail. The Blueprint Project has four phases. Mr. Kuehne presented some interesting tables showing the trade-offs between travel time (3-1/2 to 5 hours), number of round trips (2-10), the capital, operations & maintenance costs, and revenues projected.

Tort Liability

There were two presenters in this area; attorney (and P. E.) John Kalo from Flint and Mr. Nels Burns, president of E. N. Burns & Associates of Columbus, OH. Kalo, a graduate of Michigan State University and Cooley Law School, talked about the need for road agencies to perform and document their inspection activities, to be open to negotiation with the plaintiff's attorney, and the confusion engineers have understanding the legal relationship between a drunk driver and a negligent agency (a hazardous situation is still hazardous regardless of the driver's condition).

Burns is a past president and past technical council chairman of the International ITE and past president of the Ohio Section, ITE, and currently serves on the Executive Boards of the ITE Consultants Council and Expert Witness Council. He agreed that inspection by the agency was a necessity in risk management. He also suggested that road agencies protect themselves from litigation by instituting systematic ways of attacking problems and thinking about when to settle and when to contest a case.

General Motors Electric Vehicle Project

Dave Newhouse, member of the Management Marketing Assessment staff for G.M., led the next morning with a presentation about the General Motors "Impact" electric vehicle project. The car is being made in response to future vehicle emission standards, especially in California, and will be made in Lansing. It will have competitive prices, good performance (0-60 mph in 8 seconds), and will take 3-8 hours to recharge with either 110 or 220 volt outlets. Mr. Newhouse talked about some of the trade-offs being evaluated especially in battery design, the need for government incentives to market the car, and the focus on intra-city driving as the major function of the vehicle.

IVHS in Michigan

Dr. Robert Maki is the Engineer of Transportation Systems for MDOT. Bob earned a BSCE from Michigan Technological University , a master's in engineering from Michigan State University, and a doctorate in public administration from Western Michigan. He brought the audience up-to-date on the Intelligent Vehicle Highway Systems program in Michigan which includes a five-year infrastructure plan for extending the control and monitoring system on Detroit Metro freeways by 212 miles, opening their new Michigan Transportation Center just off the Lodge Freeway in downtown Detroit and a $ 5 million project on I-94 between the

Detroit CBD and Detroit Metro Airport for driver information radio using experimental communication technology.

The project which has federal (50%), state (25%), and private (25%) funding will evaluate various means of communication in terms of getting information to drivers in dealing with capacity reducing deficiencies, both recurring and non-recurring, in the airport corridor.

Issues and Challenges Facing the Transportation Profession

Dr. Jonathan Upchurch, P.E., President of ITE International, briefed us on what he saw confronting our profession in the future. He is associate professor of civil engineering at Arizona State University in Tempe and received his bachelor's and master's degrees in Civil Engineering at the University of Illinois and his Ph.D. at the University of Maryland. His major points were our credibility as professionals and the need to introduce young people to the profession. We must encourage high school students to enter civil and transportation engineering programs in college as well as making a special emphasis on encouraging women and minorities. The Institute must build public support for transportation engineering functions and positions at the state and local levels. We must educate the public to the increased quality of life that transportation safety and infrastructure improvement can bring them. He was there for both days and was eager to talk to individuals present as to their views on the issues and challenges.

Student Papers

The overall winning paper, by **Kalid Al-Sahili** of Michigan State University, was on "'Traffic Signals or Traffic Circles, Which is Better?" and was reviewed in the last issue of the *Michiganite*. Mr. Al-Sahili was born in Palestine and earned a BSCE from Yarmouk University in Jordan and a master's in Transportation Engineering from Jordan University of Science and Technology. He is presently a doctoral student at Michigan State University where he worked as a traffic engineer at MSU's Department of Public Safety.

The winning paper from Ohio was by **Oscar Franzese,** a Ph.D. candidate at Ohio State University. He earned his BSCE in Argentina and a master's degree in civil engineering from Ohio State. His pape , "Multicriteria Analysis of Aeromedical Fleet Expansion" investigated the factors involved in optimizing the helicopter service for emergency medical services for highway (and other emergency) accidents. He used actual operating data for an existing service to recommend optimal levels of service in the future.

The winning paper from Indiana was by **Paul Lombard** of Purdue University for "An Investigation Between Highways and Economic Development in Indiana." Mr. Lombard was born in the Republic of South Africa and obtained a BSCE from the University of Pretoria. After 2 1/2 years in practice there, he received a Fulbright scholarship for study in the U.S. He earned a master's and a Ph.D. in transportation planning at Purdue University. The author reviewed the relationships between highway capital programs in areas of the state and various economic development indicators in the same areas to see whether any significant relationships could be found. Some of Mr. Lombard's conclusions were contrary to what might have been expected.

Clean Air Act Amendments

Steve Rauner of the Motor Vehicle Emission Lab for the U. S. Environmental Protection Agency in Ann Arbor, gave the last presentation. Steve got his bachelor's degree in Industrial and System Engineering from the University of Michigan and a master's degree in Environmental Engineering from the University of Alaska at Anchorage. Mr Rauner gave us a lucid look at a complex piece of legislation for which the rules are still being written. The need for the amendment was driven by the explosive growth in vehicle miles of travel which are expected to increase by 2-6% a year through the year 2000. The cars' emissions are cleaner but people are driving more and road capacity is not keeping pace. VMT growth leads to congestion which leads to increased emissions because of extended operating times and lower average speeds.

The *Federal Register* for 10/4/91 contains information on the following areas of the Clean Air Act Amendments:

1. Transportation planning guidelines

2. Transportation control measures (TCM's)
   a. information documents addressing formulations of TCM's
   b. estimating emission reduction potential of TCM's
   c. estimating travel and emission effects of TCM's

3. VMT Tracking
   a. every three years starting 1996
   b. demonstrate in-line with forecast

4. VMT Offsets (not required in every region)
   a. 9 areas in the U.S. effected (non-attainment for ozone or CO)
   b. requires St. Implementation Plan (SIP) revision by 11/15/92
   c. attain reductions to offset growth in emissions by establishing milestones for reasonable further progress.

5. Employer Trip Reduction
   a. applies to employers with more than 100 employees/site.
   b. requires increase in avg. vehicle occupancy over baseline
   c. compliance by 1996

6. Conformity
   a. agencies must conform to purpose of SIP as well as specific requirements within that plan
   b. no new plan violations or exacerbation of existing ones are allowed
   c. no delay allowed with reasonable further progress milestones.

Mr. Rauner also told us that there were still major issues of disagreement between EPA and USDOT staff on attainment areas for other emission problems than ozone and carbon monoxide, inclusion of non-federal aid projects, and frequency of conformity determinations.

NOVEMBER AND DECEMBER 1991 SECTION BOARD MEETINGS ELECTION RESULTS ANNOUNCED

At the Board meeting of November 14, 1991, the Board approved the expenditure of $300 to support the MSU student's trip to TRB's annual meeting in January, 1992. This is an increase of $100 from last year. This year, for the first time, the money will come from the Educational Fund established last year with voluntary contributions.

At the Annual Meeting luncheon, December 6, 1991, the Teller Committee announced the election of the following slate of officers for 1992:

Michael Labadie - President
Samuel Lawson Jr. - Vice President
Joseph Meszaros - Treasurer
David Allyn - Secretary
William Hartwig - Director
Ronald Blake - Affiliate Director

At the organizational meeting for the new Board, the following budget was established for 1992:

Revenue

Item	1991 Budget	1992 Budget
Dues	$3,200	$3,350
Michiganite Ads	1,600	1,875
Interest	250	275
Late Dues/Fines	200	100
Other	100	100
Meetings*	0	5,000
TOTALS	$5,350	$10,700

Expenditures

Item	1991 Budget	1992 Budget
Postage	$1,400	$1,370
Supplies	60	60
Michiganite	2,800	2,800
Printing	0	100
Meetings*	0	5,000
New Programs	50	50
National Meeting	450	500
Plaques/Awards**	250	100
National Donation	120	150
District Conference	120	150
Other	120	120
TOTALS	$5,400	$10,400

*Meeting expenses were not budgeted in 1991 but were actually $4,953.56

**Student awards will be taken from the Education Fund in 1992.

TRAFFIC CRASH REPORT FORM (UD-10) REVISION

by Thomas R. Krycinski,
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The way police officers report traffic crashes to the Department of State Police is via the official traffic crash report form (UD-10). This form is mandated to be used statewide by law enforcement officers to report property damage crashes over $200, or traffic crashes involving injury or death. Out of the 387,180 crashes in 19910, 74.5% or 288,305 were solely property damage crashes. The Office of Highway Safety Planning (OHSP) has revised the UD-10 and the new form went into effect on January 1, 1992.

OHSP would like to give you a little background on the revision of the UD-10, discuss what we wanted to achieve by the revision, what we think we did achieve, note some things OHSP thinks you need to be aware of, and offer some suggestions.

Background

Probably, the first question which comes to mind is: Why did OHSP decide to revise the UD-10? A few years ago our office established a Traffic Crash Records Users Group better known as MTAR (now known as MTR). Although meetings were held for nearly four years, little forward progress was being made. A study of our state traffic records system was made by a consultant and one of the consultant major recommendations were that the UD-10 be made self coding. Then, less than a year ago responsibility for the UD-10 was transferred from the Traffic Services Division of the Department of State Police to OHSP. We now had the opportunity and the responsibility to change one part of the system which would lessen personpower for coding and allow data to be provided on a timely basis. The major concern that everyone had for traffic crash records was the 8 to 9 month turnaround time for crash data to be available to the field.

Our director, Karen Tarrant, was given approval by Colonel Michael Robinson to develop a new UD-10 for implementation on January 1, 1992. We jumped on the opportunity and have proceeded very quickly because we had set a very tight timeframe for ourselves. Without the implementation deadline, we would have relied on committees to develop the form and would still be wrestling with the idea. This form had not seen a major revision for the past 20 years, but revision had been discussed for at least the last 19 years! Obviously, technology has changed drastically in the last 20 years and we felt it was time to become state-of the art before the rest of the country passed us by.

We surveyed police agencies, county road commissions, state agencies, universities, and the U.S. Department of Transportation to gather as much input from users as we could. We also visited each of the 13 Traffic Safety Committees sponsored by our office and AAA Michigan. We then developed a form which captured as much information as feasible, paying attention to federal requirements. There are two pages to the form. The first page is two-sided and must be sent to MSP for all crashes. The second page is a local use page and must only be submitted to MSP for fatal crashes. For all other crashes, it is strictly optional. OHSP has recommended that it be completed for injury crashes. Police agencies have been receiving training for the completion of the new form, beginning November 4, 1991. Police officers are being given evaluation forms at these training sessions to be used for feedback for the first three months the new forms are used. Then, if necessary, adjustments will be made to the form.

What we wanted to achieve with the revised UD-10

- Make self coding (so decisions are made on-site by officers and not by coders in Lansing).
- Reduce manual entry of data.
- Make it as convenient as possible for the officer, recognizing that the report forms are completed under less than ideal conditions.
- Standardize officers input as much as possible, requiring a minimum of handwritten input and no handwritten narrative as a state requirement for the majority of crashes.
- Eliminate duplication whenever possible.
- Meet Federal Government guidelines which will most likely be ultimately mandated.
- Address the majority when it comes to data items to be included on the form and not the unusual or the exception.
- Make truck information easier to provide.
- At a maximum, require a single, two-sided page for the state part of the forms.

What we achieved

- One two-sided page required for the state (except for fatal crashes).
- One supplemental page which is for local use only, as they see fit (although required for fatal crashes).
- 100% self coding and 80% scannable.
- Eliminated supplemental truck form (UD-10T).
- Added valuable information for engineers regarding traffic crash patterns.
- Added valuable information for IVHS (i.e. sequence of events - four events plus most harmful event).
- Made truck crash information easier to provide.
- Assured greater uniformity in the completion of the information since written narrative will no longer be relied on nor need to be interpreted by coders.
- Eliminated duplication and possible conflict between stated facts and written narrative/diagram.
- Eliminated coding at the state level and made inputting of the form much more efficient and timely.
- Eliminated the possibility for the officer to offer engineering judgement in her or his written narrative.

Some things you need to be aware of

- The hand drawn diagram and officer's written interpretation of the traffic crash have been eliminated from the state form and are now a local option (except for fatal crashes).
- The new engineering items which have been previously discussed plus better detail on fixed object incidents.
- The report has been changed in title form a traffic accident report form to a traffic crash report form. This was done to better emphasize the seriousness of traffic crashes and to eliminate the idea that traffic crashes are "accidents", but rather are generally preventable.

Some things which OHSP would like to note or suggest

- The importance of open communication between enforcement and engineering, especially to a risk management program.
- The establishment of engineering/enforcement committees or subcommittee offshoots of the traffic safety committees. Kalkaska and Kalamazoo Counties have informal committees in place. Kalamazoo County is being very proactive to the change of the UD-10 and is considering scanning county crashes locally.
- The adoption of risk management as a management philosophy for your agency.
- In line with good risk management practices, that once a high crash site has been identified by traffic engineers that the engineer visit her or his local police agency to discuss the site and go over the hard copies of the UD-10 with them, including the local page.
- You meet with your local police agency to discuss obtaining a copy of the UD-10 if you believe you need to receive an engineering copy.

In conclusion, OHSP thinks that the revision of the UD-10 presents a wonderful opportunity. It affords traffic engineers the opportunity to meet with an important ally in traffic safety, our enforcement counterparts, to discuss what information will be collected on the local page of the report, and more importantly, how that data will be used in conjunction with state data being provided.

Our environment is changing and it is quite obvious that the states economic picture is as well. However, change to the UD-10 will be what we make of it. We can make the change work, or we can continue to discuss change.

Engineering has been a profession for a very long time because engineers are pioneers, frontrunners, and have the ability and vision to adapt to the change in the road when needed. We know you will work with us in this important change. If you have questions regarding the revised UD-10, please feel free to contact Gary Holben at 517-334-5203.

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