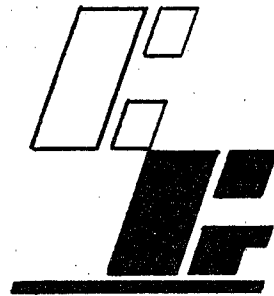


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PETER MOE

Section Member Peter Moe, age 43, died suddenly and unexpectedly on August 28. Based out of Indianapolis, he was the 3-M company's Traffic Controls Materials Division state representative for Ohio, Indiana and Michigan. A graduate of the University of Wisconsin, he was buried in his hometown of Black River Falls, Wisconsin. He is survived by his wife Jeanne and two school-age sons, Craig and Jeff.

JAMES S. WESLEY

Area Engineer for the Federal Highway Administration died unexpectedly, on June 29, 1979 in a local Lansing hospital. Jim was a native of Lansing, a graduate of Michigan State University and spent most of his Federal career in Lansing. At the time of his death he was assigned as area engineer in Wayne County.

Symbols for Safety

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LEGISLATIVE "UPDATE"

(Continued From Page 6.)

Senate Bill 400 (G. Hart) would require that anyone (driver, parent or guardian) transporting a child weighing less than 20 pounds properly secure the youngster in an approved child passenger restraint device. In addition, if the child is under 15 years old (and weighing 20 pounds or more), he or she must be restrained by the vehicle's safety belt. The bill also provides that beginning January 1, 1981, children that weigh less than 40 pounds shall be properly secured in an approved child passenger restraint device.

Finally, Senate Bill 401 (O'Brien and Faust), would require that effective January 1, 1980, school buses would have to be equipped with safety belts for the driver and each passenger.

All of these bills, with one exception, are in the Senate Committee on Transportation & Tourist Industry and have not yet received a formal hearing. The exception is Senate Bill 394, which is presently in the Senate Finance Committee. No action is expected on any of the "belt proposals" until late this summer or the fall.

Four measures have been introduced to repeal Michigan's long-standing motorcycle helmet law. The bills are SB 345 & 346 and HB 4496 & 4497. (The Senate and House bills are identical.) The Senate bills have been referred to the Senate Judiciary Committee and the House bills are in the Public Safety Committee. No hearings on either side so far.

One other recent item of interest is Senate Bill 511 (Holmes), which proposes to equip all motor vehicles with "a device" to prevent it from going faster than 70 MPH. Your guess is as good as ours on this one.

Tom Reel
Legislative Committee

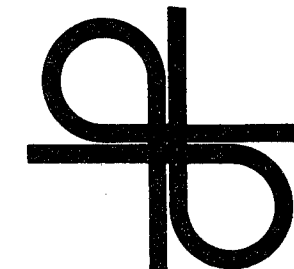
MICHIGANITE

OFFICIAL PUBLICATION

VOLUME 14 NUMBER 3 FALL 1979

MICHIGAN SECTION

INSTITUTE OF TRANSPORTATION ENGINEERS



PRESIDENT'S COLUMN

I would like to bring you up to date on our activities toward making the Michigan Section ITE more "visible". Our efforts in the area of child restraints have met with great success. The recent display of child restraint material at a City of Troy Shopping Center received a great deal of public attention and interest, and I wish to thank those section members who donated their time to making this effort a success. The Executive Board also sent a resolution to the State Legislature supporting SB



HOLMBERG

400, the complete text of which is included in this issue of the Michiganite.

Our Public Relations Committee has been very active, by providing information to the various state newspapers of the child restraint subject and the proper use of stop signs. If any member has additional subjects which deserve statewide public attention, please contact Weldon Borton, Chairman of the Public Relations Committee.

On another subject, the Michigan Section Executive Board has appointed a committee to work with the Michigan Department of Transportation and the Michigan State Police to provide local input into the revision of the Michigan Manual of Uniform Traffic Control Devices. If any member has comments on additions or changes, please bring them to my attention as soon as possible.

Also, just recently each voting member received a copy of a proposed change in our By-Laws which would add a Director to the Executive Board. This Director would represent our Affiliate members and add input in the area of programs and policies which would benefit this large portion of our membership. Such an important change deserves our support.

Gerald M. Holmberg
1979 President

NATIONAL STUDY SHOWS RIGHT TURN ON RED LAW CUTS ACCIDENTS AND SAVES GAS

The Michigan Department of Transportation (MDOT) is asking all cities, villages and counties to re-examine the need for "No Turn On Red" signs placed at some intersections. The request is the result of a national study that reveals right turns on red reduce the total number of accidents and save motorists time and fuel.

The study, conducted for the American Association of State Highway and Transportation officials, showed that the total number of rear-end collisions, sideswipes, right-angle collisions and vehicles running off the road, decreased an average 12.6 to 11.9 percent per year, per intersection, after allowing right turns on red. It also showed that the average motorist saves six seconds driving time for every turn on red which could average out to a fuel savings of about one-fifth of a gallon in an hour's time.

"That may not sound like much," says Donald Orne, engineering of MDOT's Traffic and Safety Division and chairman of the national task force that did the study, "but just in Michigan, that averages out to a fuel savings of 10 and one-half million gallons each year."

Michigan adopted turns on red in 1976. Although all 50 states have adopted the right turn on red, Michigan is one of the few states also to adopt left turn onto a one-way road when the light is red.

"On the national level, the right-turn on red showed a significant decrease in accidents," Orne said. "Here in Michigan, however, the law has not been in existence long enough to get an accurate assessment - motorists are still adjusting to it.

"While Michigan has shown essentially no change in the number of accidents, we are predicting a significant decrease in the future."

TRAFFIC ENGINEERS WORKSHOPS AT NATIONAL SAFETY CONGRESS

The Traffic Safety Program of the 1979 National Safety Congress and Exposition - October 15-18 in Chicago - has been expanded to include two workshops geared specifically for traffic engineers.

These half-day workshops are designed to be a learning experience for all who participate.

Each workshop will include discussion of the pertinent issues as well as question and answer sessions. Audience participation will be encouraged at both workshops.

The first workshop is *Accident Record System Design and Uses*. This is a morning workshop for police, records personnel, traffic engineers, records systems analysts and other officials who maintain and process traffic records.

The subject of the second workshop is the *Compatibility of Design Standards - Driver, Vehicle and Highway*. This workshop includes discussion of such issues as the 1978 Highway Safety Review, the Three "R" Program, roadway design standards and tort liability.

In addition, there will be workshops concerning vehicle safety equipment, driver training and improvement, child safety, and current issues in police traffic services (including enforcement of the 55 MPH speed limit).

All of the sessions included in the Traffic Safety Program will be conducted at the Pick Congress Hotel, 520 South Michigan Avenue, Chicago, Illinois. The at-show registration fee for the entire 1979 National Safety Congress and Exposition is \$55.00.

Persons who attend the Congress for only one day may register at a fee of \$30.00. For more information concerning the Congress or the Traffic Safety Program, contact:

John T. Fay or Richard L. Tippie
Traffic Safety Department
National Safety Council
444 North Michigan Avenue
Chicago, IL 60611

(See page five.)

MICHIGANITE

Official Publication
Michigan Section

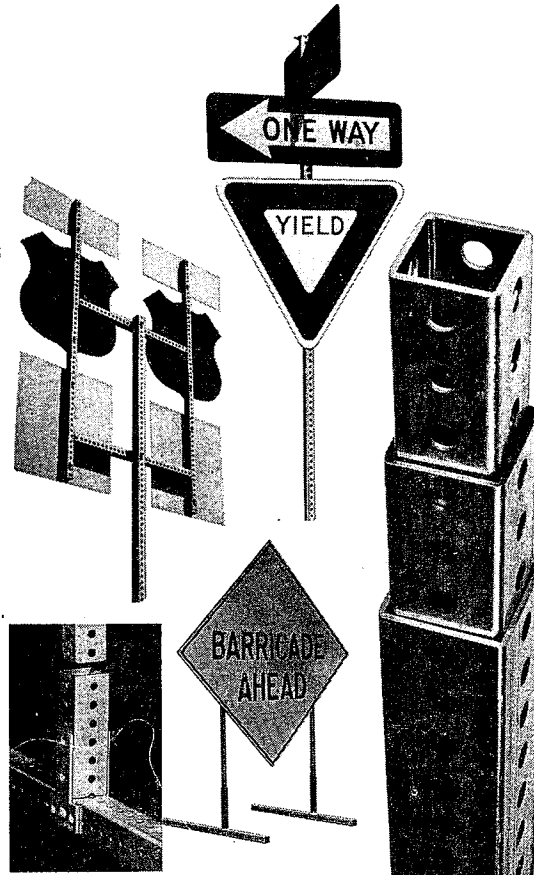
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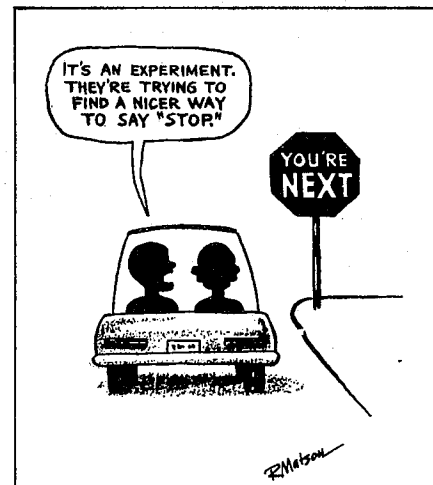
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 Traffic Safety Association of Detroit
 310 Veterans Memorial Building
 Detroit, Michigan 48226
 Prepared by the
 Traffic Safety Association of Detroit



CHILD SAFETY RESTRAINTS PUSHED BY SECTION ACTION

The Michigan Section ITE public information booth on child automobile safety seats was presented at Oakland Mall in Troy, Michigan on August 11-12. The booth contained examples of approved car seats and various hand-out materials including a buyers' guide. In addition, a drawing was held to give away a child seat that was donated by the Section.

The Public Information booth was manned by members of the Michigan Section during the hours of mall operation. Special thanks go to the following members for their assistance:

David Allyn	Mike Labadie
Richard Beaubien	David Litvin
Tom Brennan	Joe Marson
Howard Cox	Charles Michalski
John Crane	Mark Oumedian
Robert DeCorte	Dennis Randolph
Mark Flak	Gary Smith

Prior to the information booth, news releases were sent to the various local newspapers and radio and television stations. From this release, articles on the booth appeared in five local newspapers and there was coverage by

a Detroit television station WJBK-TV. As a result of this publicity, there were numerous instances of people indicating that they had seen the newspaper articles and had come to the mall that day to specifically view the booth.

In all, it is estimated that approximately 300-400 people viewed the booth during the two days of operation. The public information program served two useful purposes: 1) Literature on what are safe child restraint systems were distributed to the public and 2) The ITE received much favorable publicity both through the newspaper and TV coverage as well as the visibility to the public at the booth.

Again, my thanks to the members who took time from their schedules to assist in this program, and OHSP, Secretary of State Office and AAA which provided much of the material used at the booth.

Richard A. Cunard
 Chairman, Transportation
 Safety Committee



Section members man Child Safety Display Booth at Oakland Mall. Additional booth displays at Malls are scheduled.

Once past the first critical days of life, injuries suffered while riding in automobiles are responsible for the deaths of more young children than any single disease or other type of accident.

In Michigan during the two years of 1977 and 1978, 45 child passengers under the age of five years were killed and an estimated 24,000 to 32,000 more were injured. In the same two-year period, 92 children between the ages of five and 15 years were killed while riding as passengers, and an additional 18,000 were injured.

Accident studies have indicated that the use of child restraints can almost eliminate the chance of serious or fatal injury to children riding in cars. These studies have also indicated that the use of seat belts by the children in the five to 15 year age group reduces the chances of fatal injury by at least 80 percent and the chance of serious injury by 64 percent.

Given the dimensions of this threat to the health of our children, the proven effectiveness of the countermeasures, and the fact that children must be dependent on adults for protection, we are convinced that the most reliable method of getting parents to adequately protect their children is through the enactment of restrain usage legislation.

Therefore, the Michigan Section of the Institute of Transportation Engineers recommends that the legislature vote to enact Senate Bill 400.



EFFECTIVENESS OF SAFETY IMPROVEMENTS

Accident Reduction (%)

PROGRAM	FATAL (F)	INJURY (I)	PDO	TOTAL
Rail-Highway	53	49	36	42
High Hazard	44	18	23	21
Road Obstacle	32	--	4	4
Safer Roads	21	--	--	--

Annual Cost Per Accident Reduces \$1,000

PROGRAM	(F)	(F&I)	TOTAL
Rail-Highway	301	41	21.6
High Hazard	178	12	3.3
Road Obstacle	122	--	17.6
Safer Roads	95	--	--

FHA Researches Roadside Hazards

The Federal Highway Administration has been sponsoring much research on highway safety. One of the latest studies, "Hazardous Effects of Highway Features and Roadside Objects" has now been summarized in the June 1979 issue of *Public Roads*, a journal of Highway Research and Development. One factor becoming increasingly apparent is that curves on undivided highways are the locus of significantly more accidents than are tangent sections. In particular, curves to the left, on downgrades, were especially over-represented as accident sites.

Analysis of guardrail involved accidents suggests a continuing need to upgrade our guardrail designs and placement to the newest standards to improve guardrail performance. Forty-six percent of guardrail hits resulted in sudden stops (12 percent), vaulting or becoming airborne (3 percent) or otherwise traveling through or over the guardrail (31 percent). These three kinds of guardrail involvements were also the ones most apt to produce driver injury, or fatality.

Other data tends to confirm the "clear roadside" concept. Approximately 17.7 percent of vehicles in the sample studied, escaped impacts in the first departure without a clear zone. The percentage of vehicles escaping impacts per unit width of clear zone was nearly constant at about 1 percent returning per meter of width from edge of roadway, after deducting the initial 17.7 percent. That is, of vehicles straying

0.9 meters from the edge of roadway, 18.3 percent returned safely: Of vehicles straying 30.5 meters, 48.5 percent returned safely.

Overall, the results of the study indicate certain roadway factors are of much more importance to highway safety than other factors. Some of the more important appear to be the treatment of curves (especially left curves), down-slopes and vertical curves, offset distances, and the height of fill and ditches. Our designs for safety should be based on how a driver is apt to operate a vehicle, rather than stipulating what a driver should do.

Highway Safety Improvement Programs

A recent analysis of highway safety improvements shows that high-hazard location projects are quite cost-effective. The cost to reduce a fatal and injury accident and the cost to reduce an accident of any type were lowest among all funding sources. (See Table Below). Over 80 percent of the high-hazard projects were either intersection or cross-section type improvements.

Roadside obstacle projects were very successful in reducing fatal accidents but provided no significant reduction in any other accident. Cost to reduce a fatal accident was next to lowest among all categories analyzed. About half the projects in this category were for the installation or upgrading of guardrail.

The Rail-Highway Grade Crossing program showed the largest percentage reduction in accident for all severities but at the highest costs.

LEGISLATIVE "UPDATE"

Several bills have been introduced during the current session on topics of particular interest to the membership.

Thus far, *Senate Bill 471* (Hertel) has seen the most activity...on July 6th the amended bill was adopted by the Senate on a close 20-13 vote. The modified bill would not only impose penalty "points" on the driving record of convicted violators of the 55 MPH Speed Limit during a "declared energy emergency", but as amended, would impose a 1 point penalty at all times, regardless of whether or not an energy emergency had been declared. The bill now moves to the House for consideration.

Three bills dealing with "occupant restraints" have also been introduced, although none have seen any action to date.

Senate Bill 394 (Kelly) would provide up to a \$50 tax credit for anyone (parent or guardian) who purchases an approved infant or child restraint (seat).

Senate Bill 399 (G. Hart) would require safety belt use by "each driver and front passenger of a motor vehicle..." There are several categories to exempt certain vehicles and individuals. Also...no points would be assessed for a violation and failure to have the belt fastened "shall not be considered evidence of contributory negligence nor limit liability of an insurer..." The proposal has a built-in sunset clause - it expires 3 years after it takes effect.

(Continued on page 8.)



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ABSTRACT OF SECTION WINNING STUDENT PAPER FOR 1979

A Probability Model For Predicting Safety Benefits of Median Barrier Installation

by
Wen-Hou-Kuo

Investigators have examined the presumed safety benefits of barrier installation from an empirical standpoint. These have largely been "before and after" studies of median barrier installations. These studies are more qualitative than quantitative in the sense that there usually was not enough data to provide conclusions encompassing the range of relevant variables encountered in practice. Moreover, field studies of unique barrier and traffic conditions are inherently ungeneralizable.

For this reason, we have developed probability models which estimate, for any selected safety criterion, accident frequencies involving median barrier and cross-median multi-vehicle collision without barrier. Consequently, the net safety benefits of barrier installation can be predicted for any selected safety criterion. Our approach on median barrier installation decision-making is straightforward and takes account of as many factors as was considered feasible. The developed models are tested against available data from the highway literature and Michigan accident records with encouraging results.

In this context, we present techniques for converting the basic data (θ , y , x) to the distribution $G(\theta)$ of the encroachment angle θ , the conditional distribution $F\theta(y)$ of the maximum lateral distance of a vehicle encroaching onto median with angle θ and the traveling path of a vehicle encroaching onto median. $G(\theta)$, $F\theta(y)$ and the traveling path are the essential information needed in the developed probability models.

We also present a hypothetical example to demonstrate the decision-making process on the median barrier installation.

TECHNICAL SESSION

June 28, 1979

Approximately 50 members of the section and the Michigan IMSA section viewed demonstrations of the various new products by seven vendors in the Southfield Public Works Bldg. Those present also viewed an enjoyable and very informative management oriented video tape.

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At 5:30 p.m. the meeting adjourned to the Southfield Holiday Inn where a social hour was followed by an enjoyable dinner.

The speaker Mr. Graham Casserly of Public Technology, Inc., outlined his organization's activities.

Mr. Casserly provided an informative and entertaining talk. PTI began in 1971 as a program to tap NASA intelligence and skills to provide local jurisdictions with information and solutions to problems. It is a non-profit organization, quartered in Washington, D.C., with a staff of 85. It has an annual budget of \$5,000,000 from Federal grants and contracts, major foundation grants, and membership fees of member local governments. Currently there are 100 PTI member organizations.

The functions of PTI include identifying local government needs, describing them with constraints, prioritizing them, aggregating them, organizing projects and development fund, and overseeing projects to fruition by providing local government with problem solving products. Some urban problems being attacked by PTI are self-contained breathing apparatus for firemen, short-range communication system, pavement marking, protective clothing for firemen, underground pipe and conduit locator, automatic fire hose flow regulator, command control center design, body armor for policemen, toxic and flammable waste disposal and electrical fault detection.

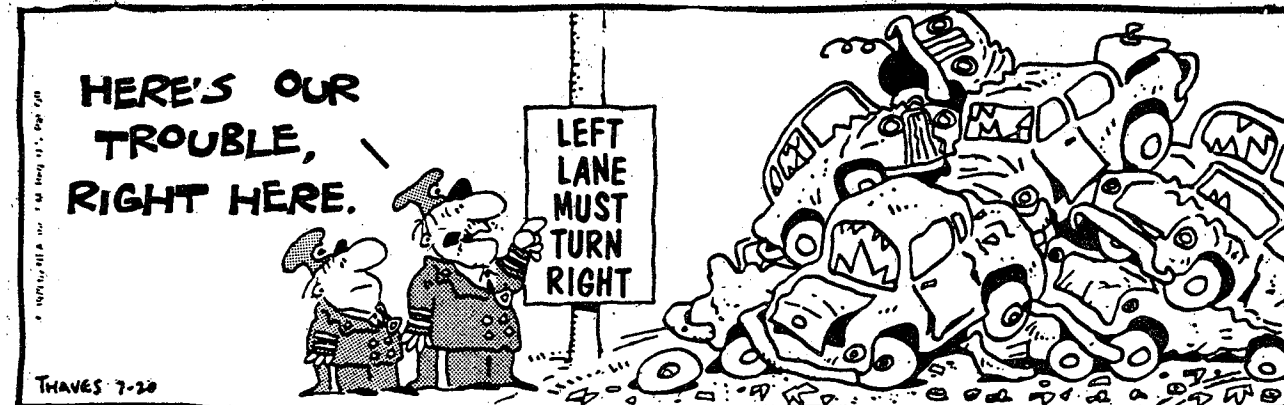
In transportation, PTI has five projects at \$750,000. They include elderly and handicapped transportation, transportation planning and impact forecasting, transit pricing to improve productivity, transit system productivity, and monthly reports on UMTA demonstration projects. PTI documents exist on street patching operations, auto fuel dispensing, the wetted salt process and lighting protection for traffic control systems.

If you are interested in becoming a member organization of PTI, please contact Mr. Graham Casserly at PTI, 1140 Connecticut Avenue, NW, Washington, D.C., 20036. If you have interest in obtaining any PTI documents, please contact Alinda C. Burke at the same address.



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SCANDI SYSTEM ABOUT A YEAR AWAY FOR FREEWAY MOTORISTS

In about a year, motorists on 32.5 miles of freeways within the city will be served by the first stage of the Surveillance, Control, and Driver Information System (SCANDI), a \$10.3 million project of the Michigan Dept. of Transportation.

About 40% of the total project presently is complete, according to Noel Smith, MDOT's project engineer in charge of construction, with the bulk of the installation expected to be finished by the end of the year. Debugging of hardware, wrapping up of applications software work, and other assignments are expected to result in the completion of the system by Spring 1980.

INCREASE FREEWAY EFFICIENCY

MDOT's Detroit Freeway Operations Unit has been given the task of planning, administering, implementation, operating, and providing for the continuous updating of the SCANDI project.

Herbert Crane, MDOT's supervising engineer in charge of the freeway unit, explained in a recent interview that the goal of the SCANDI project is to increase the efficiency of the metropolitan freeway system by reducing traffic clogging incidents.

"The purpose of SCANDI is essentially to monitor freeway traffic flow rates, determine where bottlenecks occur, and to speed the response of various agencies (police, fire, and others) to reduce as quickly as possible the source of congestion," he said. Pointing to an illustration and charts depicting MDOT's six level classification of freeway traffic congestion and analysis of traffic flow rates, he noted that tieups happen where traffic demand exceeds freeway capacity, or when incidents such as an accident, stalled vehicle, debris partially blocking a lane, and so forth, impose temporary restrictions. Not only do the latter reduce traffic capacity in the immediate vicinity of the blockage, but the resulting reductions in the speed of the vehicles and backups of stop-and-go, bumper to bumper traffic further lowers it, on many occasions for up to a few miles.

DATA TO AID MASS TRANSIT

SCANDI by itself can't eliminate all freeway traffic problems but when the first stage is operational, it will not only help reduce the time incidents restrict the freeways it serves, but will provide more accurate, computerized data to MDOT on the routes. The potential for using it in planning for

the future use of the freeways — for such things as restricted access lanes for mass transit and car pools, besides traffic growth — is obvious.

MOTORIST CALL BOXES

To start accomplishing this, SCANDI's first stage will involve about 1,300 traffic detection loops installed in the pavement of all of the Lodge (US-10) and Ford (I-94) freeways in the city, along with a portion of the Chrysler (I-75 & I-375) freeways from the Ford freeway south to the downtown area at Jefferson, and a two mile stretch of the Fisher (I-75) freeway from the Jeffries (I-96) freeway to the Chrysler freeway. The loops, mostly diamond shaped, are installed in every lane at one-third mile intervals and are tied into electronic traffic detectors that feed into telemetry equipment, line amplifiers, and coaxial cable to a control room in the freeway unit's offices in the Sentinel Building, at Chene and East Jefferson.

In addition to the traffic detectors, being installed on both sides of the Ford freeway at one-third mile intervals are 70 motorist's aid call boxes to permit quick telephone contact with the Michigan State Police. The route also will have ramp metering devices at six interchanges — Chene, Mt. Elliot, Van Dyke, Gratiot, French, and Connor — and four closed circuit television cameras will scan a stretch of I-94 between Trumbull and St. Aubin, including intersections at the Lodge and Chrysler freeways.

TV CAMERAS MONITOR FREEWAY

Besides the normal freeway lanes, Crane added, detection loops are being placed on exit and entrance ramps. As for the television cameras, the communication system now being installed will have provisions for additional cameras to cover the entire SCANDI system. The cameras will allow for visual confirmation and additional detailing of information provided by the loops.

Crane added that MDOT hopes to go out for bids in August for a project to install driver information signs on freeway approaches to Detroit's central business district.

Loop occupancy pulses from the detector system will be processed by a computer system at the Sentinel Building control building, with the data used in compiling a computer generated map that will be projected on a large screen television display Sections of

freeway where traffic tieups are occurring will be flagged by the computer for an operator immediate attention. A color code will additionally be used to indicate overall traffic conditions.

Also monitored at the control room will be the closed circuit television system, the motorists call box activity (although it will be tied directly to the state police freeway patrol dispatcher), and police freeway patrol radio frequencies. The control room operator will be able to communicate with the police involved in keeping the freeway system operating smoothly, thereby speeding up their response time to detected conditions.

The sensors for SCANDI — the traffic detection loops — include an experimental system installed about three years ago in the Lodge freeway. These take the shape of a box. But the ones currently being installed are diamond shaped, a form that MDOT has found, by field adjustment, to provide greater accuracy in traffic counting.

MAGNETIC FIELD NO HAZARD

Wendell Blikken, MDOT's electrical engineer for SCANDI (whom Crane said was responsible for adapting the diamond shaped detector for the system), explained that the detection loops emit a very weak electromagnetic field at a specified frequency. Conductive material passing through the field causes the resonant frequency to increase, which is detected and turned into a pulse that's transmitted to the control room. The duration of the pulse and the number of them over a period of time result in an accurate (about 99.7%) assessment of actual traffic flow.

Blikken said that only a very weak field is necessary, since vehicles passing through it will present conductive (metal body) surfaces within eight to 48 in. from the loops. The fields from the loops will not pose any harm to pedestrians — who aren't supposed to be on freeways in the first place — much less to drivers who are further shielded by the vehicles they are operating.

24 SYSTEMS IN U.S.

Environmental effects upon the fields due to temperature fluctuations and weather variations are compensated by the detector's internal circuitry, which also has other provisions to aid in the overall operation of the system.

Blikken said that diamond shaped loop had been tried in other freeway traffic control systems in the U.S. (there are a total of 24 presently opera-

ting), but while the shape has the potential for providing for more accurate counts than the box shape (due to the shape of field it can project), up until now the results had not been achieved in practice, as far as he knows.

"It appears that the depth, amount, and placement of reinforcing steel (in pavement) has an effect on the sensing characteristics of the detector and loop," Blikken said. In order to compensate for the effect, he developed a method of providing for adjustments at the site for each loop prior to installation.

Before installing a loop, a crew uses a mobile loop and test coil equipment to determine what size will be necessary to provide the needed coverage across the width of a lane, while compensating for or rejecting any effects caused by the reinforcing steel. After the size is determined, the crew marks the pavement and a concrete saw is used to cut grooves for the loop.

BOTTLENECKS LESS FREQUENT

The loops on a particular section of freeway are sealed in place with a polyester material. An epoxy material had been used earlier in the project, Crane said, but it required that the cut be totally dry in order to achieve a good bond. The polyester material proved to be less moisture sensitive.

Cabling is run from the loops to the side of the freeway, with a sand-cement mixture tamped into place where the undermining of pavement was needed, Smith said. He added that where there were longitudinal joints in the pavement crossed by the cabling, a short, flexible conduit was used to provide for some flexing.

While the first stage of SCANDI is about a year from beginning operations, considerations have been made for extending the system for all 65 miles of freeway within Detroit. Eventually it could be expanded to accommodate the suburban areas surrounding the city, encompassing up to a total of 187 miles.

Still, with only half the city's freeways to receive computerized traffic monitoring, bottlenecks may very soon become a less frequent driver aggravation.

REMEMBER
ITE International Meeting
Toronto Ontario
Sept. 23-27, 1979

TRAFFIC WORKSHOPS AT NSC CONGRESS

(Continued from page one.)

TUESDAY MORNING, October 16
Pick Congress Hotel, Third Floor, Lincoln Room
9:00 a.m. to 12:00 Noon

WORKSHOP A. Accident Record System Design and Uses

A morning workshop for police, records personnel, records systems analysts, traffic engineers and other officials who maintain and process traffic records.

Moderator:

John J. Zogby, Deputy Secretary, Safety Administration, Department of Transportation
Harrisburg, Pennsylvania, Chairman, Traffic Records Committee

"Accident Data Improvement Plan — Status Report"

Clayton E. Hatch, Manager, Traffic Records Program, National Highway Traffic Safety Administration, Washington, D.C.

"Accident Records for Aerial Surveillance and Enforcement of 55 MPH Speed Limit"

Major Bernard G. Stanalonis, Director, Bureau of Patrol, Pennsylvania State Police, Harrisburg, Pennsylvania.

"Wyoming's Urban Accident Location System"

Richard V. Uthoff, P.E., State Highway Safety Eng., Wyoming Highway Department, Cheyenne, Wyoming
Donald G. Pruter, P.E., Highway Safety Analysis Eng., Wyoming Highway Department, Cheyenne, Wyoming

TUESDAY AFTERNOON, October 16
Pick Congress Hotel, Third Floor, Board Room
2:00 p.m. to 5:00 p.m.

WORKSHOP D. Compatibility of Design Standards — Driver, Vehicle and Highway

An afternoon workshop featuring the importance of compatible design standards relating to the driver, the vehicle and the highway and the latest research efforts pertaining to design standards.

Moderator:

James E. Wilson, President, Signal Products Division, Amerace Corporation, Niles, Illinois, Chairman, Committee on the Roadway Environment, National Safety Council

"Roadway Design Standards — Compatibility with Vehicles"

Gene Butth, Ph.D., Head, Safety Director, Texas Transportation Institute, Texas A & M University, College Station, Texas

"1978 Highway Safety Review"

Clark Bennett, Chief, Program Evaluation Division, Office of Highway Safety, Federal Highway Administration, Washington, D.C.

"The Three 'R' Program"

Andrew Gazda, Chief of Policy & Procedures Section, Bureau of Location & Environment, Illinois Department of Transportation, Springfield, Illinois

"Vehicle Mix"

William Boehly, Chief, Integrated Vehicle Research Division Office of Passenger Vehicle Research, National Highway Traffic Safety, Washington, D.C.

"Tort Liability"

Floyd W. Taylor, General Counsel, Oklahoma Department of Transportation, Oklahoma City, Oklahoma

MICHIGAN SECTION ITE TREASURER'S REPORT August 16, 1979

Balance Forwarded 6-20-79		
Savings Account	\$2,512.31	
Checking Account	50.77	\$2,563.08
Receipts:		
Membership Dues	\$ 80.00	
Ad Int.	117.00	
Vendors Day	31.06	
	268.75	\$ 496.81
Expenses:		
Child Restraint Program	\$ 70.00	
Michiganite Printing & Mailing	318.00	
Bank Charge	7.98	
Postage	37.72	\$ 433.70
Balance on Hand 7-27-79		
Savings	\$2,543.37	
Checking	82.82	\$2,626.19
Hospitality Fund \$537.05		
		Robert V. DeCorte Treasurer

Professional Engineering Openings —

CITY OF JOLIET CITY ENGINEER/ASST PUBLIC WORKS DIRECTOR

Performs administrative and professional engineering duties, and assumes responsibility for four (4) Division Public Works Department in Director's absence. Extensive experience in CE, including progressively increasing responsibility for planning and directing major traffic engineering project, combined with progressively responsible experience in the area of governmental public works. Graduation from a college or university of recognized standing with major in civil or traffic engineering. Reg State of Illinois PE or reciprocal ability. Salary \$22,349-\$29,798. Resumes to Director of Personnel, City of Joliet, 150 W. Jefferson Street, Joliet, IL 60431, prior to 24 August 79.

CITY OF JOLIET CIVIL ENGINEER II

Performs journeyman level professional CE work within the Public Works Department; assigned as project leader in field or office; independent effort afforded and required; related experience must include background in traffic engineering. Graduation from a college or university of recognized standing with a major in civil or traffic engineering. Reg State of Illinois PE or reciprocal ability. Salary \$18,456-\$24,605. Resumes to Director of Personnel, City of Joliet, 150 W. Jefferson Street, Joliet, IL 60431, prior to 24 August 79.

CURRENT GAS TAX AVERAGES IN EUROPE AND THE USA

United States (Federal and State averages)	\$0.12 per gallon
Italy	\$1.54 per gallon
Belgium	\$1.18 per gallon
West Germany	\$1.02 per gallon
Britain	\$0.69 per gallon
Spain	\$0.55 per gallon

These figures were reported on TAX NOTES, a weekly publication.