

roads bridges transit technology

news

Local Transportation Information Center
Iowa State University Engineering Extension Service

June 1983

Toll-free Info-Line is in operation

If you have a bridge repair problem, a question about street maintenance or a need for funding information, the Transportation Info-Line can help. The Info-Line is a toll-free phone service which enables you to call ISU's Local Transportation Information Center at no charge. The phone number is 1-800-262-8498.

Here's how the Info-Line service works. Your call will be answered by a Local Transportation Information Center staff person. He or she will record your request and refer it immediately to the ISU specialist in the subject matter area of your request. The appropriate special-

ist will return your call to respond to your question directly, to acquire more detailed information or, if necessary, to set up a visit to the site of the problem. If the specialist feels the situation requires in-depth analysis, you may be informed that a consultant should be contacted.

ISU specialists in the areas of streets and roads, bridges and public transportation will provide you with the technical know-how to help you solve your particular problem.

The Info-Line service is now in operation. Until August 19, the phone will be answered

Monday through Friday from 7:30 a.m. until 4:00 p.m. After August 19, the hours of operation will be 8:00 a.m. until 5:00 p.m. Please note that the toll-free number can service Iowa residents only and that Ames area residents should call 294-7834.

The Info-Line is available to serve you. So, the next time you run into a tricky problem or need some expert advice, remember to call the Transportation Info-Line for help.

The preparation of this newsletter was financed in part through federal funds provided by the Federal Highway Administration. The opinions, findings, or recommendations expressed here are those of the Local Transportation Information Center and do not necessarily reflect the views of the Federal Highway Administration or those of the Iowa Department of Transportation.

And justice for all

Appointment, promotion, admission, and programs of University Extension at Iowa State University are administered equally to all without regard to race, color, creed, sex, national origin, disability, or age. Call the Affirmative Action Office at 515/294-7612 to report discrimination.



Transportation Info-Line

When you need answers
call toll-free
1-800-262-8498

In Ames call
294-7834

roads bridges transit

Clip and keep near your phone

Bridge funding increased

The Surface Transportation Assistance Act of 1982 has extended the "Highway Bridge Replacement and Rehabilitation Program" funding through FY 1986. Thanks to the increased federal fuel taxes, the amounts available are approximately double the previous level of funding. Estimated allocations for the State of Iowa are:

FY 1983 = \$37.3 M
FY 1984 = \$38.6 M
FY 1985 = \$41.3 M
FY 1986 = \$49.3 M

Federal participation in qualifying projects continues to be 80 percent of the eligible costs. At least 15 percent but not more than 35 percent must be expended on structures not on the Federal-Aid System. Funds must be made available throughout the state on a fair and equitable basis. They are to be divided each fiscal year between the state, counties, and cities as determined by the Iowa Department of Transportation after consultation with county and city officials through their representative organizations. Counties' and cities' portions are administered by the DOT's Office of Local Systems.

A county pays the entire amount initially, either from that county's Farm to Market or Secondary Road funds. Federal-aid (FA) is earned and reimbursement is made at the rate of 80 percent of eligible costs, as follows: 25 percent of the FA earned is deposited in the general Farm to Market (FM) fund

up to a total amount of \$50,000 per county per calendar year; the remaining

75 percent of the FA is reimbursed to the county fund from which it was paid, until the \$50,000 FM deposit has been satisfied; beyond that point, the entire FA reimbursement goes to the county. The county also receives its share of the FM funds distribution. This method is an attempt to let each county benefit, yet give the greatest benefit to those counties with the deficient bridge replacement projects.

Cities submit information on candidate bridge projects which are then prioritized on a point system. Ten percent of the cities' apportionment is reserved for rehabilitation, with \$100,000 maximum FA per project. The other 90 percent is for replacements on a priority basis, with \$650,000 maximum FA per project. As with counties, FA is earned at the rate of 80 percent of eligible costs. Cities provide all engineering except on larger projects, where engineering may be a participating item.

The method of distribution of FA will be reviewed by state, county, and city representatives each year for possible modification to adjust to changing conditions.

Additional information may be obtained from DOT District Offices or the Office of Local Systems. —**Lowell E. Richardson** -P.E., Director Office of Local Systems, DOT

Successful street maintenance workshop to be repeated

The Local Transportation Information Center recently sponsored two workshops on street maintenance for small communities. 102 people attended in Waterloo on May 4, and 57 attended the May 6th workshop in Council Bluffs.

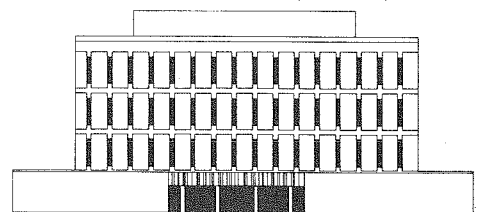
Participants learned about techniques, specifications and construction procedures involved in the maintenance of Portland cement concrete and asphaltic concrete pavements. They received a detailed set of course notes on street maintenance practices.

The workshop, which was given high marks in participants' evaluations, will be repeated in Ottumwa on July 20 and in Sioux City on July 22. If you are interested in receiving registration information, write to the Local Transportation Information Center, 110 Marston Hall, ISU, Ames, Iowa 50011; or call toll-free 1-800-262-8498.

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110 Marston Hall
Iowa State University
Ames, Iowa 50011
Phone 515/294-7834

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civil engineering extension





for more information

The Pothole Primer: A Public Administrator's Guide to Understanding and Managing the Pothole Problem is a 24 page publication prepared by the U.S. Army Corps of Engineers. This non-technical well-illustrated booklet is designed to assist elected officials and non-engineering administrators in understanding the major causes and general solutions to pothole problems in asphalt pavements. It includes information on legal and public relations aspects of safety; identifying and cataloguing pothole causes; drainage; preventive maintenance programs; patching procedures and training and education.

The Pothole Primer is provided in the course notes at the Street Maintenance for Small Communities Workshop. It is available free of charge by writing Stan Ring, Local Transportation Information Center, 110 Marston Hall, ISU, Ames, 50011. Or you may call 1-800-262-8498.

The Iowa AAA has 24 films, slide presentations and video tapes available for loan free of charge for schools, civic clubs or drivers education classes. Subjects include motorcycle safety, drunk driving, safe winter driving, school and child safety and bicycle safety. For a complete list of titles and a request form, contact R.C. (Bob) Birr, Iowa AAA, 2050 Grand, Des Moines, Iowa 50312; phone 515/282-2151.

One way to help reduce the possibility of traffic accidents and mitigate the risk of agency or personal tort liability is to properly maintain an inventory and filing system. **The Traffic Sign Inventory System**

Manual provides a guide to developing such a system. To accomplish the steps involved in setting up a system, the manual contains a series of forms which are described and discussed in detail.

A similar manual, **The Traffic Signal Inventory System**, can provide cities and towns with a method for developing a traffic control signal inventory and record keeping system. The system is applicable for cities with one to 200 or more installations. A series of forms are provided to assist your development of the system.

Both manuals are available free from DOT's Office of Road Design-Safety, 800 Lincoln Way, Ames, Iowa 50010; phone 515/239-1184. Or you may obtain a copy from your District Local Systems Engineer (see phone numbers listed elsewhere in this newsletter).

An excellent **slide-tape program on Maintaining Granular Surfaced Roads** is available from the Iowa DOT. The program was developed to help motor grader operators to better understand the procedures required to maintain aggregate surfaced roads. Areas discussed include: dragging, cutting crests, sags, crown, intersections, super elevation and safety. The program consists of 127 slides, a bound script, a carousel tray and a cassette tape (cued to 1000 Hertz system) that plays approximately 14 minutes.

Each DOT District Office has a copy of the program available for loan to cities and counties. Or, the program can be purchased from the DOT at a cost of \$40. Contact: Kevin Jones, Secondary Road

Tort claims against cities continue to rise

The amount of tort claims filed against cities in Iowa continues to mount. Although no precise figures are available, knowledgeable observers are convinced that claims relating to the highway function also are increasing rapidly.

A recent Supreme Court decision that introduced the concept of comparative negligence into Iowa law should make suits against public entities even more attractive to potential litigants against cities. Persons who feel that they have been wronged due to negligent actions relating to the provision of highway services are also encouraged by another recent court decision that found the state negligent for failing to upgrade guardrails as standards changed. Similar findings relating to various geometric design features of urban streets, where standards may also have changed since the original design, may be expected and could have a profound effect upon the basis for a city's programming of street improvements.

However, alleged deficiencies in the use of traffic control devices continues to afford the basis for most street-related tort claims. Increasing care and attention to the provisions of the Manual on Uniform Traffic Control Devices is essential if city officials are to reverse the trend of increasing tort liability claims growing out of their responsibility for providing highway services. —R. L. (Sam) Carstens, professor, civil engineering, ISU

Research Coordinator, Iowa DOT, 800 Lincoln Way, Ames, Iowa 50010; phone 515/239-1382.

Traffic engineering consultant service is free

Communities with problem school routes, intersection conflicts or outdated traffic control devices can benefit from a hassle-free service provided by Iowa DOT's Local Traffic Engineering Assistance Program.

Two types of assistance are available. Under the first method, a city official can call or write DOT's Highway Division to request help with a traffic engineering problem. Within a couple of weeks, a traffic engineering consultant from DOT will visit the community to investigate the problems and suggest solutions.

A community with numerous traffic problems may choose the second method whereby the city receives a grant

to hire a traffic engineering consultant of its choice to conduct a study.

In both methods, which are federally funded, the consultant tells the city or county how much the project recommendations will cost, how long it will take to complete them, and possible sources of funding. There is no charge for this service.

In addition, a number of federal and state programs are available to help fund the recommended traffic safety improvements.

For more information, contact Robert Andresen, Office of Safety Programs, Lucas State Office Building, Des Moines, Iowa 50319; 515/281-5014.

Small bridge repair to be discussed

There are problems with most of our small bridges. Many difficulties tend to be ignored because of lack of funds or lack of technical knowledge. The Local Transportation Information Center can help keep you informed of sources for funding small bridge repairs. For example, proper completion and submittal of FHWA structure inventory and appraisal forms is a first step to securing funds. The government uses these forms to establish their priorities for the distribution of funds.

And, through a regular column in Technology News, we can share technical information about small bridge repair.

Do you have experience with innovative procedures, a successful bridge repair or any of the procedures listed below?

- *Strengthening small bridges
- *Stress analysis for small bridges
- *Small bridge rating
- *Small bridge inspection
- *Personal computer applications
- *Funding sources

If you would like to share your small bridge repair experiences with others, please contact me. I would like to use your name and findings for my reference source. Some of the more common problems or findings will be covered in future newsletters.

Also, if you need specific information on any of the topics listed here, please let me know. You may fill out the form in this newsletter or call directly on the Info-Line (1-800-262-8498) ---
Robert H. Day, P.E., 412 Town Engineering Building, ISU, Ames, Iowa 50011.

conference 1 2 3 calendar

20th Annual School Transportation Conference July 18-21, ISU, Ames

Topics to be covered: For Supervisors and Administrators-child restraints; enforcement and licensing; productivity; communications; documentations; computer routing; life cycle costing. For Mechanics electronic ignition; stress and torque; new products and services; suspension; shock absorbers and exhaust systems; economics of front end alignment; troubleshooting LP units, Detroit diesels, IH diesels, gasoline engines. **Contact:** Gayle Fay, Engineering Service, 110 Marston Hall, ISU, Ames, Iowa 50011; phone 515/294-8190.

APWA Annual Conference August 18-19, Fort Dodge

Topics to be covered: sewer maintenance, snow removal policies, operator certification, quality circles applications, contracting for services, sidewalks, weed control, pavement management and computer aided design. **Contact:** Ron Kirchner, City Engineer, Fort Dodge, 515/576-3601

ASCE Annual Conference September 16-17, Des Moines

Topics to be covered: EROS/LANDSAT, pile driving, low water stream crossings, slurry cutoff applications, Des Moines Capitol Square construction, pavement maintenance, personal financial planning, liability, and the Des Moines Skywalk system. **Contact:** Harold Smith, City Engineer, Des Moines, 515/283-4920

Accident data improves safety

Just how dangerous is that 'dangerous intersection' in your town? ALAS can tell you. ALAS is an Accident Location and Analysis System developed by Iowa DOT. It is a computerized record of all reportable accidents since January 1, 1977. It can provide you with the statistical means needed to determine safety programs. Here is what ALAS can tell you:

- *High accident locations by city, county, road system.
- *Specific accident information on driver, vehicle and environment.
- *Specific locations such as intersections, railroad crossings, bridges, and road sections.

Data of this kind can provide helpful direction for drivers education programs, public information, selective enforcement and traffic studies.

For more details on how you can retrieve information from the ALAS system, contact Robert Andresen, Office of Safety Programs, Lucas State Office Building, Des Moines, Iowa 50319; 515/281-5014

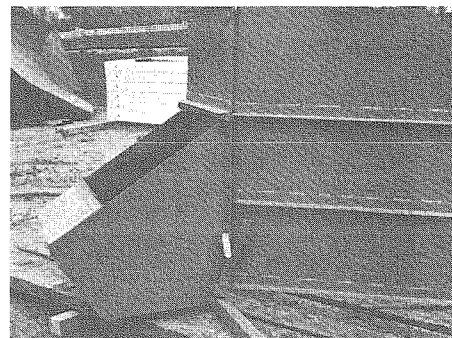
tips from the field

Charles Fisher, the assistant superintendent of Public Works in Spencer, has found that an edge rut dresser developed by the Iowa DOT is a very useful item for his city. A funnel fits into a dump truck to channel gravel to the hopper which then dispenses the gravel at the desired rate. Wheels attached to the hopper provide running gear to minimize wear on the hopper. The tailblade can be adjusted for the amount of gravel desired. When the dump box is in the lowered position for runs to and from the stockpile, the hopper lifts completely off the pavement.

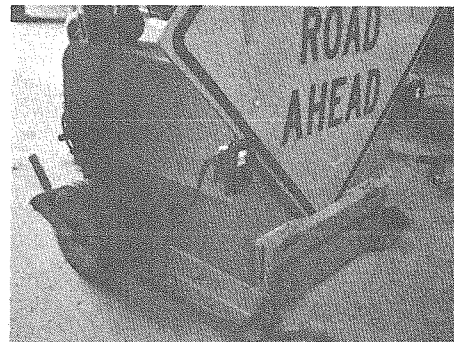
Fisher reports that he is considering making a modified version of this unit. By constructing a dual funnel and utilizing two hoppers, it could be used for filling wheel ruts in alleys.

If you would like more information about the edge rut dresser, contact Fisher at the Department of Public Works, Spencer, Iowa 50301. His phone number is 712/262-6456.

If you have a piece of equipment, an equipment modification or an innovative technique that would be beneficial to others involved with local transportation systems, please share it with us. Contact Dave Dickinson, Local Transportation Information Center, 110 Marston Hall, ISU, Ames, Iowa 50011.



Side view of the funnel



Side view of the hopper

What would you like to read about?

Help us prepare a useful newsletter.

Please let us know what subject matter is of interest to you. Check as many items as you wish or write in others.

Mail to: Technology News, 110 Marston Hall, ISU, Ames, Iowa 50011.

- pothole patching
- pavement design
- pavement reconstruction
- street & road signing
- transportation funding
- bridge inspection
- training course opportunities

- street maintenance practices
- street maintenance equipment
- urban drainage practices
- tort liability
- transit routing
- bridge rehabilitation
- self study opportunities

Other: _____

Funds available for new railroad signs

Your highway jurisdiction may be eligible for assistance in obtaining new railroad crossing advance warning signing. The Iowa DOT Railroad Division's Passive Sign Project will help eligible counties improve the safety of their public railroad/highway grade crossings.

Here's how the Passive Sign Project works. This summer, DOT staff will visit each public grade crossing in Iowa. They will collect information about the physical characteristics of the crossing, install permanent aluminum tags with the unique federal crossing number, and compile a list of those deficient and missing signs which are eligible for replacement.

During the summer of 1984, railroads will be installing new crossbucks, multiple track signs and posts at their public crossings. Local highway jurisdictions can purchase and install the necessary advance warning signs and posts. They can be reimbursed for 90 percent of the actual and necessary costs of the materials and an agreed-to installation price.

In the fall of 1983, the Railroad Division of the Iowa DOT will contact appropriate highway jurisdictions concerning their desire to participate in this project.

For more information about this project, 90 percent of which is funded through the Federal Highway Administration, contact Peggy Baer at the Railroad Division, Iowa Department of Transportation, 515/239-1052.

This is an excellent opportunity to make sure that your advance warning signing is up-to-date. In addition, the replacement crossbucks will have high intensity reflectorization on front and back to improve nighttime visibility and safety.

Who to call at DOT

Office of Local Systems,
Iowa DOT Ames, 515/239-1528

District Local Systems:

District 1 - Ben Klaus, Ames,
515/239-1421

District 2 - Bill Kupka, Mason
City, 515/423-7584

District 3 - Larry Jesse, Sioux
City, 712/276-1451

District 4 - John Pearson,
Atlantic, 712/243-3355

District 5 - Lowell VanderHamm,
Fairfield, 515/472-4171

District 6 - Jim Loy, Cedar
Rapids, 319/364-0235



engineering extension service
Iowa state university

110 Marston Hall
Ames, Iowa 50011

Route to:

Address correction requested.
Include entire mailing label.