

TECHNOLOGY

eXchange

SIGNS AND MARKINGS AT RAILROAD CROSSINGS

At recent Louisiana Local Technical Assistance Program workshops on traffic signs and signals, there have been questions about the use of stop signs and pavement markings at highway/railroad grade crossings. Here is a brief summary of what can be found in Part VII of the *Manual on Uniform Traffic Control Devices* (MUTCD).



Stop Signs

Road and street agencies may place stop signs at railroad crossings where they deem it necessary (Section 8b(9)). The use of stop signs at these locations should be warranted. The MUTCD states that stop signs should only be used when the following conditions apply:

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MEET THE LTAP STEERING COMMITTEE: ED FOREMAN



The newest member of the Louisiana LTAP Center's steering committee is the authority on the T² Center and the

LTAP program: former director Ed Foreman. Foreman was the first director of the Louisiana LTAP Center, steering it from infancy to its ascension as one of the five best centers in the Nation. He retired in 1996 after ten years of service with the program.

Before becoming LTAP director, Foreman spent twenty-three years with

the Federal Highway Administration, working in Colorado, Louisiana, Maryland, Montana, Tennessee, Texas, Washington, and the District of Columbia.

While at the FHWA, Foreman helped invent the Rural Technical Assistance Program, the forerunner of the modern Local Technical Assistance Program.

He was also instrumental in initiating LA's Rural Public Transportation Program.

Prior to his career with the Federal Highway Administration, Foreman had been a project engineer on multi-million dollar highway/bridge construction for the Texas Highway Department.

A LOCAL TECHNICAL ASSISTANCE PROGRAM OF THE LOUISIANA TRANSPORTATION RESEARCH CENTER IN COOPERATION WITH DOTD, FHWA, AND LSU.

- The roadway is secondary in character and has low traffic counts,
- There is substantial train traffic,
- The line of sight to an approaching train is restricted by physical features (such as trees or bridge abutments) such that approaching traffic is required to reduce speed to ten miles per hour or less in order to stop safely if a train is spotted.
- At the stop bar, there must be sufficient sight distance down the track to afford ample time for a vehicle to cross the track before the arrival of the train.

Stop signs should only be considered a temporary measure at a crossing until an active traffic control signal (flashing lights or gates) can be installed, or until the sight restriction can be eliminated. They should also not be installed at a location that already has an active traffic control device. Stop signs, and all other traffic control devices, should be a minimum of twelve feet from the centerline of the nearest set of railroad tracks. Whenever a stop sign is installed at a grade crossing, a "STOP AHEAD" sign shall be installed in advance of the stop sign.

The draft of the upcoming 2000 MUTCD states that stop signs at railroad crossings must be installed on a separate post. Agencies currently



attaching them to the crossbuck post should be advised of this policy change.

Crossbucks and Railroad Advance Warning Signs

The installation and maintenance of the crossbuck signs at railroad grade crossings is generally the duty of the railroad company itself. The local street or highway agency is responsible for any advance warning signs used and also for stop signs installed according to the previous section.

Railroad advance warning signs shall be installed before all grade crossings, except: 1) on

low-volume, low-speed roadways where the train traffic is very infrequent and is flagged by train crews, and 2) in business districts of urban areas where active grade crossing traffic control devices are in use.

The MUTCD specifies the use of a table based on the expected approach speed of oncoming vehicles to determine the distance of the signs from the crossing (Table II-1, Section 2C-3). It should be noted that the minimum installation distance should be increased if the roadway is on a downgrade or if there is a curve at the usual installation location. Whenever the potential for vehicles stopping on tracks is high, a "DO NOT STOP ON TRACKS" sign should be installed. Where railroad tracks have been abandoned or their use discontinued, all related signs and markings shall be removed. A "TRACKS OUT OF SERVICE" sign may be installed until the tracks are removed or covered.

Pavement Markings

Pavement markings are MUTCD required at all

locations where there are automatic devices installed, at all other crossings where the prevailing speed of highway traffic is greater than 40 miles per hour, or where an engineering study indicates a significant existing potential conflict between trains and vehicles. The MUTCD allows an exception to this when an engineering study shows that the other warning devices in place provide suitable control at urban or minor road crossings.

When used, pavement markings should be between the railroad advance warning sign and the crossing, and located closer to the warning sign. Pavement markings shall consist of an X, the letters RR, a no-passing marking on two-lane roads, and several solid lines across the traffic lanes. They should not be used between an intersection and a crossing if there is less than 150 feet between the two.

For more information, contact Bob Canfield, of the National Committee on Uniform Traffic Control Devices, which is responsible for revisions to the MUTCD. Canfield can be reached at (225)466-5667 or (225)272-5192.

ETHICS... WHO NEEDS THEM?

What are ethics? Why should I care? Can I really get into trouble? What are some examples of questionable ethics?

What are ethics? "Ethics" is a code of conduct to help people know how to deal fairly with each other. Ordinarily, ethics covers legalities, policy, and protocol. It is designed to help you make better decisions.

Why should I care about ethics? Because we all want to deal fairly and be fairly dealt with by others. Ethics helps us to know what is fair and keeps us out of trouble. As public servants, we have to keep our reputations and the reputation of our agency above reproach. While most of us have a clear idea of right and wrong, the grey areas can be a problem. Luckily, in Louisiana we have guidance from the Board of Registration for Engineers and Land Surveyors as well as from Louisiana Commission on Governmental Ethics. Either one of these organizations will be able to answer your questions concerning ethics for

engineers, land surveyors and/or public employees. In addition to the two state boards, most cities, parishes, state departments, and consultants have internal rules of conduct

It's not what we don't know that causes trouble, it's what we know that ain't so.

Will Rogers

which address ethics.

Can I really get into trouble? You bet you can! Ethics violations can lead to serious trouble. As a registered professional engineer or land surveyor, you could be subject to fines, loss of your job, loss of reputation, loss of your license and a lot of headaches. And that doesn't just go for engineers and surveyors—any public employee found to be in violation of their organization's code of ethics is subject to reprimand or dismissal.

What are some examples of questionable ethics? The easiest way for a registered land sur-

veyor or engineer to get into trouble concerns the affixation of his stamp. A registered professional engineer or land surveyor should never stamp any work unless he is in charge, responsible for, and in control of the actual work. You may be approached by some non-registered friend or colleague to stamp work that you did not supervise. Usually the approach is "you know I do good work" or "Take fifteen

or twenty minutes to look it over. If you have any questions, I'll answer them." Don't do it! Even if the plans or plat are perfect, you were not in charge of work. If you stamp the work, you make yourself liable for any engineering or surveying mistakes or shortcomings. In addition, by violating your professional trust, you become subject to a fine of up to \$1,500 and/or three months in jail.

Gifts are another problem area for public employees. While it may seem reasonable for a parish employee to trade favors with a personal friend who just happens

to work for a contractor or consultant which has a contract with the parish, it is against the state code of ethics. A person cannot receive anything of value other than his pay check for doing his job. The main exceptions are promotional items and food. A baseball cap with a logo has no resale value, so it is not a thing of value. It may be unseemly to wear a cap or shirt with the name of the company whose work you oversee, but it is not illegal nor unethical under state law. If someone representing an organization that has or is trying to get a contract with your agency asks you to lunch, go. However, that person has to be present when you eat and anything not consumed must be left—no doggy bags!

While it is acceptable for someone else to take you out to eat, you are still required to follow the policies of your organization, including those concerning drinking on the job. Those rules still count even if someone else is picking up the tab. If the host orders several bottles of wine and only the nonpublic participants drink it,

DO YOU HAVE PROBLEMS WITH GRAVEL ROADS? NEW LTAP VIDEO MAY HELP

Over one-third of all roads in Louisiana are unpaved. Unpaved or “gravel” roads present unique and persistent problems to those who maintain them. They tend to corrugate, or washboard, in wet weather and are dusty in dry weather. In addition, loose gravel has been blamed for breaking many windshields. While these problems may seem unavoidable, there is help available.

The national LTAP Clearinghouse has distributed a three-part video entitled “Problems with Gravel Roads” to all Technology Transfer Centers. The video, which was produced by the Federal Highway Administration, covers three critical issues concerning gravel roads:

- Environment and materials
- Problems - causes, prevention and correction
- Maintenance equipment and techniques.

This video, and many others, are available upon request from the T² Center. “Problems with Gravel Roads” will be used in future Roads Scholar Course #1, The Basics of a Good Road, and in mini-workshop #2, Maintenance of Gravel Roads and Shoulders.

ETHICS CONT FROM PAGE 3

Always do the right thing. This will gratify some and astonish the rest.

Will Rogers

don't take the left overs home. That's a breach of ethics.

There are lots of grey areas in ethics. The easiest way to keep out of ethical trouble is to do your job the best you

can and don't accept anything that could even be remotely construed as a bribe or something of value from anyone.

If you have any questions concerning ethics

or registration as a land surveyor or engineer call the Louisiana State Board of Registration for Professional Engineers and Land Surveyors at (225)295-8522 or the Louisiana Board of Ethics at (225)922-1400.

David Grouchy, LTAP director, made a presentation on ethics at the 1999 Louisiana Transportation Engineering Conference.

REMEMBER: THE LAW AND LOGIC HAVE NOTHING IN COMMON

As a public employee, you may at some time be involved in a lawsuit. In representing your agency, you will probably have to give a deposition of facts and possibly testify in court. For most of us, that is a pretty scary prospect. Here are a few pointers to help you feel more comfortable and prepared for the experience.

The purpose of a deposition is to get the facts out in the open and to let the lawyers on both sides see how you behave under pressure. It is part of what the law calls “discovery,” which allows the other side the chance to learn about your experience, your ability to answer questions and handle yourself in a stressful situation. Attorneys for all parties may be present at the deposition, along with a court reporter who will record everything that is said. The deposition is always taken in advance of the actual trial. Quite often, after the depositions are taken and reviewed by both sides, a negotiated settlement is reached and no trial is necessary.

Whether you are giving a deposition or testifying in court, you should remember a few guidelines:

- Everybody has a natural urge to tell their story. Resist this urge.

- Don't make assumptions about what the lawyers need to know or want to know.
- Don't volunteer information, just answer the questions in a brief, succinct manner.



- The opposing attorneys are not your friends, though they may be polite to you. Their job is to beat you and your agency. It does them no good to make you look good.

- You have the right to take your time and get your statements mentally organized before you answer any questions. If you don't understand a question, ask that the

question be rephrased or explained.

- Don't get angry. If you do, you weaken your position and appear to have something to hide.

- If an opposing attorney asks you something that is out of line, your attorney will object. Just keep quiet until he does.

- If your attorney does object to something, stop talking. He is trying to

protect you and your agency. If you keep talking, you may be inadvertently weakening your position.

- If you can't answer the question, say so. It may be a yes/no or either/or question that can't be answered that way. Just say “I can't answer the question as asked.” Don't try to work up an

answer that makes sense, just stay quiet and let the lawyers rephrase the question so that you can answer it properly.

Dealing with lawyers can be stressful especially if they are trying to prove incompetence or negligence on the part of your agency. Remember to stay calm, follow the advice of your agency's lawyer, and tell the truth in the simplest terms you know. You will be glad when it is over, but you will have done your part to see that justice is done.

Adapted in part from an article by Tom Mulinazzi in KUTC Newsletter, Kansas University Transportation Center, Winter 1996-97.

AMITE BRIDGE FAILURE SERVES AS INSPECTION REMINDER

A freak storm on Saturday, March 13 1999, dropped over ten inches of rain over a relatively small area in south Mississippi, just above the LA 10/Amite River Bridge. DOTD maintenance personnel were dispatched on Sunday to check bridges in the area, noticed the large debris accumula-

Flood, scour, and resultant accumulation of debris are the primary causes of bridge failure in the United States. Because scour holes generally fill in as stream flows diminish, post-flood inspections are not always adequate to determine the full extent of scour damage.

bridge located over the Hatchie River cost eight lives and broadened the concern to stability problems of streams as well.

Following the failure of the Schoharie Creek Bridge, the FHWA established a national scour evaluation program. The 1989 revision of the National Bridge Inspection Standards (NBIS) mandated that an

inspection program also include procedures for underwater inspection. The FHWA also issued a Technical Advisory (TA) to provide guidance on the development and implementation of procedures for evaluating bridge scour. The TA indicates that every bridge over a waterway, whether existing or under design, should be evaluated for scour in

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tion around the bridge and had heavy lifting equipment en route to the site when two spans of the bridge collapsed.

The bridge, located on LA 10 between Clinton and Darlington, was being carefully monitored by DOTD District 62 bridge inspectors, but the fateful combination of flood, scour, and debris accumulation was more than the bridge could tolerate.

The catastrophic failure of the Schoharie Creek Bridge on the New York Thruway in April 1987 cost ten lives and focused attention in the United States on the bridge scour problem. In April 1989, the subsequent failure of another New York

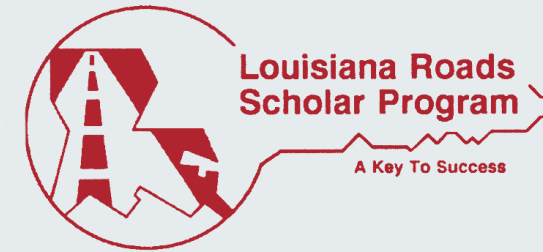


CALENDAR

SCHEDULE OF UPCOMING ROADS SCHOLAR COURSES - 1999

- ◆ Roads Scholar #5 - Safety: A Common Sense Approach for the Public Worker & Roads Scholar #6 - Equipment Operation and Worker Safety
 - Nov 2, 1999 - Baton Rouge
 - Nov 3, 1999 - Jefferson
 - Nov 9, 1999 - Alexandria
 - Nov 10, 1999 - Sulphur
 - Nov 16, 1999 - Lafayette
 - Nov 17, 1999 - Bossier City
 - Nov 18, 1999 - Ruston

- ◆ Moveable Bridge Inspection & Maintenance Workshop
 - Jan 24-28, 2000 - Houma



OTHER EVENTS

- ◆ NOLA - SOAR (Ergon, Inc.)
 - Oct 20, 1999 - Shreveport (?)
- ◆ Grade Crossing Collision Investigation
 - Oct 20-21, 1999 - Walker
- ◆ Practical Highway Bridge Inspection
 - Oct 25-29, 1999 - Ruston
- ◆ Region VI County Road Advisors Conference
 - Nov 9-11, 1999 - San Antonio, TX

AMITE BRIDGE CONT FROM PAGE 6

order to determine prudent measures to be taken for its protection.

Existing bridges found to be scour-critical, either from field observations or results of the analytical scour evaluation, require a plan of action. The plan of action should include instructions; regarding the type and frequency of inspections, particularly as it may relate to the need to close a

bridge if necessary, and a schedule for the timely design and construction of scour countermeasures.

Each DOTD district maintenance office has an action plan to identify all bridges (both on and off state system) susceptible to flood, scour, and debris accumulation.

TECHNOLOGY exchange

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- I have the following suggestion(s) for newsletter articles:

The Louisiana Transportation Technology Transfer (T²) Center was established at the Louisiana Transportation Research Center on the LSU campus in 1986. The purpose of the center is to provide technical materials, information, and training to help local government agencies in Louisiana maintain and improve their roads and bridges in a cost-effective manner. To accomplish this purpose, we:

- publish a quarterly newsletter,
- conduct seminars, workshops, and mini-workshops covering various aspects of transportation,
- provide a lending library service of audio/visual programs on a variety of transportation topics,
- provide technical assistance through phone and mail-in requests relating to transportation technology,
- and undertake special projects of interest to municipalities in Louisiana.

NEED TECHNICAL HELP?.....CONTACT OUR T² CENTER STAFF:

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