TEMPORARY TRAFFIC CONTROL SAFETY

BASIC PRINCIPLES OF WORK ZONE TRAFFIC MANAGEMENT

Temporary traffic control zone safety has become an area of national concern as awareness of risk to workers, pedestrians, bicyclists, and vehicle occupants has grown. A maturing surface transportation system has increased the need for maintenance operations conducted adjacent to traffic. Furthermore, transportation planners have been responsive to public expectations that maintenance be conducted with minimum disruption to existing traffic patterns. Statistics regarding fatalities within temporary traffic control zones revealed an increasing problem in the 1980's. In the early 1990's, fatality statistics within temporary traffic control zones have reduced noticeably, arguably due to educational efforts, certification, and increased experience in the conduct of work next to traffic. Even so, more than 700 people are killed and 5,000 injured each year in accidents that occur in road construction sites across the nation.

The authoritative guide for the use of traffic control devices in temporary traffic control zones, Part VI of the Manual on Uniform Traffic Control Devices (MUTCD), was revised in September 1992. It is essential to develop Traffic Control Plans (TCPs) for construction, maintenance, utility, and emergency operations in conformity with this document. The MUTCD applies any time the normal function of a public roadway is suspended.

For a copy of the MUTCD, write to the Superintendent of Documents, PO Box 371954, Pittsburgh, PA 15250-7954 or call the U.S. Government Printing Office in Washington DC at (202) 512-1803: press 4 then press 1.

Objectives

Traffic Control Plans (TCPs) describe what traffic controls will be used to facilitate vehicle and pedestrian traffic through a temporary traffic control zone. The TCP should be prepared by persons knowledgeable about the fundamental principles of traffic control. A well designed TCP provides for safe and orderly movement through a temporary traffic control zone, and allows for the timely and efficient completion of the work necessitating the temporary traffic control zone.

Fundamental Principles

All traffic control devices used in street and highway construction, maintenance, utility, or incidental management operations shall conform to the applicable specifications of the MUTCD.

Temporary traffic control zones can present unexpected or unusual traffic operation situations to the driver.

Because of this, special care should be taken in applying traffic control techniques in these areas.

During temporary traffic control activities, commercial vehicles and vehicles carrying hazardous materials may need to follow a different route than automobiles because of bridge, weight, clearance, or geometric restrictions. Truck Route National Network and hazardous cargo signs are included in section 2B-43 of the MUTCD.

The following principles and procedures tend to enhance the safety of motorists and workers in the vicinity of temporary traffic control areas. These principles and procedures provide a guiding philosophy of good traffic control for the practitioner. They do not establish specific standards and warrants. See the MUTCD for specific examples.

1. Traffic safety in temporary traffic control areas is an integral and high-priority element of every project, from planning, through design and construction. Maintenance and utility work should be planned and conducted keeping the safety of motorists, pedestrians, and workers in mind at all times. Formulating specific plans for incident management traffic control is difficult because of the variety of situations that can arise. Nevertheless, plans should be developed in sufficient detail to provide safety for motorists, pedestrians, workers, and enforcement/ emergency personnel and equipment.

a. The same basic safety principles that govern the design of permanent roadways and roadsides also govern the design of temporary traffic control zones. (Route traffic through such areas using geometrics and traffic control devices comparable to those used in normal highway situations.)

b. A detailed traffic control plan (TCP), appropriate to the complexity of the work project or incident, shall be prepared and understood by all responsible parties before the site is occupied. Any changes in the traffic control plan need to be approved by an official trained in safe traffic control practices and should be understood by all responsible parties.

2. Traffic movement should be inhibited as little as possible.

a. Design traffic control plans in work and incident sites on the assumption that drivers will reduce their speeds only if they clearly perceive a need to do so. Avoid reduced speed zoning as much as possible.

b. Avoid frequent and abrupt changes in driving patterns, such as lane narrowing, dropped lanes, or main roadway transitions requiring rapid maneuvers.

c. Provide for the safe operation of work or incident management vehicles, particularly on high-speed, high-volume roadways.

d. Minimize roadway occupancy and work completion time to reduce exposure to potential hazards.

e. Provide pedestrians with access and safe passage through the temporary traffic control zone at all times.

f. Schedule any road work during off-peak hours. Conduct road work at night if possible.

3. Drivers and pedestrians must be guided in a clear and positive manner while approaching and traversing the temporary traffic control zone.

a. Provide adequate warning, delineation, and channelization by using proper pavement marking, signs, or other devices that are effective under varying conditions of light and weather. This assures the driver and pedestrian of positive guidance before approaching and while passing through the temporary traffic control zone.

b. Remove all permanent signs, pavement markings, channelizing devices, delineators, and other traffic control devices that are inconsistent with intended travel paths through long-term work spaces. In short-term and mobile work spaces, cover any permanent devices that are inconsistent with intended temporary travel paths so that the driver's attention is given to the temporary devices that highlight or emphasize the appropriate path.

c. Flagging procedures, when used, can provide positive guidance to drivers traversing the temporary traffic control area. Due to the danger flagging imposes on personnel, flagging should be employed only when all other methods of traffic control are inadequate to warn and direct drivers.

4. Routine daily inspections of traffic control elements should be performed to ensure acceptable levels of operation.

a. Individuals trained in the principles of safe traffic control shall be assigned responsibility for safety at work sites. These individuals ensure that all traffic control measures used on the project are necessary, conform to the traffic control plan, and effectively provide safe conditions for motorists, pedestrians, and workers.

b. Modification of traffic controls or working conditions may be required to expedite safe traffic movement and to promote worker safety. It is essential that the individual responsible for safety has the authority to control the progress of work on the project with respect to obtaining safe conditions, including the authority to modify conditions or halt work until applicable or remedial safety measures are taken.

c. Carefully monitor temporary traffic control areas under varying conditions of traffic volume, light, and weather to ensure that traffic control measures are operating effectively and that all devices used are clearly visible, clean, and in good repair.

d. Conduct an accident investigation (in cooperation with law enforcement officials) of all accidents occurring in temporary traffic control zones. Temporary traffic control zones and accident records should be monitored to identify and analyze traffic accidents or conflicts. For example, skid marks or damaged traffic control devices may indicate the need for changes in the traffic control.

e. Remove all traffic control devices when no longer needed. When work is suspended for short periods, advance warning signs that are no longer appropriate shall be removed, covered, or turned, and other inappropriate devices removed from the work area so they are not visible to drivers.

5. Because of the potential increase in hazards during the life of the temporary traffic control zone, attention must be given to maintaining roadside safety.

a. Provide an unencumbered roadside recovery area to accommodate vehicles that run off the road, for disabled vehicles, or for emergency situations.

b. To channel traffic, use pavement markings, signs, and/or lightweight channelizing devices that will yield when hit by errant vehicles.

c. Store equipment, workers' private vehicles, materials, and debris so that they are not vulnerable to run off the road vehicle impact.

d. Protect pedestrian paths through the temporary traffic control zone to minimize pedestrian exposure to errant vehicles.

6. Each person whose actions affect temporary traffic control zone safety - from upper-level management personnel through field personnel - should receive training appropriate to the job decisions each is required to make. Only those trained in safe traffic control practices and who have a basic understanding of the principles established by applicable standards and regulations (including those of the MUTCD) should supervise the selection, placement, and maintenance of traffic control devices in work and incident management areas.

7. Good public relations should be maintained. The cooperation of the various news media in publicizing the existence of and reasons for work sites can be of great assistance in keeping the motoring public well informed.

8. Ensure that all traffic control devices used in temporary traffic control zones meet minimum specification standards. Non-approved devices shall not be permitted without prior written approval of the executing authority.

DEVELOPMENT OF TRAFFIC CONTROL PLANS (TCPs)

A traffic control plan (TCP) describes the traffic controls that will be used to facilitate vehicle and pedestrian traffic through a temporary traffic control zone. TCPs provide for the safe movement of traffic through, and for the conduct of necessary operations within, a temporary traffic control zone. Each TCP should be uniquely appropriate to the actual set of conditions and circumstances surrounding the individual temporary traffic control zone operation. The complexity of a TCP will vary based upon the complexity of the circumstances and conditions accompanying the roadway operation. It is imperative that the plan be developed by competent and trained personnel.

Components of Temporary Traffic Control Work Zones

The temporary traffic control zone includes the entire section of roadway between the first advance warning sign and the last traffic control devices. The four components of temporary traffic control zones, in the order that drivers encounter them, are:

Advance Warning Area: This area notifies the driver of an impending temporary traffic control zone. This advance warning may vary from a single sign to a series of signs and/or flashing

lights on a vehicle preceding the transition area. The distance the warning area should be placed ahead of the transition area depends on factors such as the speed limit, roadway condition, and type of road (urban or rural). Use table II-I, section 2C-3 of the MUTCD to determine the effective placement of warning signs.

Transition Area: When traffic needs to be redirected from normal lanes, channelization devices are used to move traffic to a new path. This redirection should occur at the beginning of the transition area. Transition areas usually involve the use of roadway tapers. Tapers are created using a series of channelizing devices or pavement markings placed out of or into the normal traffic path. There are several types of tapers; merging, shifting, shoulder, downstream, and one-lane/two-way.

Activity Area: Actual road work is conducted within the activity area. This area is made up of the work space, the traffic space, and optional buffer spaces. The work space is that portion of the roadway closed to traffic and set aside for workers, equipment, and material. The work space can be stationary or move as work is conducted. The traffic space is the portion of the roadway in which traffic is routed through the activity area. Buffer space is intended to provide an area of separation and security between the worksite and traffic. The buffer space can be placed longitudinally and/or latitudinally to the work area. Buffer spaces are optional.

Termination Area: As within the transition area, tapers can be used to achieve rerouting of traffic, in this case back to the normal traffic lanes. The termination area extends from the downstream end of the work area to an "END ROAD WORK" sign, if posted. The termination area is used to return traffic to the normal traffic path.

Detours and Diversions

Detours may be necessary in certain circumstances. Signage throughout the detour needs to guide motorists back to their original highway. While detours route traffic to alternate roads, diversions simply redirect traffic onto temporary roadways, often adjacent to the roadway under repair. Diversions often entail crossing medians or shifting lanes.

One-Lane/Two-Way Traffic Control

Temporary traffic control zones occasionally require that two opposing traffic lanes share a single lane during reconstruction or other operation. Alternative methods exist to restrict access at both ends of the single lane to assure one way movement at all times. Preferred traffic control methods include: flag transfer, the use of a pilot car, temporary traffic signals, and stop/yield control.

(For descriptions of these and other traffic control methods, see part VI of the MUTCD.) Flaggers may be posted at each end of the single lane to regulate traffic movement in single columns. Because of the increased danger to personnel, flagging should only be used as a last resort. (See the flagger section for flagger qualifications.)

Pedestrian Safety

Pedestrian movement through a worksite should be constrained to avoid conflict

with either traffic or worksite activity, and should be accommodated by clearly delineated sidewalks or footpaths. Wherever possible, signing should be used to direct pedestrians to safe street crossings before they encounter the temporary traffic control zone and should discourage mid-block crossings. Restricting pedestrian traffic from a temporary traffic control zone is preferable to channelizing, but where channelizing is unavoidable, fencing or plywood fencing is allowed where vehicle impact is highly improbable.

Where pedestrians are especially vulnerable to impact by errant vehicles, all foot traffic shall be protected by barrier systems. Normal vertical curbing is not an adequate substitute for barriers in this situation. Barriers need to be of sufficient strength and should have low deflection characteristics to prevent violation of pedestrian space. The TCP designer needs to consider the likely range of a pedestrian's physical capabilities and should minimize movement of work vehicles and equipment across designated pedestrian paths.

Worker Safety

Worker safety is another primary objective of the TCP. Key elements of traffic control management that enhance worker safety are:

- Training workers how to work safely next to traffic;
- Equipping workers with bright and highly visible clothing;
- Using barriers to separate work space from traffic;
- Reducing speed zones and using law enforcement;
- Lighting the work area;
- Preparing public relations efforts to reduce traffic through the temporary traffic control zone; and
- Closing roads.

HAND SIGNALING CONTROL FLAGGER OPERATIONS

Flaggers can be used to guide traffic through a temporary traffic control zone and to ensure safety within the temporary work zone. Because of the danger inherent in flag work, flaggers shall only be employed as a last resort. Flaggers should be trained and tested in all areas of work zone safety. Because flaggers are a primary point of contact for drivers and often pedestrians, their appearance and the quality of their deployment are important to meeting the TCP's objectives. The flagger needs to embrace the importance of safety to the public and coworkers, recognize his or her impact on the overall safety of the site, and be able to politely assert him/herself.

Flagger Location

The flagger shall be located far enough in advance of the work zone so that approaching traffic will have sufficient distance to stop before entering the work space. (Use table VI-1 in the MUTCD to determine the proper flagger locations.) The flagger should be clearly visible to traffic at all times. Flagger stations should be illuminated at night. Portable changeable message signs (PCMS) are advisable 1/4 to 1/2 mile prior to a flagger to alert motorists and to provide the flagger with an additional safety buffer.

Flagger Uniform

The flagger shall wear fluorescent or orange clothing during the daytime, to

include a vest, shirt, or jacket. Similar retroreflecterized garments shall be worn at night. The retroreflecterized material should be visible at a minimum distance of 1,000 feet.

Flagger Equipment
Flaggers are equipped primarily with a hand held "STOP/SLOW" paddle, as it guides drivers through a work zone more effectively than flags. At night, the equipment shall be retroreflecterized.

Hand Signal Procedures
The following methods of signaling with sign paddles should be used:

- To stop traffic with the "STOP/ SLOW" paddle, the flagger will extend the "STOP" sign to traffic and raise his/her free arm with the palm facing oncoming traffic.
- To advance traffic, the flagger will extend the "SLOW" sign paddle to traffic, and with his/her free arm, motion for traffic to proceed.
- To slow approaching traffic, the flagger will extend the "SLOW" sign and, with his/her free hand palm down, motion up and down for traffic to slow down.

Flag use should be limited to emergency situations and to low-speed locations. If the flagger uses a 24-inch square red flag, the following methods of signaling should be used:

- To stop traffic, the flagger will extend the flag horizontally across the traffic lane so that the full flag is visible to traffic. His/her free arm may be raised with the palm facing oncoming traffic.
- To advance stopped traffic, the flagger will stand so that the flag is out of the driver's view and motion with his/her free arm for traffic to proceed. Flags should not be used to signal traffic to proceed.
- To slow approaching traffic, the flagger will face traffic and slowly wave the flag in a repeated sweeping motion from shoulder level to the ground.

TRAFFIC CONTROL DEVICES USED IN TEMPORARY TRAFFIC CONTROL ZONES
A traffic control device is a sign, signal, marking or other device placed on or adjacent to a street or highway. Devices should be placed by an official or public body with jurisdiction to regulate, warn, or guide traffic. Specific crashworthy information on devices can be found in the American Association of State Highway & Transportation Officials' (AASHTO) Roadside Design Guide.

This excellent engineering guideline is available for $67 by writing to: AASHTO at 444 North Capitol Street NW, Washington DC 20001 or call their office at (202) 624-5800.

Types of Work Zone Devices
Traffic control devices within temporary traffic control zones serve essentially the same functions as traffic control devices do generally. The types and uses of the various devices used in temporary traffic control zones include:

Signs: Temporary traffic control zone signs are similar in their communication objectives to all other traffic signs. Like other signs, temporary traffic control signs are categorized as regulatory signs,

warning signs, and guide signs.

Regulatory signs inform highway users of traffic laws or regulations. The color of regulatory signs within temporary traffic control zones will not differ from other regulatory signs; they generally have a black legend and border on a white background. For exceptions and a list of commonly used regulatory signs see figure VI7 of the MUTCD.

Warning signs notify drivers of general or specific conditions on or adjacent to a roadway. With some exceptions, warning signs shall be diamond shaped with a black legend on orange background. See figure VI- 8 for a list of commonly used warning signs.

Guide signs give drivers information that helps them in the most simple, direct manner possible and will be standard with certain specific exceptions, as noted in section 6F-1c of the MUTCD.

Signs used at night need to be retroreflecterized or illuminated to achieve a night-time visibility that is comparable to that in daylight. The illumination can be internal or external; street or highway lighting is not adequate to satisfy this requirement. Signs used in temporary traffic control zones are often relocated and subject to considerable wear and tear during handling. Therefore, they should be routinely inspected for cleanliness, visibility, excess wear, and proper positioning, and should be replaced if necessary. Descriptions of specific signs and suggestions as to sign placement are fully developed in the MUTCD.

Portable Changeable Message Signs (PCMS): The primary purpose of PCMS in temporary traffic control zones is to advise the driver of unexpected traffic and routing information. They should not replace any required signing. PCMS are able to render customized and specific messages as needed. PCMS include a message sign panel, control systems, power source, and mounting and transportation equipment. PCMS must be legible from 1/2 mile under ideal day/night conditions and up to a minimum of 650 feet. The control system must do the following: preview messages; provide a back-up or default message in the event of power failure; and provide a back-up power supply.

Arrow Displays: An arrow display is a sign with a matrix of elements. The matrix, capable of either flashing or sequential displays, provides the driver with additional warning or information. There are three categories of arrow displays: type A are used on low speed urban streets; type B are used in intermediate speed applications; and type C are used in high speed circumstances. The panel must be capable of displaying different arrows and chevrons. Refer to the MUTCD for specific examples of the uses of arrows and/or chevrons.

High Level Warning Device: A high level warning device, or flag tree, is designed to be visible over the top of vehicles, has at least two flags, and may contain an appropriate warning sign. They are often used in high volume urban temporary traffic control zones to warn motorists of short-term operations.

Channelizing Devices: Channelizing devices warn and guide drivers through work activities in or near the roadway and protect workers in the temporary

traffic control zone. Because channelizing devices are subject to impact, they should be routinely inspected and replaced, especially when the functional performance of the device has been compromised. The name of an agency, supplier, or contractor can be placed on the device within a non-retroreflecterized surface. Types of channelizing devices include cones, tubular markers, vertical panels, drums, barricades, portable barriers (design per AASHTO Standards), and temporary raised islands. Each device is subject to specific requirements as to size, color, stripe patterns and use of retroreflecterized material. See section 6F-5 of the MUTCD for specific design and placement requirements.

Pavement Markings: Pavement markings provided in a temporary traffic control zone must be comparable to the markings maintained along adjacent roadways. Preexisting markings need to be evaluated for their potential to misguide vehicles. Any such markings need to be thoroughly removed (black spray paint is not satisfactory as in certain lighting it can appear to motorists as an existing marking). All markings and devices used to delineate vehicle paths and pedestrian routes should be evaluated in differing lighting and weather conditions to assess the risk of misguidance. Interim markings are permissible for up to two weeks. Interim markings are subject to the same standards as permanent markings with certain specific exceptions as itemized in the MUTCD. Raised retroreflecterized pavement markers are recommended for use along surfaced detour or temporary roadways to emphasize redirection of traffic paths and to guide motorists during adverse weather.

Delineators may be used in work areas to indicate the alignment of the roadway and to outline the required vehicle path. Delineators shall be used only in conjunction with other traffic control devices. The delineator must be mounted so that the reflecting unit is four feet above the edge of the road**.**

Lighting Devices: It is often necessary to supplement retroreflectorized signs, barriers, and channelizing devices with lighting devices at night. Floodlights should be used to illuminate flagger stations, equipment crossings, and other work areas where existing light is not adequate. Never use floodlights where they may create a disabling glare for drivers. A flashing beacon is a flashing yellow light used to alert drivers to special road conditions. Steady-burning lamps placed in a line on channelizing devices are effective in delineating the proper vehicle path through a temporary traffic control zone. Because warning lights attract a driver's attention, they are used to help drivers identify road hazards.

Other Devices: Other devices include impact absorbing attenuators, portable barriers, temporary traffic signals, rumble strips, screens, and lane dividers. Impact attenuators, which may be stationary or mounted on a vehicle, protect motorists from the exposed ends of barriers, fixed objects, and other hazards. Attenuators may be redirected or designed to absorb a direct collision. Portable barriers are designed to prevent vehicles from penetrating work areas. Temporary traffic signals can be used to regulate traffic in the event of a permanent traffic signal failure, haul road, equipment crossing, or a temporary

traffic control zone with alternate one-way traffic flow. Rumble strips warn drivers to unusual traffic conditions and should be used in conjunction with other devices. Screens limit the driver's view of the work area. They are especially useful in circumstances where construction and maintenance related activity are interesting to drivers. Screens also can contain dust and debris within a work area. Opposing traffic lane dividers separate opposing traffic on a two lane, two-way operation. Like all traffic control devices, these temporary devices must be routinely inspected to ensure they function as intended.

APPLICATION OF THE TRAFFIC CONTROL PLAN (TCP) DURING CONSTRUCTION/MAINTENANCE ACTIVITIES

To ensure safety, a well developed traffic control plan (TCP) must assess and address numerous considerations, including location of work, type of road, actual and posted speed of traffic, traffic volume, geometrics, alignment, pedestrian traffic, and the location of intersections. The TCP should be developed by competent and trained designers only. The process of managing the temporary traffic control zone is not completed simply by implementing the TCP at the start of the project. A TCP needs to be assessed for its continued effectiveness and to determine if revisions are warranted.

The MUTCD has developed a comprehensive list of typical applications that are available as models for effective traffic control plans, and that anticipate many of the situations likely to be encountered in an actual temporary traffic control zone. The extent to which a TCP designer may rely on a typical application is limited by the complexity of unique circumstances surrounding the actual work area.

Selecting Typical Applications

Three primary considerations in selecting the most appropriate typical application are the duration of work, work location, and roadway type.

Duration of Work. The five categories of work duration are: (1) Long-term stationary; (2) Intermediate-term stationary; (3) Short-term stationary; (4) Short duration; and (5) Mobile. The equipment and work zone requirements vary greatly for each of the different durations. For a complete definition of each, please refer to section 6G-2a of the MUTCD.

Location of Work. Work can take place outside of the shoulder edge, on or near the shoulder edge, on the median of a divided highway, or on the actual traveled road. Once again, TCP requirements vary for each location. For example, for work outside the shoulder of a roadway a TCP specifying signage such as "ROAD MACHINERY AHEAD" would be adequate. Work on the normal travel path requires the maximum attention of the TCP designer to assure the safety of travelers and workers. As a general rule, the closer work is to traffic, the more traffic control devices will be needed.

Roadway Type. Highway types range from rural two-lane highways to freeways. A freeway would require the maximum implementation of traffic control elements due to high vehicle volumes and speed.

Nearly fifty typical applications are annotated and diagrammed in Part VI of

the MUTCD. These represent a major planning resource for the TCP designer. **Part VI is the definitive regulatory guidance for TCP designers and must be utilized.** Competent and trained personnel who are thoroughly exposed to Part VI will design compliant TCPs which responsibly advance the safety of travelers and workers in work zones. Commitment to continued improvement in work zone safety is good public policy. Transportation construction firms are well positioned to contribute to the continued reduction of annual fatalities in work zones. **Further progress is both possible and warranted.**

WORK ZONE TRAFFIC CONTROL STRATEGIES

Lane constriction, i.e., reducing the width of one or more lanes to retain the number of lanes normally available. Lane constriction is usually the least disruptive to traffic, but is applicable only if the work area is predominantly outside the normal traffic lanes and if shoulders are available.

Lane closure, i.e., one or more traffic lanes are closed after determining that serious congestion will result based on a capacity analysis.

Shared right-of-way, i.e., utilizing one lane for both directions of traffic flow with flaggers or signals to coordinate the two directions of traffic, or possibly traffic control signing alone for short-term work zones on very low volume two-lane roads.

Temporary by-pass, i.e., total closure of the roadway in one or both directions where work is being executed, and rerouting the traffic to a temporary roadway constructed within the highway right-of-way.

Intermittent closure, i.e., stopping all traffic in one or both directions for a relatively short period of time to allow work to proceed, then after a certain time (based on traffic volume), reopening the roadway (normally applicable on very low volume roadways).

Crossover, i.e., routing a portion or all of one direction of the traffic stream across the median to the opposite traffic lanes, or utilizing the shoulder and/or lane constriction to maintain the same number of lanes.

Use of the shoulder or median, i.e., the existing shoulder or median acts as a temporary traffic lane.

Detour, i.e., total closure of the roadway (one or both directions) and rerouting traffic to existing alternate facilities.

National Work Zone Safety Information Clearinghouse

This one-of-a-kind facility provides transportation agencies, law enforcement departments, highway designers and contractors, labor unions, insurance companies, motor clubs and other interested parties with a wealth of information on how to make road construction zones safer for motorists, pedestrians and highway workers.

The clearinghouse is a cooperative venture between the Federal Highway Administration (FHWA) and the American Road & Transportation Builders Association (ARTBA). The clearinghouse is located in The Transportation Institute, in College Station, Texas.

The National Utility Contractors Association (NUCA) and the Institute of Transportation Engineers (ITE) will help ARTBA publicize and market the program. John Chisholm at ARTBA, Washington D.C. is Project Manager of the clearinghouse.

ARTBA publishes a quarterly National Work Zone Safety Information Clearinghouse Newsletter. To subscribe for the newsletter, contact Mary Diamound, ARTBA Communications Director: Phone (888) 447-5556, Fax (409) 845-7575, E-Mail: workzone@tamu.edu or the Internet http:// www.wzsafety.tamu.edu.

Date:	Company Name:	
Project Number/Name:	Meeting Location:	Person Conducting Meeting:

Items Discussed: _____

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Problem Areas or Concerns: _____

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Attendees: _____

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Comments: _____

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