Memo

New Mexico
Department of Transportation

SUBJECT: Infrastructure Design Directive IDD-2009-05 (Temporary Traffic Control Devices Rule - Subpart K)

DATE: 20-July-2009

TO: Office of Infrastructure Divisions
District Offices
Transportation Design Community

FROM: Tamara P. Haas, Acting Chief Engineer
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FILE REFERENCE:
PSESHARE:Design Directives

In order for NMDOT to be in compliance with the federal rules FHWA's 23 CFR 630 that govern work zone safety and mobility in highway and street work zones, a process has been developed to address all the safety and mobility concerns. FHWA requires each state to have a comprehensive process for design and implementation of these rules. The rules are divided into three segments.

1. Work Zone Safety & Mobility Rule (Subpart J)
   Subpart J is addressed in NMDOT design Directive (IDD-2009-02)
2. Temporary Traffic Control Devices Rule (Subpart K)
3. Worker Visibility Rule

The purpose of this document is to address the traffic control devices (Subpart K) rules. Although subpart K is a separate document, it is interrelated with the two other federal requirements stated above. Please see attachments.

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Temporary Traffic Control Devices Rule (Subpart K)
Summary

Policy Statement

NMDOT policy is to plan, design, construct and maintain highways while providing for the safe and efficient movement of all modes of transportation through or around a temporary traffic control zone and to ensure safety of the workers.

This policy applies to all types of bridge and highway construction, reconstruction and maintenance projects on the State Highway System, projects on local systems that are administered by the NMDOT, and urban as well as rural facilities.

Temporary Traffic Control Devices Rule (Subpart K)

Temporary traffic device rule subpart K was initiated with a Notice of Proposed Rulemaking (NPRM) published November 1, 2006. The Final Rule was published December 5, 2007. Subpart K must be implemented by December 4, 2008.

The goal of the rule is to decrease work zone fatalities and injuries to workers and road users.

The department approach is as follows:

- Build on processes, procedures and/or guidance implemented under Subpart J – (Design Directive IDD-2009-02)
- Establish minimum requirements and provide guidance for use of temporary traffic control devices

Key Components of Subpart K

1. Added emphasis on safety in work zone
2. Clarify the use of positive protection devices
3. Use of exposure control measures
4. Use of uniformed law enforcement
5. Standardizing the design and use of Safe entry/exit for work vehicles and equipment
6. Clarifying Payment for traffic control features and operations
7. Establishing quality guidelines

In order to meet FHWA requirements the NMDOT has established a process for each key component of the Subpart K identified above. This design directive shows how each component will be addressed during the project. Each component will be addressed by either the design team or the Construction management personnel. This directive identifies the parties responsible for the processes associated with each component and when and how each component should be addressed.

1.0 Added emphasis on safety in work zone policy

Intent or goal: The safety consideration used in developing a control plan are intended to ensure the constructability of the project, keep workers safe, minimize inconvenience to the public while simultaneously protecting the workers. A traffic

control designer must consider safety of the workers as well as the traveling public at the forefront of the traffic control plans.

As required in 23 CFR 630.1008(d), personnel involved in the development, design, implementation, operation, inspection, and enforcement of work zone related transportation management and traffic control must be trained, appropriate to the job decisions each individual is required to make. This includes law enforcement officers used for enforcement and first responders responsible for the work zone on a project.

Responsibility Table

Responsibility	Person responsible	Activity
Design	PDE/Design groups/Districts	Review safety list
Construction	PM	Inspection
Training	Refer to appendix section 1.0 for more information and sources of training.	

2.0 Positive protection devices

Intent or Goal: Positive protection strategies are intended to minimize the exposure of the workers to motorized vehicles. The policy is based on the MUTCD as the minimum guidance. In addition, other factors must be considered to develop the appropriate type of separation devices.

Responsibility Table

Responsibility	Person responsible	Activity
Design	PDE/Design groups/Districts	Review Check List 1- "CWB Decision Matrix" in appendix and follow the design guidelines shown in Appendix section 2.0
Construction	PM and Inspector	Review with the design during the project constructability meetings.

Follow the design guidelines shown in Appendix section 2.0

3.0 Exposure control measures

This term was added in place of "Positive Protective Strategies" to reflect the fact that strategies were not aimed solely at preventing vehicles from entering the work space, but to reduce worker exposure through a variety of strategies.

Responsibility Table

Responsibility	Person responsible	Activity
Design	PDE/Design groups/Districts	Review Check List 2 "Exposure Control Measure Matrix" in appendix
Construction	PM and Inspector	Review with the design during the project constructability meetings.

Refer to Appendix section 3.0 for more information.

4.0 Uniformed law enforcement

Intent or goal: In order to provide better mobility and safer work zones, the use of law enforcement should be considered based on NMDOT policy.

Policy Statement

"NMDOT may acquire the services of Uniformed Law Enforcement officers for select projects that a need for enforcement is established by the design team.

- Any project where the need for law enforcement is established shall develop an memorandum of understanding (MOU)
- MOU shall be developed upon check list (Appendix, check list 3).
- Each item in the check list must be addressed."

Responsibility Table

Responsibility	Person responsible	Activity
Design	PDE/Design groups/Districts	Decide during the constructability the level of enforcement and use Check list 3 "Law Enforcement MOU check list" in appendix to develop an MOU
Construction	PM and Inspector	PM to assign administer to manage the services.

Refer to Appendix section 4.0

5.0 Safe entry/exit for work vehicles and equipment

Goal: Establish provisions for safe means for work vehicles, equipment and delivery vehicles to enter and exit travel lanes safely. These provisions should be based on individual project characteristics and conditions.

Responsibility Table

Responsibility	Person responsible	Activity
Design	PDE/Design groups/Districts	Use Check list 4 "Safe entry/exit for work vehicles and equipment" in appendix
Construction	PM and Inspector	Monitor implementation

Refer to Appendix-A section 5.0 for more information

6.0 Payment for traffic control features and operations

Goal: The accepted work for traffic control devices during construction will be paid for at the contract unit price lump sum. Payment shall be full compensation for furnishing all materials, tools, labor, equipment, hauling, and any other

appurtenances necessary to satisfactorily complete and maintain adequate and safe traffic control until completion of the project.
Design Directive (IDD-2009-04) addresses payment for traffic control devices. Traffic Control Devices during Construction shall not be considered as eligible for a cost savings suggestion.

Responsibility Table

Responsibility	Person responsible	Activity
Design	PDE/Design groups/Districts	Establish payment for the devices according to IDD-2009-04

Refer to Appendix section 6.0 for more information

7.0 Quality guidelines

- Each agency **shall** develop and implement quality guidelines to help maintain the quality and adequacy of the temporary traffic control devices for the duration of the project
- A level and frequency of inspection necessary to provide ongoing compliance with the quality guidelines **shall** be provided
- Establish specific provisions as necessary to ensure appropriate payment and quality assurance for all necessary safety features, when not covered by the lump sum devices as established in IDD-2009-04.
- Quality guidelines for temporary traffic control devices along with appropriate level of inspection and fines.

Responsibility Table

Responsibility	Person responsible	Activity
Construction team	PM and inspector	monitor quality guidelines and fines

Refer to Appendix section 7.0 for more information

Appendix

New Mexico Work Zone Regulation

Temporary Traffic Control Devices Rule

Subpart K

Effective December 4, 2008

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Background

Facts

New Mexico Department of Transportation is maintaining approximately 15000 lane miles of highway within New Mexico. Our roadway infrastructure is aging and the need for rehabilitation and reconstruction is growing. With NMDOT roadway improvement projects the public encounters construction work zones in greater frequency. Much of this work is occurring while traffic is maintained on the facility under repair.

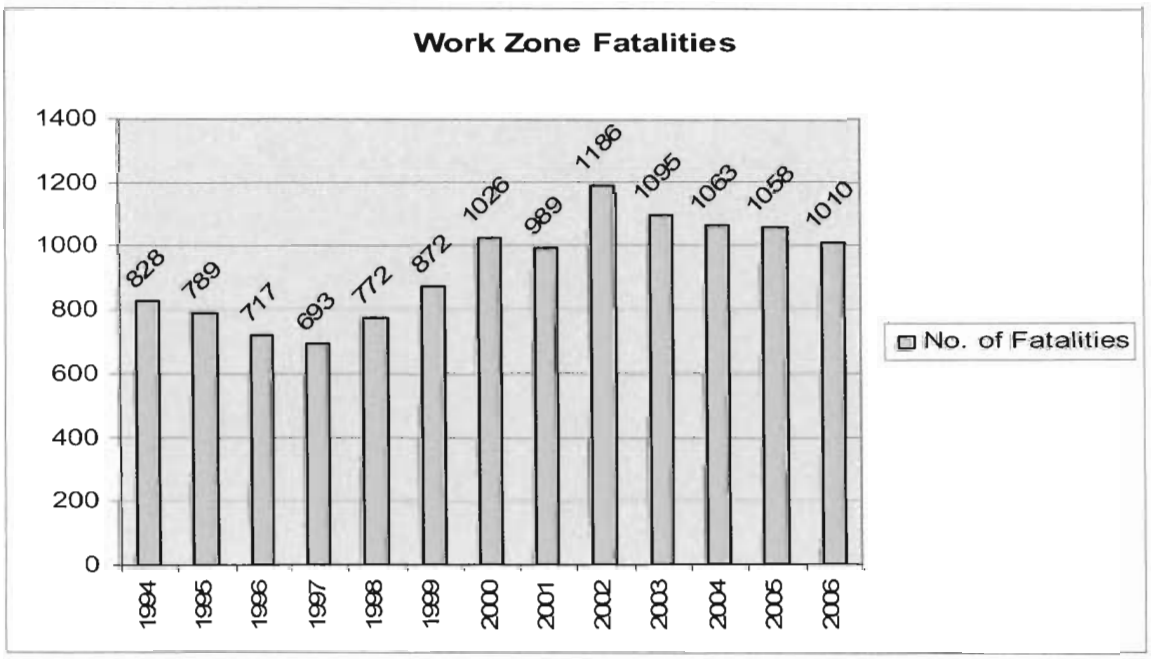
Exposure

The following data from Federal Highway Administration illustrates what the drivers encounter on national highway systems (NHS):

- Approximately 20% of NHS under construction during peak construction season
- More than 3,000 work zones are expected to be present on the NHS during the peak construction season
- Approximately 12 billion vehicle miles of travel a year will be through active work zones
- Motorists can expect to encounter an active work zone at one out of every hundred miles driven on the NHS

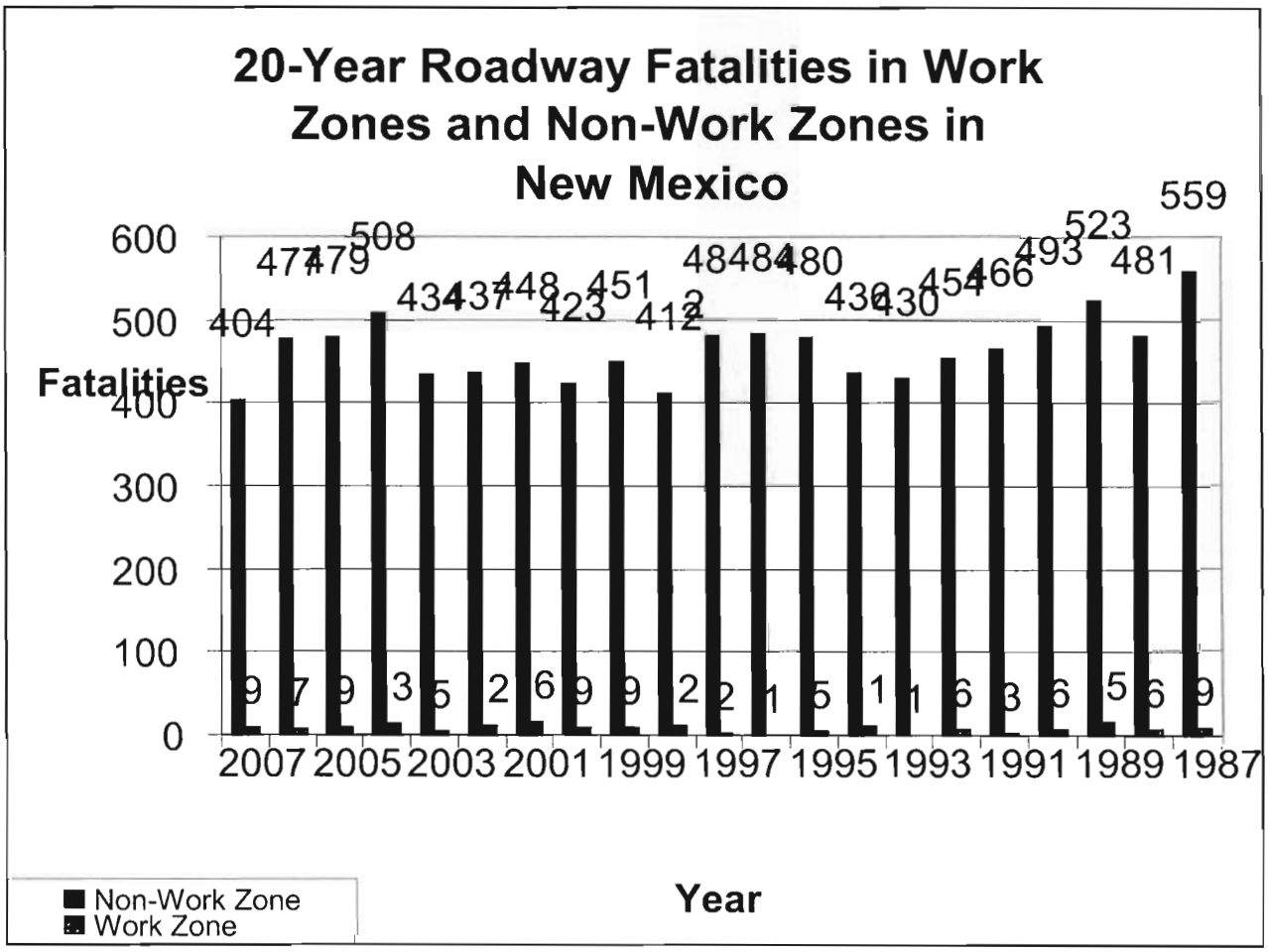
Work zone fatality numbers from the year 1994 to 2006 are shown in the following table.

Figure 1- Work Zone Fatalities from 1994 to 2006



This data shows that one work zone fatality occurs every 8.7 hours (almost 3 a day). In addition there is one work zone injury every 9 minutes (160 a day). The numbers are high on the national level. New Mexico is not immune from these tragedies. The data for New Mexico has been provided from Fatality Analysis Reporting System (FARS) maintained by National Highway Traffic Safety Administration. It is shown in the following chart:

Figure 2 -20-Year Roadway Fatalities in Work Zones and Non-Work zones New Mexico



Here are some of the facts:
Median number of fatalities in the work zone each year from 1987 to 2007 for all the states in the nation is 9. Median number of fatalities in the work zone in New Mexico for the same period is 9.
Median number of fatalities in non-work zones each year from 1987 to 2007 for all the states in the nation is 621. Median number of fatalities in the non-work zone for the same period in New Mexico is 466.

Purpose

In order for NMDOT to be in compliance with the federal rules a process is developed to address all the work zone safety and mobility concerns. FHWA requires each state to have a comprehensive process for design and implementation of these rules. The rules are divided into three segments.

1. Work Zone Safety & Mobility Rule (Subpart J)
   Subpart J is shown in Appendix A.
2. Temporary Traffic Control Devices Rule (Subpart K)
3. Worker Visibility Rule

The purpose of this document is to address traffic control devices (Subpart K) rules. Although subpart K is separate document, it is interrelated with two other federal requirements stated above.

Federal Rule

The federal rule was shown in Federal Register / Vol. 72, No. 233 / Wednesday, December 5, 2007 / Rules and Regulations. "Federal Highway Administration 23 CFR Part 630 [FHWA Docket No. FHWA–2006–25203] RIN 2125–AF10" addresses Temporary Traffic Control Devices. The following is stated:

"The FHWA is adding a new Subpart K to 23 CFR part 630 to supplement existing regulations that govern work zone safety and mobility in highway and street work zones to include conditions for the appropriate use of, and expenditure of funds for, uniformed law enforcement officers, positive protective measures between workers and motorized traffic, and installation and maintenance of temporary traffic control devices during construction, utility, and maintenance operations. These regulations are intended to decrease the likelihood of fatalities and injuries to road users, and to workers who are exposed to motorized traffic (vehicles using the highway for purposes of travel) while working on Federal-aid highway projects. The regulations are issued in accordance with section 1110 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA–LU), Public Law 109– 59, 119 Stat. 1227, codified at 23 U.S.C. 109(e) and 112(g).
***DATES:** Effective Date: December 4, 2008.*
The incorporation by reference of certain publications listed in this rule is approved by the Director of the Federal Register as of December 4, 2008."

To expand on the first statement, the following applies:

"A NPRM proposing the creation of a new Subpart K of 23 CFR part 630 was published on November 1, 2006, at 71 FR 64173. The purpose was to emphasize the need to appropriately consider and manage worker safety as part of the project development process by providing guidance on key factors to consider in reducing worker exposure and risk from motorized traffic. The FHWA proposed to require that each agency's policy for the systematic consideration and management of work zone impacts be established in accordance with the recently updated 23 CFR part 630 subpart J (effective October 12, 2007), and address the consideration and management of worker safety as follows:
1. Avoid or minimize worker exposure to motorized traffic through the application of appropriate positive protective strategies including, but not limited to, full road closures; ramp closures; crossovers; detours; and rolling road blocks during work zone setup and removal;

2. Where exposure cannot be adequately managed through the application of the above strategies, reduce risk to workers from being struck by motorized traffic through the use of appropriate positive protective devices;
3. Where exposure and risk reduction is not adequate, possible, or practical, manage risk through the application of appropriate intrusion countermeasures including, but not limited to, the use of uniformed law enforcement officers; and
4. Assure that the quality and adequacy of deployed temporary traffic control devices are maintained for the project duration".

Policy Statement

New Mexico Department of Transportation policy is to plan, design, construct and maintain highways while providing for the safe and efficient movement of all modes of transportation through or around a temporary traffic control zone and safety of the workers.

This policy applies to all types of bridge and highway construction, reconstruction and maintenance projects on the State Highway System, projects on local systems that are administered by the NMDOT, and urban as well as rural facilities.

Temporary Traffic Control Devices Rule (Subpart K)

NPRM published November 1, 2006
Final rule Published December 5, 2007
Implement by December 4, 2008
Goal:
Decrease Work Zone fatalities & injuries to workers and road users
Approach:

- Build on processes, procedures and/or guidance implemented under Subpart J
- Establish minimum requirements and provide guidance

Key Components of Subpart K

- Added emphasis on safety in work zone policy
- Positive protection devices
- Exposure control measures
- Uniformed law enforcement
- Safe entry/exit for work vehicles and equipment
- Payment for traffic control features and operations
- Quality guidelines

1.0 Added emphasis on safety in work zone policy

The safety consideration of the traffic control plan intends to expedite the project, keep workers safe, minimize inconvenience to the public but simultaneously protect them. Traffic control designer must consider safety at the forefront of the traffic control plans. The following factors should be considered to address safety issues:

- Speed Limit Reduction
- Temporary Traffic Barrier
- Crash Cushions
- Temporary Rumble Strips

- Project Task Force/Committee
- ITS for Traffic Monitoring/Management
- Incident/Emergency Response Plan
- Local Detour Routes
- Police Enforcement
- Increased Penalties for Work Zone Violation
- Reduces work zone impacts by alerting road users and community of road-use changes and provides suggestions for avoiding these impacts.
- Communicates appropriate driving behavior and options to the traveling public.
- Allows flexibility to choose the best means of communication for each individual project and situation to include 2 broad categories:
    - Public Awareness Strategies
    - Motorist Information Strategies
- The key is to improve the use of available work zone field observations, crash data, and operational information to:

(1) Manage the safety and mobility impacts of projects more effectively during implementation

(2) Provide the basis for systematic procedures to assess work zone impacts in project development.

NMDOT has developed a check list for the designer and project development engineer to systematically go through all the considerations to deliver a safer work zone. See Figure 3 on page 9

Additionally, the emphasis on safety by all the parties involved in the development, design, implementation, operation, inspection, and enforcement of work zone related transportation management and traffic control stems from awareness of field related work zone challenges. Properly trained individuals aware of work zone rules make them safer.

1.1 Training

As required in 23 CFR 630.1008(d), personnel involved in the development, design, implementation, operation, inspection, and enforcement of work zone related transportation management and traffic control must be trained, appropriate to the job decisions each individual is required to make. This includes law enforcement officers used on projects.

Training and certification programs provided by national organizations like IMSA or ATSSA or others approved by the department shall be required as pre-requisite in design, implementation, operation, inspection and enforcement of the traffic control plans.

The NM technician Training and Certification Program (TTCP) has established training program for contractor and NMDOT construction personnel.

Here is a sample of suggested training courses. This information is also available in Subpart J

Suggested training courses for construction Project Managers or Project Engineers:

A. Traffic Control Supervisor (ATSSA)
All projects from the simplest maintenance job to a multi-million dollar reconstruction project require traffic control expertise to make the project as safe as possible for the motorist and workers. The Project Manager or Project Engineer on the project needs to be trained in the latest standards, practices and procedures to accomplish this goal.

Suggested training course for construction inspectors/technicians:

A. Traffic Control Technician (ATSSA)
All those involved in construction work zone projects should have a basic knowledge of temporary traffic control that allows them to assist in monitoring and recognition of deficiencies during the course of a project.

B. Comprehensive Inspection Training Course (ATSSA-Training CD)
The training consists of 14 modules geared towards specific topics; inspection basics, nighttime traffic control, flagging operations, signs and supports, portable changeable message boards, arrow panels, channelizing devices, pavement markings, raised pavement markers and delineators, warning lights and floodlights, crash cushions, portable concrete barriers, truck mounted attenuators, and guardrail installation and inspection

Suggested training courses for Maintenance Supervisor:

A. Low Speed Lane Closures (ATSSA – Training CD)
Introduces the basic concept and techniques related to lane closures in low speed areas, such as advance warning areas, transitions, buffers, work spaces, ad termination areas, standards, typical setups, channelizing devices, use of flaggers, installation and removal, residential and urban areas

B. Moving Mobile Operations (ATSSA – Training CD)
Review of issues related to work zones that are in motion such as mowing, striping, parching, and line painting. Other topics include standards and procedures, fundamental principles, using flaggers, operations on the shoulders and beyond the shoulders, and more.

C. Basic Worker Safety (ATSSA – Training CD)
Introduces principles and concepts related to basic worker safety such as training, garments, visibility, nighttime work, worker safety regulations, use of barriers, shadow vehicles use of police, special devices, and more

D. Mowing Operations (ATSSA – Training CD)
Reviews issues related to traffic control during mowing operations. Standards and procedures, factors to consider during mowing, work beyond the shoulder, and in the median, personal safety, visibility and sign spacing

E. Truck Mounted Attenuator Operations (ATSSA – Training CD)
Review of issues related to work zones where TMAs are used, when to use, crash cushions, type of TMA, typical uses, shadow vehicles, advance warning trucks, positioning of TMAs, roll-ahead distances, and additional situations are discussed

F. Comprehensive Inspection Training Course (ATSSA – Training CD)
The training consists of 14 modules geared towards specific topics; inspection basics, nighttime traffic control, flagging operations, signs and supports, portable changeable message boards, arrow panels, channelizing devices, pavement markings, raised pavement markers and delineators, warning lights and floodlights, crash cushions, portable concrete barriers, truck mounted attenuators, and guardrail installation and inspection

Useful Web Sites with Work Zone or Related Information
The following web sites have information specifically related to work zone operations or organizations and programs that address work zone issues. The Work Zone Safety Information Clearinghouse maintained by the Texas Transportation Institute is a particularly valuable source of current work zone information and contacts.

American Road and Transportation Builders
http://www.artba-hq.org
American Traffic Safety Services
http://www.atssa.com
American General Contractor
http://www.agc.org
American Association of State Highway and Transportation
http://www.aashto.org
Federal Highway Administration Work Zone program
http://ops.fhwa.dot.gov/wz/index.asp
FHWA Highway Rail/Grade Crossing
http://safety.fhwa.dot.gov/safetyprogs/hiway/hiwaygradexing.htm
FHWA MUTCD
http://mutcd.fhwa.dot.gov
FHWA Work Zone Safety and Mobility Program
http://safety.fhwa.dot.gov/safetyprogs/hiway/wkzone.htm
Institute of Transportation Engineers
http://www.ite.org
Local Transportation Assistance Program
http://www.ltap.org
National Utilities Contractors Association
http://www.nuca.com
Work Zone Safety Information Clearinghouse
http://wzsafety.tamu.edu

Given all the proceeding sources of training the NM technician Training and Certification Program (TTCP) has developed a minimum training requirement and set standards of the certification for all the personal involved in the development, design, implementation, operation, inspection, and enforcement of work zone related transportation management and traffic control.

2.0 Positive Protection Devices

Positive protection strategies are intended to minimize the exposure of the workers to motorized vehicles. The policy is based on MUTCD as the minimum guidance. But in addition, other factors must be considered to develop the appropriate type of separation devices.

The Rule requires consideration of positive protection, but allows flexibility to determine how and when to use it. This determination should be based on a project specific to adhere to agency guidelines. The Roadside Design Guide offers guidance on the use of barriers, but the actual decision on whether positive protection is needed, and the best type of device to use for a specific work zone situation, is typically determined design engineer after he or she considers the actual conditions expected to be encountered in the work zone combined with the characteristics of the various devices that may be available.

In the development of traffic control plan, safety must be given the primary role. The conditions will dictate what will be necessary. When the use of concrete wall barrier (CWB) is warranted, budgetary constrains does not solely justify alteration of the standard without full consideration of all related factors.

- The process of designing **shall** be based on analysis of existing conditions and constructability review.
- An engineering study **may** be used to develop positive protection guidelines, or to determine appropriate measures for an individual project
- The engineering study **should** be based on consideration of factors and characteristics

2.1 Factors to Consider

In this procedure, situations are listed that would typically justify CWB. However, each project has a unique set of factors that should be considered. These factors include:

1. Project scope and duration;
2. Anticipated traffic speeds through the work zone;
3. Anticipated traffic volume;
4. Vehicle mix;
5. Type of work (as related to worker exposure and crash risks);
6. Distance between traffic and workers, and extent of worker exposure;
7. Escape paths available for workers to avoid a vehicle intrusion into the work space;
8. Time of day (e.g., night work);
9. Work area restrictions (including impact on worker exposure);
10. Consequences from/to road users resulting from roadway departure (Hazards, Clear Zone);
11. Potential hazard to workers and road users presented by device itself and during device placement and removal;
12. Geometrics that may increase crash risks (e.g., poor sight distance, sharp curves, lane reductions);
13. Access to/from work space;
14. Roadway classification; and
15. Impacts on project cost and duration.

For example, larger lateral clearance to a hazard results in a lesser need to shield the hazard with CWB. Where a range of distances for the desired lateral clearance is listed in this procedure, consider factors such as traffic speed/volume/type and duration of exposure to determine appropriate lateral clearance for a project, and whether CWB should be used.

NMDOT has developed a check list that may be used as basis of the design of a traffic control plan.

Figure 3- Check list 1-CWB decision Matrix

CWB decision matrix			
Work Zone	**Yes**	**No**	**N/A**
1. Project scope and duration?			
a. Short term (duration of work)	☐	☐	☐
b. Long term (longer than three days)	☐	☐	☐
c. Permanent lane/shoulder/ramp closures	☐	☐	☐
Comments:			
2. Anticipated traffic speeds through the work zone larger than 35 mph;	☐	☐	☐
3. Anticipated traffic volume; larger than 10,000	☐	☐	☐
4. Vehicle mix; more than 5% truck volume	☐	☐	☐
5. Type of work (as related to worker exposure and crash risks); High risk, bridge deck	☐	☐	☐
Comments:			
6. Distance between traffic and workers, and extent of worker exposure; Less than 6'	☐	☐	☐
Comments:			
7. Work area restrictions (including impact on worker exposure);	☐	☐	☐
8. Escape paths available for workers to avoid a vehicle intrusion into the work space;	☐	☐	☐
Comments:			
9. Time of day (e.g., night work);	☐	☐	☐
10. Consequences from/to road users resulting from roadway departure;	☐	☐	☐
Comments:			
11. Potential hazard to workers and road users presented by device itself and during device placement and removal;	☐	☐	☐
Comments:			
12. Geometrics that may increase crash risks (e.g., poor sight distance, sharp curves);	☐	☐	☐
Comments:			
1. Access to/from work space;	☐	☐	☐
Comments:			
14. Roadway classification;	☐	☐	☐
Comments:			
15. Impacts on project cost and duration.	☐	☐	☐

Comments:			
16. NMDOT drop off policy is met.	☐	☐	☐
Comments:			
17. Intersection sight distance.	☐	☐	☐
Comments:			
Review all the factors. Safety of the workers and public should be evaluated and based on engineering judgment traffic control plan should be designed.			
Will CWB be required? Use this matrix and department policy to decide on the use of CWB. Refer to next pages for more guidance.	**Yes**	**No**	**N/A**

NMDOT pavement drop off guide shall be used before consideration for positive protection devices to develop for traffic control plans. The New Mexico Department of Transportation publication, "Pavement Drop-off Guidelines for Maintenance and Construction Work Zones", shall be used for all highway projects involving maintenance and construction work zones.

Table 1- NMDOT Drop off policy

PAVEMENT DROP-OFF CASES
CASE I - Activities Within the Travel Lane Such as Milling or Overlay Operations.
A maximum 1.5 in. vertical drop-off between adjacent surfaces will be allowed at the centerline, or lane lines without treatment. When the drop-off is greater than 1.5 in., a fillet with a slope of 6:1 or flatter shall be provided during non-working hours. The work shall be scheduled to result in not more than one day operation of exposed longitudinal joint between adjacent surfaces.
CASE II - Areas Adjacent to the Existing Travel Lane with Lateral Buffer Zones Less than 6 ft. In Width.
A buffer zone is defined as any smooth, traversable surface that does not contain any obstruction or drop-offs. 1) For travel lane widths within construction/maintenance work zones of 11 ft. or more: a) A slope of 3:1 or flatter should be constructed whenever possible; however, a maximum 3 in. drop-off will be allowed without any special treatment. Vertical panels or other delineation devices shall be provided to delineate the drop-off. b) Drop-offs greater than 3 in. that are exposed to traffic during non-working hours shall be protected by a fillet (3:1 or flatter slopes) with delineation by drums, vertical panels, or other delineation devices. If a fillet of 3:1 slope is not achievable, positive barrier (concrete wall barrier or approved equal) protection should be used. For travel lane widths within construction/maintenance work zones of less than 11 ft., the procedure outlines under exceptions will apply.
CASE III - Areas Adjacent to the Existing Travel Lane with Buffer Zones 6 ft. or More in Width.
1) A slope of 3:1 or flatter should be constructed whenever possible. 2) In those cases where a 3:1 or flatter slope is not possible, the following shall apply: a) For drop-offs less than 1 ft., vertical panels or other delineation devices shall be used. For drop-offs in excess of 1 ft., Type "B" drums at a spacing approved by the District Traffic Engineer or design team shall be used.
CASE IV - Point Drop-offs Such as Drop Inlets and CBC Ends.

When this type of drop-off is present, every effort should be made to place the appropriate permanent nature, such as guardrail or inlet grates, as soon as possible. The following temporary measures shall apply:
1) For drop-offs located 6ft. or more from the travel lane, Type "B" drums shall be used to delineate the hazard.
2) For drop-offs located less than 6 ft. from the travel lane, positive barrier (concrete wall barrier or approved equal) protection shall be provided. Type "B" drums may be used if

2.2 Concrete wall barriers

The following procedure establishes design guidelines for the use of Concrete Wall Barrier (CWB). CWB is effective in protecting the workers by providing positive separation between traffic and the work area. When used appropriately, CWB has the potential to reduce the severity of crashes. However, the CWB itself and the proximity of the end of the CWB can also be a hazard to traffic. Whenever feasible, it is preferable to remove the hazard and avoid the need for CWB. Typical reasons for use of CWB are:

- Protect workers
- To separate high-speed vehicular traffic from the work area,
- To shield a hazard,
- To protect vehicles from embankments or drop-offs,
- To separate opposing directions of traffic.

Currently the traffic control standard drawings can be found in NMDOT public web-site http://nmshtd.state.nm.us/upload/images/Plans_Specs_Estimates/Design_Directrives/702.pdf
See MUTCD section 6F.65 standard for more information.

2.3 Guidelines for CWB Use

If the work area closure is anticipated to last more than three continuous days and nights without a change to the traffic control layout or staging, CWB may be considered after going through the work zone design check list or encountering the following situations:

1. A bridge deck or culvert replacement/rehabilitation where any of the following conditions is anticipated to exist for more than three consecutive days and nights:
• Full-depth holes in the deck,
• Railing removed,
• Confined/restricted work area.
2. Dropping/removing a bridge deck over roadway if the work activity is more than three consecutive days and nights.
3. A bridge painting project over the roadway.
4. Where permanent positive protection devices are removed, for more than three days, for replacement temporary positive protection shall be provided.
5. To separate counter directional traffic where two or more lanes in each direction are provided during the work and posted speed limit >= 45 mph.
Depending on the significance of the factors listed at the beginning of this procedure, other common situations which may justify CWB, include:

A. Spot (or isolated) locations where the work area closure will last for more than three continuous days and nights without a change to the traffic control layout or staging, and either of the following conditions is anticipated:

Exposed hazard that is at the same spot for more than three consecutive days and nights is within clear zone and is closer to an open traffic lane than:

a) 15 - 20 feet on freeway or expressway,
b) 10 – 15 feet on non-freeway/expressway where the posted speed limit is >= 45 mph,
c) 8 – 10 feet if AADT is less than 1,500 or the posted speed limit is less than 45 mph.

Examples include footings, abutments, and construction activities such as false (form work for concrete) work.

The distance between the edge of the open traffic lane and the work is less than 6 feet (4 feet if non freeway/expressway) and the work is anticipated to continue for more than three consecutive days and nights at the same spot location.
If the work area closure and hazard will last for extended length of time (e.g., more than 2 months), lateral clearance should be greater than noted above, or CWB should be considered.
Whenever feasible, it is preferable to remove the hazard and avoid the need for CWB. Where the hazard cannot be removed, an option in lieu of CWB to shield some hazards is to use attenuators, or crash cushions.

B. Where a drop off or slope steeper than 3:1 is anticipated to exist for more than three continuous days and nights, has a continuous length of 100 feet or more, and is close enough to a traffic lane that the likelihood of vehicles going off the edge of the road are significant (See following table).

Table 2- CWB justification based on Posted Speed

Drop-offs to Commonly Justify CWB based on posted speed			
	Freeways/ Expressways 60 – 65 mph	**Freeways/ Expressways 45 – 55 mph**	**Non Freeways/ Expressways 45 – 55 mph**
Depth of Drop off (in)	Lateral Offset (ft)*	Lateral Offset (ft)*	Lateral Offset (ft)*
6 – 12	0-2	0-2	0-2
13 – 24	0-4	0-4	0-4
25 – 36	0-12	0-8	0-4
> 37	0-20	0-20	0-8

* For drop offs on the outside of a horizontal curve or taper, or where the drop off will last for extended length of time (e.g., more than 2 months), provide greater offset than shown in the table. Otherwise, consider CWB. Whenever feasible, provide a minimum 2-foot lateral offset between the edge of the traffic lane and any drop off.
Where this is not feasible, a maximum drop off of 6 inches may be acceptable without using CWB. Provide a sloped edge of aggregate or other temporary fill material at the drop off.
For roadways with posted speed limit, less than 45 mph consider the factors listed in the beginning of this procedure to determine if a barrier is warranted.

The need for CWB to protect from drop-offs may be avoided by using aggregate or other temporary fill material to increase the lateral offset and/or to provide a 3:1 or flatter slope adjacent to the pavement or shoulder. Even if adequate lateral offset is provided, a sloped edge is desirable. Provision of temporary fill material at the pavement edge should be specified on Construction Details in the plan.

C. At freeway/expressway crossover entrances to prevent vehicles from entering opposing traffic lanes. CWB should also be considered at crossover exits that will be in place for more than one week where AADT is >=10,000 and percent of truck mix >=5%.

D. Engineering judgment should be used on other situations where a combination of severity of hazard, high traffic volume, geometric concerns, and/or long duration of exposure exists.

E. Performance level – Many CWB designs have been tested at NCHRP 350 test level three (TL3) and are acceptable for use on higher speed roadways. However, some designs are approved at NCHRP 350 test level two (TL2) and may be used only when approved by NMDOT.

2.4 CWB Anchoring Requirement/Deflection Distance

Although CWB is designed to prevent an errant vehicle from entering a construction work zone, research tests have shown lateral deflection of the barrier after a vehicular hit. The barrier shall be anchored if the distance to a 2 foot or greater drop off is equal or steeper than 3H: 1V, and:

1. The posted speed is 45 mph or greater and the drop off is less than 4 feet from the side of the barrier closest to the drop off,

2. The posted speed is 40 mph or less and the drop off is less than 2 feet from the side of the barrier closest to the drop off.

For example, the edge of a bridge deck or a drop off at the edge of pavement.

The values shown below are recommended buffer space behind a freestanding (without anchor) concrete barrier installation.

Table 3- Buffer space when shielding Hazards

When shielding hazards above ground:	
Posted Speed	**Deflection Distance**
40 mph or less	2 ft
45 mph or greater	5 ft

Table 4- Buffer space when shielding Drop-offs

When shielding Drop-offs:	
Posted Speed	**Deflection Distance**
40 mph or less	2 ft
45 mph or greater	

• Vertical Drop-off 6" or less and no traffic below	2 ft
• Vertical drop-offs greater than 6"	5 ft

Table 5- Buffer space used as Temporary Median Barrier

When used as a Temporary Median Barrier separating opposing traffic lanes:	
Posted Speed	**Deflection/Shy Distance**
40 mph or less	2 ft typical
45 mph or greater	2 ft typical

Where lateral displacement of the barrier cannot be tolerated, anchor the barrier to the underlying pavement surface.

2.5 Two-lane, Two-way Operation on one roadway of a normally divided highway (TLTWO)

Often an efficient method of reconstructing a multi-lane divided highway is to close one roadway and to provide two-way operation on the other roadway. This is accomplished with high speed crossovers at each end of the project. However, this situation violates what drivers normally expect and great care must be exercised in order for this scheme to operate safely.

Section 6G.15 of the 2003 edition of the Manual on Uniform Traffic Control Devices (MUTCD) addresses two-lane, two-way traffic on one direction, of a normally divided highway. The standard provided for this condition is as follows:

'*When two-lane, two-way traffic control must be maintained on one roadway of a normally divided highway, opposing vehicular traffic shall be separated with either temporary traffic barriers (concrete safety-shape or approved alternate) or with channelizing devices throughout the length of the two-way operation. The use of markings and complementary signing, by themselves, shall not be used.*'

NMDOT recommended standards

There are many factors involved in deciding the appropriate devices to meet the condition of the road for two lanes, two-way traffic control. Concrete wall barriers may be used as an effective way of positive separation. The use of tubular marking or other appropriate devices may be permissible according to MUTCD. But in an effort to develop guidance for the designers of traffic control plans in how to deal with positive separation for two-lane, two way traffic control a policy has been developed.

The policy is based on MUTCD as the minimum guidance. But in addition, other factors must be considered to develop the appropriate type of separation devices.
In the development of traffic control plan, safety must be given the primary role. The conditions will dictate what will be necessary.

CWB shall be always considered as a part of engineering analysis to justify their application at the following locations:

- In transition zones and positive separation (channelization) between opposing two-lane traffic throughout a crossover where speed is posted larger or at 35 mph.
- On tangent sections and flat curves where an angle of impact of more than seven degrees exists and where an allowable movement of the barrier, when hit, of 1 ½ feet is not acceptable.
- On all freeway facilities with ADT of 10000 and truck percentage of 5% or above

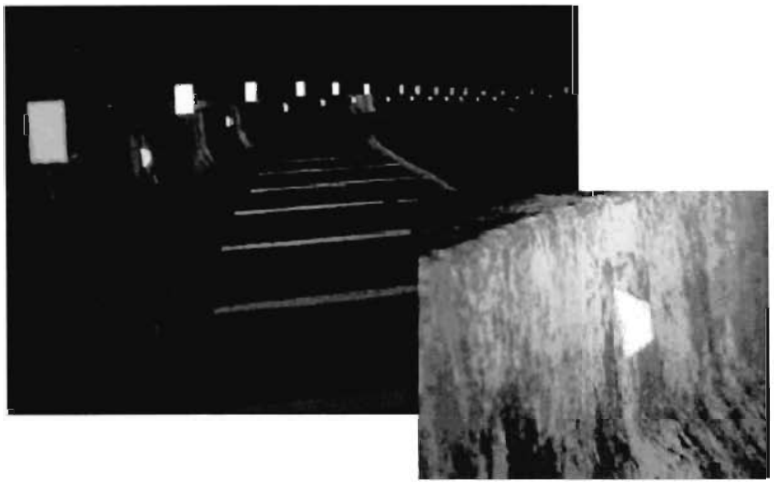
Proper end treatment shall always be applied.

2.6 Other devices may be considered – Ballast-Filled Barriers, Traffic drums, Traffic tubes, Vertical panels, Barricades, Shadow Vehicles, and Vehicle Arrestor Systems

The use of a flashing arrow panel at the start of the taper at all right and left lane closures is recommended on all roadways

The longitudinal spacing of Tubular Marking channelizing devices (in feet) through a work zone and through taper and transition sections at not more than the speed limit (in miles per hour) is recommended, with spacing (in feet) through the taper for a lane closure at not more than one-half the speed limit (in miles per hour) where engineering judgment indicates a special need for speed reduction.

The use of side reflectors with cube-corner lenses on CWB and related concrete channelizing devices spaced (in feet) at not more than two times the construction zone speed limit (in miles per hour) through a work zone is recommended.



A minimum spacing (in feet) of one time the construction zone speed limit (in miles per hour) for channelizing devices (other than concrete barriers) is recommended in transition areas, and through the length of the crossover and in the termination area downstream (where operations as existed prior to the crossover resume).

The use of side reflectors with cube-corner lenses spaced (in feet) at not more than the construction zone speed limit (in miles per hour) on concrete channelizing barriers in crossovers (or alternately the use of retroreflective sheeting on plastic glare-control louvers [paddles] placed in crossovers) is recommended.

It is recommended for construction/work zones on high-volume roadways that plastic glare-control louvers (paddles) be mounted on top of concrete channelizing barriers, when used in transition and crossover areas, at a spacing of not more than 24 in.

2.7 Intersection Sight Distance

When specifying the need for CWB, it is recommended that the designer check all side road approaches to ensure the CWB does not restrict intersection sight distance. This is especially critical when the roadway segment has horizontal and vertical curves that may further affect sight distance. Provide appropriate turning radii in urban areas to accommodate school buses and other large vehicles. Install portable crash cushions so the end of the cushion is located at least 50 ft from the intersecting side road. The intersection may need grading to minimize drop-offs

2.8 CWB End Treatments

Clear zone

For the purpose of determining the need for end treatment for temporary precast concrete barrier in work zones, the following clear zones are appropriate. Where a range of minimum to desirable clear zone is noted, consider traffic volume, speed, and duration of exposure to determine appropriate clear zone for the project. For stage switches and short term work operations of no more than 24 hours duration, lesser clear zone than the minimum noted may be allowed. For end treatment barrier installations in place for extended length of time (e.g., more than 2 months), a greater clear zone should be considered.

- Freeways and expressways: 15' minimum, 20' desirable.
- Other highways (non-freeway/expressway): 10' minimum, 15' desirable.
- Other highways with AADT less than 1500 or non-construction speed limit of 45 mph or less: 8' minimum, 10' desirable.
- Bridge projects with temporary traffic signals, one open lane shared by both directions: 12' from the open traffic lane.

2.9 Barrier Flare: One treatment for the exposed end of CWB is to flare the barrier away from open traffic lanes to the edge of the clear zone as defined above. Cost effective flare rates range from 4:1 (low speed roadways) to 8:1 (high speed roadways). Longer flare rates increase the number of impacts while shorter flare rates increase the severity of crashes. For additional guidance, refer to Roadside Design Guide. The recommended flare rates are shown below.

- 8:1 for operating speed of 45 mph or more.
- 6:1 for operating speed of 40 mph or less.

Often it is not possible to flare the barrier to the edge of clear zone due to space limitations or need for construction vehicles and equipment to access the work area. If

the barrier is not flared to the edge of clear zone and speeds are 35 mph or greater, temporary grading may be required for uneven ditch sections or NCHRP Report 350 Test Level 3 approved sand barrels or portable crash cushion should be provided as the barrier end treatment. The Roadside Design Guide contains recommended barrier end placement examples in non-level shoulders and medians.

2.10 Construction Work Operations and Traffic Stage Switches near Flared Barrier: Even if the barrier is flared away from traffic, the barrier may have to be straightened and the barrier end moved closer to traffic to complete some work operations and traffic stage switches. If the barrier end would be located within the clear zone for longer than 24 hours and speeds are 35 mph or greater, one of the following treatments should be done:

1. Provide a portable crash cushion,
2. Taper traffic to the shoulder or adjacent lane to provide more lateral clearance to the barrier end,
3. Remove the barrier and stockpile it off the work site.

2.11 Crash Cushion or Sand Barrels

As indicated earlier in this procedure, if it is not possible to flare the barrier to the edge of the clear zone and speeds are 35 mph or greater, then NCHRP Report 350 Test Level 3 approved portable crash cushion or sand barrels should be provided as the barrier end treatment. Install an approved crash cushion or sand barrels on the exposed end of the barrier if within the clear zone. These end treatments are designed to absorb energy of an impacting vehicle by reducing the impact force to acceptable levels. A crash cushion or sand barrels are required on the upstream end for divided or one-way facilities, and on both ends for all two-way facilities, including temporary two-way facilities, such as in freeway counter-directional operations. The types of crash cushions currently used are listed in the NMDOT Approved Products List.

Sand Barrels consist of a group of free-standing barrels and are discussed in FDM. When selecting the crash cushion or sand barrels, consider the frequency of nuisance hits.

3.0 Exposure control measures

"Section 630.1108(b) discusses the use of "Exposure Control Measures." This term was added in place of "Positive Protective Strategies" to reflect the fact that strategies were not aimed solely at preventing vehicles from entering the work space, but to reduce worker exposure through a variety of strategies. Here are some of the strategies that may be considered:

- Full road closures
- Ramp closures
- Median crossovers
- Full or partial detours or diversions
- Protection of WZ setup and removal using rolling road blocks
- Performing work at night or during off-peak periods
- Accelerated construction techniques
- Automated speed enforcement.

Controlling exposure for the workers and safety of the workers must be considered of outmost importance. The traffic control devices shall take into consideration all tool available in providing safer work zones. But in addition to those measures other option are available that may enhance the safety and provide saving in duration and cost of the construction.

The following matrix provides few other options that may be available. Prior to considering these options examine the circumstances that the workers are left with. If safety of the workers is in jeopardy, consideration of the following options is strongly recommended.

Figure 4- Check list 2-Exposure Control Measures Matrix

Exposure Control Measures Matrix				
Ask the following questions:	**Can you provide?**		**Can you see any?**	
	Yes	**No**	**Cost saving**	**Time saving**
1. Full road closure	☐	☐	☐	☐
Comments:				
2. Ramp Closure	☐	☐	☐	☐
Comments:				
3. Median Crossovers	☐	☐	☐	☐
Comments:				
4. Full or partial detours and diversion	☐	☐	☐	☐
Comments:				
5. Protection of WZ setup and removal using rolling road block	☐	☐	☐	☐
Comments:				
6. Work area restrictions (including impact on worker exposure)	☐	☐	☐	☐
Comments:				
7. Performing night or during off-peak periods	☐	☐	☐	☐
Comments:				
8. Accelerated construction techniques	☐	☐	☐	☐
Comments:				
9. Encroachments	☐	☐	☐	☐
Comments:				
Will additional safety be provided taking available one or several measures?	**Yes**	**No**		**N/A**

4.0 Uniformed law enforcement

4.1 Purpose

In order to provide better mobility and safer work zones, NMDOT in partnership with FHWA, has developed a policy for the use of uniformed law officers within the construction work zones.

The policy consists of processes, procedures, and/or guidance. The processes, procedures, and/or guidance address the following:

1. Basic interagency agreements between the NMDOT and appropriate law enforcement agencies to address work zone enforcement needs;
2. Interaction between NMDOT and law-enforcement agency during project planning and development;
3. Conditions where law enforcement involvement in work zone traffic control may be needed or beneficial, and criteria to determine the project-specific need for law enforcement;
4. General nature of law enforcement services to be provided, and procedures to determine project-specific services;
5. Appropriate work zone safety and mobility training for the officers, consistent with the training requirements in 23 CFR 630.1008(d);
6. Procedures for interagency and project-level communications between NMDOT and law enforcement personnel, and
7. Reimbursement agreements for law enforcement service.

4.2 Policy Statement

"NMDOT may acquire the services of Uniformed Law Enforcement officers for select projects that a need for enforcement is established by the design team.

- Each project where the need for law enforcement is established shall develop an memorandum of understanding (MOU)
- MOU shall be developed upon check list.
- Each item in the check list must be addressed."

The details of the document shall be drafted in a memorandum of Understanding (MOU) document within the construction plan at PS@E design inspection. All seven issues should be addressed this document. A person with high stake in the project shall be recognized prior to the start of construction to be the liaison between the agencies and execute the details of the agreement. MOU will be part of construction documents.

Figure 5- Check list 3-Law Enforcement MOU check list

Law Enforcements MOU should address the following issues:			
Work Zone	**Yes**	**No**	**N/A**
Scope of Work, Description	☐	☐	☐
Statement of work	☐	☐	☐
Inter-agency agreement	☐	☐	☐
Law Enforcement Responsibilities	☐	☐	☐
Department Responsibilities	☐	☐	☐
Contract Period	☐	☐	☐
Contract management	☐	☐	☐
Budget DETAILS	☐	☐	☐
Payment	☐	☐	☐
Rates	☐	☐	☐
Cost Limitation	☐	☐	☐
Termination	☐	☐	☐
Subcontracting	☐	☐	☐
Retention	☐	☐	☐
Disputes	☐	☐	☐
Indemnification	☐	☐	☐
Change in Terms of agreement	☐	☐	☐
Review all the factors. Develop MOU based on addressing all the issues on the check list.			
	Yes	**No**	**N/A**

An example of a Memorandum of understanding (MOU) is shown in Appendix B

5.0 Safe entry/exit for work vehicles and equipment

Provisions for safe means for work vehicles and equipment to enter and exit traffic lanes and for delivery of construction materials to the work space should be based on individual project characteristics and factors. Here are some of the factors to be considered:

- Characteristics of the Facility
  - Speed (acceleration /deceleration, alignment constraints?)
  - Traffic Volumes and Queues
- Configuration of Access
  - How do vehicles gain access?
  - How is traffic affected? Decision sight distance
  - Are turning radii appropriate?

- Motorist Expectancy
  Is ample direction given to the motorist?
- Work Zone Signing
  Is additional signing necessary for exit/entry locations?
- Truck crossing signs requirements
- Movement of work vehicles in the work zones.
- Probability for congestion causing movements
- Mandates vehicle entrance and exit in the direction of traffic flow.
- Night time signing of delivery vehicles
- Light requirements for guidance to ensure proper visibility
- Motorist awareness of work vehicle movement.
- Recommendation for Delivery Coordination (off peak hours)
- Environmental factors (dragging dirt into the roadway)

Use check 4 in the appendix D and after careful consideration an appropriate traffic control plan shall be designed and presented to project manager for review and approval. The design shall be based on AASHTO and MUTCD guidelines. Project manager shall assign a responsible person for scheduled and random inspection for adherence. Here are more guidelines:

- Truck crossing signs requirements
  Signing can be placed according to the shoulder work typical applications, with Truck Crossing signs replacing all shoulder work signs
  Place at same interval as "Shoulder Work"
  Any distances to be displayed on the Truck crossing sign shall be installed using supplemental distance plaques.
  W 11-10(1) sign on controlled access facilities may be used
  W11-10(1) sign on any facility where stopping sight distance is less than requirement and entrance cannot be relocated shall be used

- Night time signing of delivery vehicles
  Increases motorist awareness of vehicular movements
  Provides specific direction to following motorists
  Protects workers from "Errant" vehicles
  Sign for do not follow into work area

6.0 Payment for traffic control features and operations

Appropriate pay item provisions for work zone traffic control features are necessary to address the safety impacts of a project. Separate pay items are required for major categories of traffic control devices, safety features, and work zone safety activities. Separate pay item does not mean unit price pay item. Unit price pay items, lump sum pay items, or a combination thereof may be used with method-based specifications.

Special provision Supplemental Specification 702-C-05-01-06 addresses payment for traffic control devices: When specifically designated for measurement and payment in the contract, traffic control devices during construction will be measured as a lump sum unit.

6.1 BASIS OF PAYMENT

The accepted work for traffic control devices during construction will be paid for at the contract unit price lump sum. Payment shall be full compensation for furnishing all materials, tools, labor, equipment, hauling, and any other appurtenances necessary to satisfactorily complete and maintain adequate and safe traffic control until completion of the project.

This shall include all interim and temporary signing, temporary striping, temporary stripe removals, construction signing, steel posts, base posts, portable sign supports, barricades, drums, sequential arrow displays, and flaggers as necessary to complete the traffic control detailed in the construction plans or modifications to the plan details as approved by the District Traffic Engineer including all setups and resetting of devices and no additional separate measurement or payment will be made for such items therefore.

The cost of traffic control devices shall not be considered incidental to other contract pay items.

Traffic Control Devices during Construction shall not be considered as eligible for a cost savings suggestion.

Here are examples of NMDOT pay items for traffic control devices.

6180000	TRAFFIC CCONTROL MANAGEMENT	LS
7020000	CONSTRUCTION SIGNINGS.	LS
7021000	POSTS FOR CONSTRUCTIION SIGNING	LF
7021100	PORTABLE SIGN Support	EACH
7022100	BARRICADE, TYPE I	EACH
7022200	BARRICADE, TYPE II	EACH
7022380	BARRICADE, TYPE III-8'	EACH
7023100	VERTICAL PANEL, TYPE SINGLE	EACH
7023200	VERTICAL PANEL, TY BK TO B	EACH
7024000	CONSTRUCTION TRAFFIC MARKER	EACH
7025250	CHANNELIZATION DEVICES TYPE DRUM	EACH

7025270	LANE SEPARATOR SYSTEM	LF
7026000	SEQUENTIAL ARROW DISPLAY	EACH
7026100	PORTABLE CHANGEABLE MESSAGE SN	EACH

7.0 Quality guidelines

- Each agency **shall** develop and implement quality guidelines to help maintain the quality and adequacy of the temporary traffic control devices for the duration of the project
- A level of inspection necessary to provide ongoing compliance with the quality guidelines **shall** be provided
- Specific provisions that address appropriate payment and quality assurance for necessary safety features.
- Quality guidelines for temporary traffic control devices along with appropriate level of inspection and fines.

7.1 Quality Guidelines

The quality of the Temporary Traffic Control Zone devices in this standard has been divided into three classifications: acceptable, marginal, and unacceptable.

Acceptable devices meet the all MUTCD requirements such as design, size, color, weight, etc., and are properly placed as specified, and clearly meet quality/cleanliness and their intended function.
The term "Marginal" for the purpose of this manual means "marginally acceptable", reaching the lower end of acceptability.
Devices that fall into the “unacceptable” classification shall be removed from or shall not be delivered to the jobsite.
The required minimum percentage of acceptable devices has been established for each type of device and varies upon the duration of the Temporary Traffic Control Zone.

7.2 Intermediate and Long Term Duration

Within each Temporary Traffic Control Zone that is planned to remain in place for more than twelve (12) hours, the following requirements shall be followed:

- At the time of the initial set up or at the time of major stage changes, one hundred percent (100%) of each type of device (channelizers, barricades, signs, warning lights, arrow panels, portable changeable message signs, pavement tape and raised pavement markers) shall be classified as "acceptable".
- Throughout the duration of the project, the number of acceptable devices may decrease to seventy-five percent (75%) of the initial quantity of each particular device, as a result of damage and/or deterioration during the course of the work with the remainder of the devices in the “marginal” category.
- Devices in the marginal category may remain in the Temporary Traffic Control Zone until their total number exceeds the twenty-five percent (25%) maximum for that type of device, which is considered an “unacceptable“ situation. Should the percentage of devices in the marginal category exceed twenty-five percent (25%), all marginal devices shall be replaced so as to bring the group of devices back up to acceptable standards.
- All devices categorized as unacceptable shall be replaced upon notification.

- Missing or knocked down devices should be replaced or re-set in a timely manner. They may directly affect safety on the project.

7.3 Short Term Duration

Within Temporary Traffic Control Zones that are planned to be in place for less than twelve (12) hours, the following requirements may be followed:

- At the time of the initial set up, one hundred percent (100%) of all TTC devices except channelizing devices and barricades shall be classified as "acceptable". During the short term duration of the project, the intermediate and long term duration standards shall be maintained for these devices.
- At the time of the initial set up, a minimum of seventy-five percent (75%) of each type of channelizer and barricade shall be classified as "acceptable". Up to a maximum of twenty-five percent (25%) of these devices may be classified as "marginal". "Unacceptable" devices shall not be installed.
- During the short term duration of the project, the number of marginal devices may increase beyond the twenty-five percent (25%) of the initial quantity, as a result of damage and/or deterioration during the course of the work.
- Missing or knocked down devices should be replaced or re-set upon notification.

The descriptions should established by NMDOT and Construction Bureau to determine if the device is acceptable, marginal or unacceptable.

7.4 Inspections and fines

Inspection of the traffic control devices should involve NMDOT project manager and prime and sub contractor
Compliance to quality and scale to measure has been nationally established by several organizations.

7.5 Failure to Comply

1. The details can be worked out to issue points against violators on their next project
2. Scaled pay according to percentage of compliance "Pay Scale"

7.6 Citation process

1. Daily inspections
2. Nightly inspections
3. Surprise inspections
4. Ask for the contractor recognition of the violations
5. Pictures of the field non-conformances
6. Correction guidance and coaching

Appendix A

Subpart J

As a reference the work zone safety and mobility rule is shown in this document:
NEW MEXICO
DEPARTMENT OF TRANSPORTATION
Work Zone Safety and Mobility
October 2007

Purpose and Background

The Federal Highway Administration amendment to title 23, Code of Federal Regulations, Part 630, was published in the Federal Register dated September 9, 2004. The purpose of this amendment was to revise Subpart J – Work Zone Safety and Mobility. The New Mexico Department of Transportation (NMDOT) is required to comply with all provisions of 23 CFR Part 630 Subpart J - Work Zone Safety and Mobility by October 12, 2007. Section 630.1006 Work Zone Safety and Mobility Rule states: *"Each State shall implement a policy for the systematic consideration and management of work zone impacts on all Federal-aid highway projects. This policy shall address work zone impacts throughout the various stages of the project development and implementation process. This policy may take the form of processes, procedures, and/or guidance, and may vary based on the characteristics and expected work zone impacts of individual projects or classes of projects. The States should institute this policy using a multi-disciplinary team and in partnership with the FHWA. The States are encouraged to implement this policy for non-Federal-aid projects as well."* In order to meet the requirements of 23 CFR 630 Subpart J, the NMDOT has developed the following policy and procedure regarding work zone safety and mobility.

Work Zone Safety and Mobility Policy

Policy Statement

New Mexico Department of Transportation policy is to plan, design, construct and maintain highways while providing for the safe and efficient movement of all modes of transportation through or around a temporary traffic control zone and safety of the workers.

This policy applies to all types of bridge and highway construction, reconstruction and maintenance projects on the State Highway System, projects on local systems that are administered by the NMDOT, and urban as well as rural facilities.

Goals and Objectives

The goal of this policy is to promote a commitment to implement the requirements of the Work Zone Safety and Mobility Policy (23 CFR 630 Subpart J) by:
Providing safe work zones for workers an motorists
Reducing the number of crashes and deaths in work zones

Improving training for all project staff involved in plan development and construction administration related to work zones
Improving work zone procedures over time by using knowledge and observations gained from past work zones
Developing and implementing Transportation Management Plans (TMPs) for work zones

Explanation of Terms

Transportation Management Plan (TMP): A TMP consists of strategies to manage the work zone impacts of a project. The TMP consists of a Temporary Traffic Control Plan (TTC) and addresses both Transportation Operations (TO) and Public Information (PI) Components depending on expected work zone impacts.

Work Zone: An area of a highway with construction, maintenance, or utility work activities. It extends from the first warning sign to the "End Road Work" sign or the last temporary traffic control device.

Project Classification

Determining project classification is intended to help assess and allocate resources more effectively to projects that are likely to have more work zone impacts. A project that is expected to cause more impacts may warrant additional attention during project development and may require additional funding for transportation strategies that help manage the work zone impacts of the project. The three project classifications utilized in New Mexico are as follows:

Significant Project
Regionally Significant Project
Routine Project

Specific definitions of project classifications are as follows:

***Significant Project*: 1) All Interstate system projects within the boundaries of a designated Transportation Management Area (TMA) that occupy a location for more than three days with either intermittent or continuous lane closures; 2) Any project that alone or in combination with other concurrent projects nearby is anticipated to cause sustained work zone impacts that are greater than what is considered tolerable based on State policy and or engineering judgment.**

Regionally Significant Project: Any project that is within a community or is along a scenic byway or other culturally significant area.

Routine Project: Any project that is not anticipated to cause sustained work zone impacts. These projects are typically rural in nature and on low to medium volume roads. The LOS for these types of roads would not be significantly impacted if a lane is closed during normal work operations.

The project classification should be done during the STIP Planning & Preliminary Project Definition stage and will be determined based on the following parameters that can significantly affect work zone impacts:

Project purpose and need
Roadway functional classification – e.g., Interstate, expressway, principal arterial, major arterial, minor arterial, collector.
Area type – e.g., urban, suburban, rural.
Traffic demand and travel characteristics – e.g., lanes affected, average daily traffic (ADT), expected capacity reduction, level of service (LOS).
Type of work – e.g., new construction, reconstruction, rehabilitation, maintenance, bridge work, equipment installation/repair.
Complexity of work – e.g., duration, length, intensity.
Level of traffic interference with construction activity.
Potential impacts on local transportation network and businesses.
Considerations specific to the region – e.g., tourism, special events, weather

Policy Guidance and Agency Processes and Procedures

The project design team is responsible for developing the Transportation Management Plan (TMP) for the project based on the project complexity and potential impacts to mobility through the work zone and highway corridor. The Transportation Management Plan shall include at a minimum, a detailed Temporary Traffic Control (TTC) plan that addresses the safe handling of motorized and non-motorized traffic through the work zone. In addition, it may be necessary on some projects to include Transportation Operations (TO) strategies to ease work zone impacts. The TMP may also include a Public Information (PI) component. Public Information strategies may be required to inform those affected by the project of the expected work zone impacts and changing conditions. The PI component may be included as a bid item if the project design team determines that this may be necessary due to the complexity of the project. The PI may be the responsibility of the contractor, the District Office or a public relations firm based on recommendations of the design team in consultation with the District Office.

For all **significant projects**, a Transportation Management Plan (TMP) shall be developed. The TMP will consist of the temporary traffic control plan, as well as transportation operations and public information strategies to manage work zone impacts.

All projects will include detailed traffic control plan sheets specific to the phasing of traffic as included in the suggested sequence of construction developed by the design team during project development. All projects will include a bid item for Traffic Control Management in addition to bid items for traffic control devices. All NMDOT Design Directives shall be followed during project development.

The Project Development Engineer (PDE) shall be responsible for developing pay items for bidding on the TTC plan. This shall be in compliance with the NMDOT's specification for Section 702 Traffic Control Devices for Construction.

Exhibit "A" outlines the agency process for developing a TMP.

Work Zone Data

NMDOT shall use field observations, available work zone crash data, and operational information to manage work zone impacts for **Significant Projects** during implementation.

NMDOT shall continually pursue improvement of work zone safety and mobility by analyzing work zone crash and operational data for multiple projects to improve and enhance State policies and procedures. Collecting, analyzing and compiling findings from multiple projects will help in developing and implementing future projects.

Responsibility	Project-Level Activity
District Office	Collect Work Zone Crash Data
District Office	Collect Operational Data
District Office	Manage Work Zone Impacts

Responsibility	Process-Level Activity
District Office /TTSBureau	Analyze Work Zone Crash & Operational Data
TTS Bureau	Incorporate into Central Database
TTS Bureau	Compile Findings from Multiple Projects for use

Process Review

In order to ascertain the present degree of compliance with the intent of the MUTCD as it applies to NMDOT's construction project work zone safety and mobility statewide, NMDOT shall perform a process review at least every two years. The review will be led by the State Construction Bureau. The review shall include representatives from:

Planning
Project Development
Traffic Technical Support
Construction Bureau
District Office
Contractor
FHWA
ACNM

The committee shall determine and document areas of non-compliance and recommend appropriate actions, ascertain which existing NMDOT policies and procedures are affectively working to provide safe compliant construction work zones or determine if new procedures are required, improve long term day-today quality and safety of NMDOT construction work zones and determine the effectiveness of work zone training.

The scope of this review is as follows:

Conduct a statewide Work Zone Process Review to evaluate the existing Department, District, and project work zone implementation, policies and procedures.
Conduct site visits of on-going construction/maintenance work zones in each NMDOT District to determine compliance with work zone specifications.
Conduct a survey in an attempt to obtain information of recurring work zone problems, concerns, issues and best practices.
Document and compare review findings with established NMDOT policies, specifications and MUTCD.
Provide a report of the review team findings and recommended corrective action or mitigation to improve public and work force safety within construction work zones.
Establish subsequent procedures and protocol for conducting periodic work zone reviews

Policy Exemption Criteria and Process

If this policy can not be implemented on a project, then the Project Development Engineer will request a design variance as outlined in the attached Infrastructure Design Directive IDD-2006-04 Design Exception & Design Variance Procedure.

Work Zone Training

The NMDOT will require training for personnel involved in the development, implementation, operation, inspection, and enforcement of work zones, appropriate to the job decisions each individual is required to make. The training will reflect industry practices and agency processes and procedures. Personnel requiring training includes, but is not limited to, transportation planners, designers/consultant designers, project development engineers, traffic engineers, safety engineers, construction project staff, maintenance staff, contractor and utility staff.
The certification shall be effective for four years upon completion of the course and recertification will be required every four years. Recertification may consist of a shorter refresher course.

Work Zone Training shall be provided by a nationally recognized resource such as *FHWA, NHI, ATSSA, and IMSA*. In addition, Work Zone Training will also be provided through in-house NMDOT resources such as, Traffic Technical Support, District Personnel, Construction Bureau and others involved in aspects of work zones.

Following are guidelines that the NMDOT is recommending for who should be trained and suggestions of acceptable courses to be used.

Design

The NMDOT Programs and Infrastructure Organization will require training for design personnel involved in the implementation, inspection, and enforcement of work zone related transportation management and traffic control.

Suggested training courses for individuals responsible for the design or review of Temporary Traffic Control Plans (TTC):

Traffic Control Design Specialists (ATSSA)

This training course addresses the entire process for designing, installing, maintaining, and the evaluation of temporary traffic control in work zones. This training is recommended for traffic engineers, engineering technicians, consultants and other individuals responsible for temporary traffic control design and for individuals that are responsible for designing traffic control plans for approval.

Advanced Work Zone Management and Design (NHI)

This training course will provide planners, designers, construction managers, and other transportation professionals with additional skill and knowledge of both technical and non-technical aspects of work zone design and traffic management practices.

Implementation/Operation/Inspection/Enforcement

The NMDOT Transportation & Highway Operations Organization in conjunction with district construction staff will require training for construction personnel involved in the implementation, inspection, and enforcement of work zone related transportation management and traffic control. Traffic Control Supervisors employed by the contractor must be certified according to the specifications outlined in the latest edition of the NMDOT Standard Specifications for Highway and Bridge Construction.

Suggested training courses for construction Project Managers or Project Engineers:

Traffic Control Supervisor (ATSSA)

All projects from the simplest maintenance job to a multi-million dollar reconstruction project require traffic control expertise to make the project as safe as possible for the motorist and workers. The Project Manager or Project Engineer on the project needs to be trained in the latest standards, practices and procedures to accomplish this goal.

Suggested training course for construction inspectors/technicians:

Traffic Control Technician (ATSSA)

All those involved in construction work zone projects should have a basic knowledge of temporary traffic control that allows them to assist in monitoring and recognition of deficiencies during the course of a project.

Comprehensive Inspection Training Course (ATSSA-Training CD)

The training consists of 14 modules geared towards specific topics; inspection basics, nighttime traffic control, flagging operations, signs and supports, portable changeable message boards, arrow panels, channelizing devices, pavement markings, raised pavement markers and delineators, warning lights and floodlights, crash cushions, portable concrete barriers, truck mounted attenuators, and guardrail installation and inspection

Maintenance

The NMDOT Transportation & Highway Operations Organization in conjunction with the district maintenance staffs shall develop and maintain a training program for maintenance personnel involved in the implementation, inspection, and enforcement of work zone related transportation management and traffic control.

Suggested training courses for Maintenance Supervisor:

Low Speed Lane Closures (ATSSA – Training CD)

Introduces the basic concept and techniques related to lane closures in low speed areas, such as advance warning areas, transitions, buffers, work spaces, ad termination areas, standards, typical setups, channelizing devices, use of flaggers, installation and removal, residential and urban areas

Moving Mobile Operations (ATSSA – Training CD)

Review of issues related to work zones that are in motion such as mowing, striping, parching, and line painting. Other topics include standards and procedures, fundamental principles, using flaggers, operations on the shoulders and beyond the shoulders, and more.

Basic Worker Safety (ATSSA – Training CD)

Introduces principles and concepts related to basic worker safety such as training, garments, visibility, nighttime work, worker safety regulations, use of barriers, shadow vehicles use of police, special devices, and more

Mowing Operations (ATSSA – Training CD)

Reviews issues related to traffic control during mowing operations. Standards and procedures, factors to consider during mowing, work beyond the shoulder, and in the median, personal safety, visibility and sign spacing

Truck Mounted Attenuator Operations (ATSSA – Training CD)

Review of issues related to work zones where TMAs are used, when to use, crash cushions, type of TMA, typical uses, shadow vehicles, advance warning trucks, positioning of TMAs, roll-ahead distances, and additional situations are discussed

Comprehensive Inspection Training Course (ATSSA – Training CD)

The training consists of 14 modules geared towards specific topics; inspection basics, nighttime traffic control, flagging operations, signs and supports, portable changeable message boards, arrow panels, channelizing devices, pavement markings, raised

pavement markers and delineators, warning lights and floodlights, crash cushions, portable concrete barriers, truck mounted attenuators, and guardrail installation and inspection

Appendix B

Example from New Mexico and California

Memorandum of Understanding

Procedures for Setting Up New Mexico State Police Traffic Control Presence

- NMDOT Project Manager (PM) discuss need with Contractor.
- Determine needed location, dates and times.
- PM discuss cost with Resident Engineer and Construction Liaison Engineer (CLE).
- Request Change order Pre-Approval from the CLE.
- PM call for appointment with New Mexico State Police (NMSP)
- Contractor and PM meet with NMSP
- Agree on Project specific changes to be made to, "MEMORANDUM OF UNDERSTANDING between THE NEW MEXICO DEPARTMENT OF PUBLIC SAFETY STATE POLICE DIVISION and Project Contractor" standard contract prepared by The Department of Public Safety Counsel.
- Contractor and NMSP review and sign the "MEMORANDUM OF UNDERSTANDING between THE NEW MEXICO DEPARTMENT OF PUBLIC SAFETY STATE POLICE DIVISION and Project Contractor"
- NMSP send signed contract to Deputy Counsel, Department of Public Safety
- PM and Contractor receive copies of the signed contract.
- PM initiates Supplemental Agreement Change Order with the Contractor. The signed contract is an attachment to the Change Order.
- Wait for Change Order to be signed and approved.
- PM provides a written schedule of NMSP requested patrols to include date, time, location and the number of patrols.
- NMSP patrols start at this time.
- Prior to the Estimate cut-off date (Contractor's Progress Payment monthly cut-off date), the NMSP send a written invoice to the Contractor to include the NMSP patrol dates, hours, mileage.
- PM includes invoice data and Contractor's mark-up into the Monthly Progress Payment to the Contractor.
- Contractor makes direct payment to the Department of Public Safety
- Procedure repeats for succeeding Monthly Progress Payments.
- PM provides to the NMSP a written Notice of Termination when patrols are no longer needed.

Attachments:

- Example of NMSP's "MEMORANDUM OF UNDERSTANDING between THE NEW MEXICO DEPARTMENT OF PUBLIC SAFETY STATE POLICE DIVISION and Project Contractor"
- Example NMDOT Change Order
- Example NMSP Invoice to Contractor

- Example of requested patrol schedule from PM to NMSP

MEMORANDUM OF UNDERSTANDING

between

THE NEW MEXICO DEPARTMENT OF PUBLIC SAFETY
STATE POLICE DIVISION

and

JAMES HAMILTON CONSTRUCTION COMPANY

This Memorandum of Understanding ("The Agreement") is entered into between the New Mexico Department of Public Safety, New Mexico State Police Division (hereinafter referred to as "NMSP") and the James Hamilton Construction Company, P.O. Box 1287, Silver City, New Mexico 88062, (hereinafter referred to as "Contractor") for the provision of certain safety services.

1. SCOPE OF WORK

A. Services

It is acknowledged by the New Mexico State Police Division ("NMSP") of the DPS that Contractor is engaged in a construction project on US 54, starting at mile marker 101 and ending at mile marker 119. The intended length of the project is approximately five (5) months commencing June 28, 2002 and ending on or about November 30, 2002.

It is the intent of the NMSP of the DPS to provide traffic enforcement services. Due to scheduling conflicts and restrictions on available NMSP officers necessitated by other assignments, NMSP projects substantial overtime hours will be required to fulfill the need for these traffic enforcement services.

Contractor and the NMSP hereby agree that, in view of said restrictions, Contractor will reimburse the NMSP the amounts expended for overtime compensation and other costs necessitated by the NMSP assigning NMSP officers to perform these traffic enforcement services. In that the NMSP will not permit an amount of overtime that will otherwise reduce the overall efficiency of the officers' work performance in the scope of regular duty hours, and in that the NMSP must perform other statutorily imposed duties and functions, Contractor and the NMSP agree that the manner and extent to which the NMSP officers are assigned to these traffic enforcement services will be determined by, and in the sole discretion of, the NMSP.

OCT 2 5 2002

B. Scheduling

A written schedule of requested patrols will be provided to the NMSP by the NMSH&TD Project Manager with reasonable and timely notice of the dates, times and locations during which traffic enforcement services will be needed. When the services of the NMSP will be needed, the NMSP requests twenty-four (24) hour advance notice; however, the NMSP acknowledges and agrees the scheduling and the need for NMSP services is subject to change and the failure or inability of NMSH&TD to provide twenty-four (24) hour advance notice to the NMSP will not in any manner be considered a breach of this Agreement.

NMSH&TD and Contractor do acknowledge that the ability of the NMSP to provide services to Contractor is subject to, and may be adversely affected by, NMSP regular law enforcement obligations and other statutory duties, which shall have priority over the services to be provided to Contractor under this Agreement.

NMSH&TD will maintain a reasonable liaison with the appropriate contact person for the NMSP to enable the NMSP to schedule officer personnel accordingly.

Contractor guarantees that, for each Officer whose assistance has been requested and who has been assigned, a minimum of four (4) hours of compensation will be provided, regardless of the amount of time the Officer(s) actually work.

C. Supervision

The NMSP officers assigned to the related functions will be, at all times, under the supervision, control, and authority of the NMSP. It is further acknowledged that Contractor and its agents and employees are independent contractors and are not, by virtue of this Agreement, employees of the State of New Mexico nor shall they accrue any benefits afforded to such employees.

2. COMPENSATION

Contractor will pay to the NMSP, in full consideration of the services rendered by NMSP under this Agreement, compensation at the rate of fifty dollars ($50.00) per hour for each officer assigned pursuant to this Agreement. In addition, Contractor will pay to the NMSP twenty-five cents ($.25) per mile for mileage incurred by NMSP patrol units in connection with this Agreement. Compensation and mileage commence when the particular Officer(s) assigned pursuant to this Agreement leaves his/her respective duty station.

A statement will be provided to Contractor and Contractor will remit payment to the NMSP within thirty (30) days of receipt of the statement by Contractor. Payment shall be made to:

New Mexico State Police
P.O. Box 1628
Santa Fe, New Mexico 87504-1628

The statement will be detailed and certified as true and accurate by the Chief of the NMSP, or his authorized representative, and will indicate the number of person hours incurred by NMSP officers in connection with duties performed under this Agreement.

It is understood and acknowledged that all NMSP personnel performing services for Contractor under this Agreement shall do so as employees of the NMSP and shall not be deemed employees of Contractor for any purpose.

3. INDEMNITY AND HOLD HARMLESS

In the event NMSP equipment is damaged or lost in the course of providing services under this Agreement, Contractor will reimburse the NMSP for any damage or loss, excluding ordinary wear and tear, caused to the NMSP equipment to the extent that such damage or loss is caused by the negligent or wrongful acts of Contractor or its agents. The NMSP is to report such damage or loss to Contractor within seventy-two (72) hours after the occurrence of said damage or loss for which NMSP claims Contractor is responsible, and NMSP shall cooperate fully with Contractor in the investigation of such claim(s), and permit investigators to inspect the property so claimed to be damaged.

James Hamilton Construction Company, acting through its authorized agent, agrees to defend, protect, indemnify, and hold the NMSP harmless from any personal injury or property damage suffered by the Contractor, the Contractor's employees, the Contractor's members and participants, the State, or by third parties resulting from the construction project.

4. TERMINATION

This Agreement may be terminated by either party upon submission of written notice to the contact person or person acting on their behalf delivered to the other party on the day prior to the intended date of the termination. Termination by either party will not nullify obligations with regard to expenses already incurred for services rendered by the NMSP prior to the date of termination.

5. AMENDMENT

This Agreement shall not be altered, changed, or amended except by instrument in writing executed by the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date of execution of the last affixed signature below:

APPROVED:

DEPARTMENT OF PUBLIC SAFETY NEW MEXICO STATE POLICE:	CONTRACTOR:
FRANK R. TAYLOR	DAN MARES
DEPUTY SECRETARY/CHIEF	JAMES HAMILTON CONSTRUCTION CO.
10/07/02	10/26/02
DATE	DATE

This Agreement has been approved as to form and legal sufficiency by:

JOHN TEMPLEMAN

DEPUTY COUNSEL, DEPARTMENT OF PUBLIC SAFETY

October 7, 2002

DATE

DRAFT COPY

NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
STATE CONSTRUCTION BUREAU
RECORD OF AUTHORIZATION TO PROCEED WITH WORK PENDING SUBMISSION
OF
CONTRACT CHANGE ORDER ON STATE OVERSIGHT PROJECTS

Project Number	SP-054-2(206)101	**Control No.**	CN:3042
District	TWO	**County**	Lincoln
C. O. Number	#3	**Amount**	$ 10,296.00
Requested by	Earle Smith, HPS1	**Date**	October 2, 2002

Changes Proposed:

A. Establish Item Code 950080, Unique Item 1, Law Enforcement for Traffic control. The New Mexico State Police (NMSP) hourly rate is $50.00 per hour (Reference letter from NMSP dated:--------. Standard Specification, 2000 Edition, Subsection 109.5,B, states, "The Contractor shall receive an amount of 10% of the total cost of such subcontract work for profit and overhead."
The hourly rate with the administrative cost mark-up is $55.00 per hour. The estimated hours to be worked are 144 hours (6 hours per day, 3 days per week for 8 weeks)

B. Establish Item Code 950140 Unique Item 1, Law Enforcement for Traffic Control, mileage rate. The New Mexico State Police (NMSP) mileage rate is $0.25 per mile (Reference letter from NMSP dated:--------. Standard Specification, 2000 Edition, Subsection 109.5,B, states, "The Contractor shall receive an amount of 10% of the total cost of such subcontract work for profit and overhead."
The mileage rate with the administrative cost mark-up is $0.275 per mile. The estimated mileage is 8,640 miles (60 miles driven in an one hour's time, 6 hours per day, 3 days per week for 8 weeks)

Reason for Change:
Historical data indicates that excessive speed, vehicular accidents and near misses are minimized as a result of an increase police presence.
Enclosures:
Letter dated: ----------

Time:
No change in contract time.

Time Extension: none

Approved By: _____ Date: 10-2-02
CONSTRUCTION LIAISON
ENGINEER

General or Standard Change Order Explanation

All other provisions of the original contract bond, including those related to the time, manner and scope of work and payment shall continue unaltered. This document constitues a binding contractual amendment of the above parent contract, although it is mutually understood that the quantities and total costs, herein are estimates only.

Contractor:_____

By:_____

Recommended:_____Date____
ProjectManager

Recommended:_____Date____
District Construction Engineer

Approved:_____Date____ SHTD Secretary or Designee

Federal participation in the cost of ths work is contingent upon Federal Funds made available by a modified project agreement if necessary.

Authorized_____Date_____
FHWA Area Engineer

30429639

Change Order Explanation for Specific Line Item - 03042 9220

Project Number	Item Number	Item Description
03042	9220	UNIQUE ITEM 1

Need explanation.

Explanation:

Establish Item Code 950080, Unique Item 1, Law Enforcement for Traffic control. The New Mexico State Police (NMSP) hourly rate is $50.00 per hour (Reference letter from NMSP dated: October 7, 2002) Standard Specification, 2000 Edition, Subsection 109.5,B, states, "The Contractor shall receive an amount of 10% of the total cost of such subcontract work for profit and overhead."

The hourly rate with the administrative cost mark-up is $55.00 per hour. The estimated hours to be worked are 144 hours (6 hours per day, 3 days per week for 8 weeks)

Change Order Explanation for Specific Line Item - 03042 9230

Project Number	Item Number	Item Description
03042	9230	UNIQUE ITEM 1

Need explanation.

Explanation:

Establish Item Code 950140 Unique Item 1, Law Enforcement for Traffic Control, mileage rate. The New Mexico State Police (NMSP) mileage rate is $0.25 per mile (Reference letter from NMSP dated: October 7, 2002). Standard Specification, 2000 Edition, Subsection 109.5,B, states, "The Contractor shall receive an amount of 10% of the total cost of such subcontract work for profit and overhead."

The mileage rate with the administrative cost mark-up is $0.275 per mile The estimated mileage is 8,640 miles (60 miles driven in an one hour's time, 6 hours per day, 3 days per week for 8 weeks)

2. An example from California

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
ADMINISTRATION
DIVISION OF PROCUREMENT AND CONTRACTS MS-67
1727 30th STREET
SACRAMENTO, CA 95816-7006
PHONE (916) 227-6056
FAX (916) 227-6155
TTY (800) 735-0193 or (916) 227-2857
INTERNET http://caltrans-opac.ca.gov

Flex your power!
Be energy efficient

May 12, 2006

Contract No: 54a0031

California Highway Patrol
2555 First Avenue
Sacramento, CA 95818

Dear Contractor:

A fully executed copy of the above-referenced contract/amendment is enclosed for your files. **You are not authorized** to commence work until you have been notified by the State's designated contract manager to begin work. The **contract manager is not authorized** to approve payment for any work or services performed prior to contract approval **nor is the contract manager authorized** to change the terms of the contract without an approved additional amendment.

All invoices are to be submitted to the contract manager in triplicate :

- with the above contract number placed next to your firm's name,
- with your address and phone number preprinted on the invoice in the format shown in the contract, if appropriate,
- with all documentation required to prove costs and with any additional information required in the terms of the contract.

You are encouraged to pay your suppliers and subcontractors in a timely manner. You are also reminded that, unless stipulated otherwise in the contract, you must pay your suppliers and subcontractors prior to requesting any reimbursement, if applicable, from the State.

A fully approved contract or additional amendment is required to:

- **extend** the term of the contract.
- **change** the description or scope of work.
- **allow** any additional cost to be incurred which would exceed the cost limit set in the contract.

A minimum of 30-60 days should be allowed for processing a contract amendment.

All questions regarding invoices, documentation support for invoices, payment, and services are to be directed to Celso Izquierdo, 1120 N Street, Sacramento, CA 95814 (916) 654-5627.

Sincerely,

ORIGINAL SIGNED
Diane Buffington
Service Contracts Analyst

C: Celso Izquierdo

STATE OF CALIFORNIA
STANDARD AGREEMENT
STD 213 (Rev 06/03)

CHP #5R052001

AGREEMENT NUMBER
54A0031
REGISTRATION NUMBER

1. This Agreement is entered into between the State Agency and the Contractor named below:
   STATE AGENCY'S NAME
   California Department of Transportation
   CONTRACTOR'S NAME
   California Highway Patrol
2. The term of this Agreement is: **03/01/06** through **06/30/09**
3. The maximum amount of this Agreement is: **$53,000,000.00** **Fifty-three Million Dollars and No Cents**
4. The parties agree to comply with the terms and conditions of the following exhibits which are by this reference made a part of the Agreement.

Exhibit A – Scope of Work	9 Pages
Exhibit B – Budget Detail and Payment Provisions	3 Pages
Exhibit C* – General Terms and Conditions (GIA101)	
Exhibit D - Special Terms and Conditions	4 Pages
Attachment 1 – Construction Zone Enhanced Enforcement Program (COZEEP) Forms	9 Pages

Items shown with an Asterisk (*), are hereby incorporated by reference and made part of this agreement as if attached hereto. *These documents can be viewed at* http://www.ols.dgs.ca.gov/Standard+Language/default.htm

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

CONTRACTOR

CONTRACTOR'S NAME *(if other than an individual, state whether a corporation, partnership, etc.)*
California Highway Patrol

BY *(Authorized Signature)* — DATE SIGNED *(Do not type)* 5/10/06
PRINTED NAME AND TITLE OF PERSON SIGNING

ADDRESS
2555 First Avenue, Sacramento, CA 95818

STATE OF CALIFORNIA

AGENCY NAME
California Department of Transportation

BY *(Authorized Signature)* — DATE SIGNED *(Do not type)* 5/14/06
PRINTED NAME AND TITLE OF PERSON SIGNING
Mapula Conley, Contract Officer

ADDRESS
1727 30th Street, MS 67, Sacramento, CA 95816

California Department of General Services Use Only

APPROVED
MAY 18 2006

☐ Exempt per:

EXHIBIT A
INTERAGENCY AGREEMENT

SCOPE OF WORK

1. Description

The Construction Zone Enhanced Enforcement Program (COZEEP) is jointly operated between California Department of Transportation (Department) and California Highway Patrol (CHP) to increase the safety of motorists and construction workers in state highway construction project zones.

2. Statement of Work

A. The purpose of this agreement is to provide supplemental CHP officers to assist Department in the management of public traffic at state highway construction projects statewide. Department has sole discretion in the determination as to whether this service will be requested on a particular project, per the Department Construction Manual, Chapter 2, Section 215. This section further specifies that:

1. Every attempt should be made to provide COZEEP for the following situations.
   - All daytime or nighttime closures of all lanes in the same direction of travel (full freeway closure).
   - Nighttime closures of two or more lanes on a freeway with three or more lanes of travel in the same direction.
2. Consider all other closures on a project-specific basis.

The CHP will be the exclusive provider of these services, regardless of the law enforcement jurisdiction at the project site. The types of enhanced enforcement which the CHP may provide through this agreement to increase worker and motorist safety include, but are not limited to the following:

1. Roving patrol vehicle(s) (including but not limited to speed enforcement, queue control, limited monitoring of traffic control devices, etc.)
2. Stationary patrol vehicle(s)
3. Traffic control assignment
4. Mandatory truck inspection stations

B. Service will be requested at least seventy-two (72) hours in advance prior to the date that traffic management will be needed.

C. Services will be requested by the Resident Engineer (RE), or his/her designee, for the construction project.

D. Project locations, services required, dates and times of service shall be defined in a Task Order between the RE requiring service and the designated representative from the involved CHP office.

EXHIBIT A
INTERAGENCY AGREEMENT

E. The Task Order shall follow the format specified in Attachment 1. Task Orders shall require the RE to utilize a COZEEP Daily Report Form, Attachment 2, to record hours worked and actual miles driven by CHP personnel for each occasion services are provided. The Task Order shall state that no other type of reports or forms will be required by the RE.

F. Upon arrival at the project site, each CHP uniformed member assigned to the project shall check in with the Project Supervisor (or Field Engineer in charge of the operation) COZEEP Daily Report. At the conclusion of each members daily assignment, the member shall check out with the Project Supervisor who shall complete the COZEEP Daily Report, have it initialed by the member(s), and approve it. A legible copy of the COZEEP Daily Report completed in full shall be provided to the senior CHP uniformed member on site upon the completion of requested services that day.

G. CHP uniformed members (officers and sergeants) provided by the CHP for this program will be working outside their normal work shift and will be paid at standard overtime rates. CHP officers will normally be used. Sergeants may be used when officers are not available, when requested services warrant the use of a sergeant(s) for the supervision of officers (provided the RE is notified ahead of time), or when the CHP's operational needs make it impractical to use officers, e.g. sick employees, job action, unexpected decrease in available staffing.

H. Two officers are normally assigned to patrol units between 2200 and 0600 hours for officer safety. This does not preclude the assignment of one-officer field patrol units for COZEEP details during these hours, provided that there are at least two fixed-post traffic control assignments in close proximity, the beat environment affords reasonable safety, and the CHP Commander has given authorization. The CHP Commander will make this decision on a project-specific basis, and will decide in the interest of officer safety.

I. If the CHP uniformed members report for the detail and work less than four (4) hours, Department agrees to pay every assigned uniformed member a minimum of four (4) hours overtime. Exception: This does not apply to those cases when the hours worked are part of an extended regular on-duty, or other COZEEP duty shift. Hours worked as part of an extended shift will be identified on the COZEEP Daily Report Form completed by the RE.

J. The provisions of this contract, and in general, the providing of COZEEP services, shall in no way supercede or violate the conditions of the CHP's current Bargaining Unit 5 Contract, or the Public Safety Officers Bill of Rights Act.

K. Cancellations:

EXHIBIT A
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1. In the event of disaster or unforeseen emergency, Department or CHP will have the right to cancel the scheduled services under this agreement without prior notice.

2. Department will not be charged for cancellations made more than 24 hours prior to the scheduled detail.

3. Department agrees that if cancellation is not made at least 24 hours prior to the scheduled detail and the assigned CHP uniformed member(s) cannot be notified of such cancellation, a minimum of four (4) hours overtime will be charged for each assigned CHP uniformed member. CHP agrees to make reasonable efforts to notify affected CHP uniformed members of the cancellation.

4. If CHP cancels with less than twenty four (24) hours notice to Department then the CHP shall bear the responsibility of paying the four (4) hour minimum fee and or the short notice cancellation fee to the CHP officer.

5. All cancellation notices to the CHP must be made during normal CHP business hours between 8:00 am and 5:00 pm, Monday through Friday, excluding legal holidays. Reference Attachment 3.

6. Cancellation notices shall only be accepted by the designated COZEEP Coordinator, or designee, located at the CHP office providing the requested service.

L. Project locations, times and dates of service may be amended by mutual consent of the parties involved.

M. Payment for Damaged Uniforms and Property

1. Department agrees that additional charges may be assessed for CHP supplies, additional equipment utilized, damage to uniforms or property repaired or replaced at CHP's expense, which are directly related to the services provided.

2 Invoices for additional charges will be billed separately from other charges, and will be accompanied by a memorandum containing a full description of the additional charges, approved by the commander of the CHP office where the charges were incurred. The Commander and the State should jointly approve these potential additional changes. Both agencies should decide if the memorandum has merit.

N. Reporting of and Payment for Travel Charges

1. At the time the COZEEP Daily Report is completed, at the end of the detail shift, the senior CHP uniformed member on site shall estimate the time for each uniformed member, and vehicle mileage, to travel from the project site to the CHP office. The

EXHIBIT A
INTERAGENCY AGREEMENT

total estimated travel time and mileage shall be calculated and entered on the COZEEP Daily Report.

2. Both the Department and CHP representatives should agree on the COZEEP Daily Report information and sign the form. Any disputes should be elevated, the very next day, to the Resident Engineer and CHP Supervisor to address and resolve any discrepancy.
3. CHP shall notify Department within five (5) working days if the actual travel time and or mileage is greater or less than the allowances estimated on the Daily Report. CHP shall submit a modified copy of the Daily Report that includes a written explanation for the change to the Department staff person who issued the Daily Report and the COZEEP District Coordinator. If no notice of change is received, the Daily Report will be submitted for processing.

3. California Highway Patrol Responsibilities

A. Pre-job/Planning

1. California Highway Patrol personnel must have a clear understanding of their respective on site duties. As such, CHP personnel are to work closely with the Department field representative to determine the appropriate measures necessary to address highway work crew and motorist safety concerns, traffic control procedures, and any information pertaining to anticipated traffic delays. These concerns should be addressed during both the pre-job planning process and the pre-job safety meeting prior to entering the work zone. Areas of discussion should include, but not be limited to:

   - Methods of communication (Cell Phone, Radio call sign)
   - Traffic handling and roles
   - Defining acceptable traffic delays (e.g., determine when to monitor end of queue vs. remaining stationary)
   - Contingency plans to address unanticipated or unacceptable traffic congestion
   - Emergency vehicle routes
   - The positioning of COZEEP vehicles within the work site to provide maximum visibility and safety, as well as establishing locations from which CHP personnel can safely observe the work site and quickly respond to incidents without negatively impacting the work site.

B. Standard Closure

1. Furnish coordinated services that will enhance safety for highway work crews and the motoring public. All involved personnel shall remain alert, vigilant, and proactive for the duration of the detail. While assigned to COZEEP details, individuals should not engage in any activities that could distract them from their safety and traffic management duties.

EXHIBIT A
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2. Ensure that all pertinent information in multi-shift COZEEP operations is communicated to the relieving officer.

3. On-duty CHP Supervisor shall periodically monitor construction sites.

4. Work collaboratively with Department to facilitate the safe and expedient placement and removal of planned lane closures.

5. In an effort to reduce potential traffic problems and to enhance worker and public safety, officers should provide assistance to stranded motorists in and around construction work zones.

6. If an officer assigned to a COZEEP detail determines that he/she needs assistance to safely complete a detail or to mitigate incidents or unexpected traffic congestion, the officer shall notify the CHP supervisor via dispatch and request assistance. The on-duty CHP supervisor shall then determine what type of support will be needed and the method by which it will be provided. Officers shall advise the Department field representative of their request.

7. Officers shall advise CHP dispatch when they are en route to and when they have arrived at the work site.

8. Officers shall advise the Department field representative of their arrival at the work location and exchange necessary phone numbers and/or call signs.

9. Officers shall provide as much information as is available to the CHP dispatch center at the beginning of the COZEEP detail. In addition, officers shall provide CHP dispatch or the Traffic Management Center (TMC) with pertinent traffic updates as the work progresses.

10. Officers shall provide the traffic management services as agreed upon with the Department field representative.

11. If requested by Department, officers shall provide traffic control assistance during the setup and breakdown of construction work zones.

12. Department will supply safety vests upon request. Officers should consider wearing safety gear when working around construction equipment.

13. Officers should take the appropriate enforcement action for violations that could, in the officers' opinion, pose an immediate threat to life or public safety. National studies have shown that speeds increase in work zones even with police presence unless speed is enforced.

EXHIBIT A
INTERAGENCY AGREEMENT

14. Prior to the end of shift, officers and the Department field representative shall meet to complete all necessary paperwork.

15. Officers shall contact the Department field representative prior to leaving the work zone unless an emergency necessitates an expeditious departure. As soon as possible, the officer shall notify the Department field representative of the situation and their estimated return time (other than the first four (4) hours of the detail, if officers leave the work zone, they will not be compensated per this agreement for the time away from the operation).

C. Unanticipated/Unacceptable Delay

1. Decisions to abate or discontinue work for traffic considerations shall be made collaboratively with Department and should include a CHP supervisor.

2. Officers will collaborate with the Department field representative to mitigate traffic delays caused by construction operations.

3. Officers/field representatives will implement agreed upon contingency plans if necessary.

4. Department Responsibilities

A. Pre-job/Planning:

1. The Department field representative must have a clear understanding of their respective on site duties. The Department field representative will work closely with CHP personnel to determine the appropriate measures necessary to address highway work crew and motorist safety concerns, traffic control procedures, and any information pertaining to anticipated traffic delays. These concerns should be addressed during both the pre-job planning process and the pre-job safety meeting prior to entering the work zone. Areas of discussion should include, but not be limited to:

   - Methods of communication. (Cell Phone, Radio call sign)
   - Traffic handling and roles.
   - Defining acceptable traffic delays.
   - Contingency plans to address unanticipated or unacceptable traffic congestion.
   - Emergency vehicle routes.
   - The positioning of COZEEP vehicles within the work site to provide maximum visibility and safety as well as establishing locations from which CHP personnel can safely observe the work site and quickly respond to incidents without negatively impacting the work site.

EXHIBIT A
INTERAGENCY AGREEMENT

2. Determine which projects and operations will require COZEEP services. Additional officers should be requested as part of the COZEEP detail if the desired services include more than one activity be performed simultaneously.

3. The Department field representatives are responsible for submitting traffic control plans to Department traffic operations TMC personnel prior to any work zone closures. Whenever possible, these plans should be provided to CHP for review.

4. Traffic operations personnel are responsible for approving, or if necessary, modifying all traffic control plans with emphasis on mitigating traffic delays and enhancing officer and highway worker safety. Plans should be reviewed with the CHP as part of the pre-planning process.

5. Notify the public through the TMC concerning construction work projects that have the potential for causing traffic delays. Information will be updated as necessary.

B. Standard Closure

1. Work collaboratively with CHP to facilitate the safe and expedient placement and removal of planned lane closures.

2. The Department field representative will advise CHP officers of any changes to planned activities.

3. If needed, Department shall request CHP officers to provide traffic control assistance during the setup and breakdown of construction work zones.

4. Prior to the end of shift, officers and the Department field representative shall meet to complete all necessary paperwork.

C. Unanticipated/Unacceptable Delay

1. The Department District Traffic Manager will maintain the authority to direct the removal of planned lane closures. Emergency requests for removal of planned closures shall be coordinated by the TMC subject to approval by the District Traffic Manager.

2. Collaborate with CHP to mitigate traffic delays caused by construction or maintenance operations.

3. Decisions to abate or discontinue work for traffic considerations shall be made collaboratively with field representatives and should include coordination with the TMC and the District Traffic Manager.

EXHIBIT A
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4. Assist with the implementation of agreed upon contingency plans if necessary.

5. **Contract Period**

This agreement shall begin on March 1, 2006, contingent upon approval by the State, and expire on June 30, 2009, unless extended by amendment. This agreement shall supersede all existing COZEEP agreements between the CHP and Department.

6. **Contract Management**

A. The Department Statewide Contract Manager for COZEEP activities is Celso Izquierdo, Division of Construction, (916) 654-5627.

B. The Department Construction COZEEP Coordinators for each Department Districts are listed below:

District	Coordinator	Phone	Fax	External E-mail
4	Wil Manner	510-286-5181	510-286-5171	wil_manner@dot.ca.gov
7	Youssef Youssefzadeh	310-649-1821 x-232	310-649-1438	youssef_youssefzadeh@dot.ca.gov
8	Emad Makar	909-383-7483	909-383-6739	emad_makar@dot.ca.gov
11	Vian Yakou	858-688-1451	858-688-1439	Vian_yakou@dot.ca.gov
12	Mahmoud Ghafouri	949-440-4498	949-724-2519	Mahmoud_ghafouri@dot.ca.gov
North Region	Ed Yarbrough	530-822-4346	530-822-4405	Ed_ Yarbrough@dot.ca.gov
Central Region	Rosemarie Demello	559-444-2532	559-444-2529 559-438-4317	rosemarie_demello@dot.ca.gov

C. The Department Project Lead Person shall be the Resident Engineer or designee, who is the on-site project supervisor for Department.

D. The CHP Statewide Contract coordinator is Cheryl Share, Special Projects Section, (qmirazo@chp.ca.gov), (916) 657-7222.

E. The CHP contract Coordinators for each CHP field Division are listed below:

Northern Division
Sue Allison
2485 Sonoma Street
Redding Ca 96001-3026
Phone: (530) 225-2715
FAX: (530) 241-1590

Valley Division
Vicki Merkh
1336 Trade Center Drive
Rancho Cordova CA 95742
Phone: (916) 464-2090
FAX (916) 464-2097

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INTERAGENCY AGREEMENT

Golden Gate Division
Janice Nance
1551 Benicia Road
Vallejo CA 94591
Phone: (707) 648-4180
FAX: (707) 648-4055

Coastal Division
Erika Bullard, Linda Ross
4115 Broad Street, Suite B-10
San Luis Obispo CA 93401-7963
Phone: (805) 549-3261
FAX: (805) 546-9176

Inland Division
Joette Wilson
847 East Brier Drive
San Bernardino CA 92408-2820
Phone: (909) 383-4811
FAX: (909) 888-4228

Central Division
Patricia Heintz
5179 North Gates Avenue
Fresno CA 96722-6414
Phone: (559) 488-4329
FAX: (559) 276-2949

Southern Division
Darlene Pederson
411 North Central Avenue, Suite 410
Glendale CA 91203-2020
Phone: (818) 240-8200
FAX: (818) 240-5962

Border Division
Jason Murray
9330 Farnham Street
San Diego Ca 92123-1284
Phone: (858) 650-3600
FAX: (858) 268-2851

EXHIBIT B
Interagency Agreement

BUDGET DETAIL

1. Invoicing

A. For services satisfactorily rendered and upon receipt and approval of the invoices, CA Department of Transportation agrees to compensate the CHP for actual allowable costs incurred as specified herein and in accordance with the rates specified herein or attached hereto.

B. Invoices shall include the Agreement Number and shall be submitted within 60 calendar days of date of service, in triplicate, monthly in arrears, to the appropriate Department Contract Coordinator identified previously in Exhibit A, part 6 Contract Management, item B.

C. Invoices shall be paid after review and approval by the appropriate Department Contract within 45 calendar days of receipt of the invoice by Department.

D. Invoices shall include the following items:

1. Printout showing the following: (Reference Attachment 4)
   a) Sergeant and/or officer name
   b) Daily report number next to officer/sergeants name
   c) Total hours worked in the FLSA report period
   d) Total mileage driven in the FLSA report period

2. Mileage change notification, if applicable
3. For cancellations, a copy of the Task Orders showing the cancellation information

2. Invoice Dispute Procedures

A. In the event the invoice is disputed by the appropriate Contract Coordinator, the invoice shall be returned to the CHP Accounts Receivable Unit, PO Box 942898, Sacramento CA 94298-0001 along with a completed invoice dispute form, STD. 209 (Attachment 5).

B. Department or CHP may request resolution of invoice disputes under the terms of Exhibit B, part 5,of this agreement.

3. Budget Contingency Clause

A. It is mutually agreed that if the Budget Act of the current year and/or any subsequent years covered under this Agreement does not appropriate sufficient funds for the program, this Agreement shall be of no further force and effect. In this event, CA Department of Transportation shall have no liability to pay any funds

EXHIBIT B
Interagency Agreement

whatsoever to Contractor or to furnish any other considerations under this Agreement and Contractor shall not be obligated to perform any provisions of this Agreement.

B. If funding for any fiscal year is reduced or deleted by the Budget Act for purposes of this program, CA Department of Transportation shall have the option to either cancel this Agreement with no liability occurring to CA Department of Transportation, or offer an Agreement Amendment to Contractor to reflect the reduced amount.

4. Payment

A. Costs for this Agreement shall be computed in accordance with State Administrative Manual Sections 8752 and 8752.1.

B. Nothing herein contained shall preclude advance payments pursuant to Article 1, Chapter 3, Part 1, Division 3, Title 2 of the Government Code of the State of California.

5. Rates

Department agrees to reimburse the CHP at actual hourly and mileage rates. Overtime cost will be at the actual rates in effect at the time service is provided. Rates charged to Department shall in no event exceed the actual cost to the CHP to perform the requested services. The rates shown below are estimates only.

1. Salary, Benefits and Overhead of uniformed member(s) provided

a) Sergeant	Pay Range	$75.09 to $89.59
b) Officer	Pay Range	$61.86 to $73.82

2. Vehicle mileage:

a) Automobile	$.52
b) Motorcycle	$.91

3. Damaged uniforms and privately owned safety equipment, are to be reimbursed in accordance with Annex G of the CHP Uniform/Grooming and Equipment Standards manual, HPM 73.5 (in accordance with Article II, Section I.2.).

4. Actual costs for repair or replacement of damaged State property.

5. Actual time and vehicle mileage charges for travel to and from the CHP Area office and the project location.

EXHIBIT B
Interagency Agreement

It is understood by both parties that increases in mileage, salaries, and benefits are governed by collective bargaining agreement and/or statute and that no advance written notification is necessary prior to implementing the increased rates. Within fifteen (15) working days following any rate change, the CHP Accounting Section shall submit to each Department Statewide Contract Manager identified in Exhibit A, part 6, of this agreement, written notification of the rate change.

6. Cost Limitation

A. The total amount of this Agreement shall not exceed $53,000,000.00.

B. It is understood and agreed that this total is an estimate and that CA Department of Transportation will pay for only those services actually rendered as authorized by the CA Department of Transportation Contract Manager or his/her designee.

7. Cost Principles

A. The CHP agrees to comply with Federal procedures in accordance with Office of Management and Budget Circular A-87, Cost Principles for State and Local Governments.

B. The CHP also agrees to comply with Federal procedures in accordance with 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

C. Any costs for which payment has been made to CHP that are determined by subsequent audit to be unallowable under the Office of Management and Budget Circular A-87, or 49 CFR, Part 18 are subject to repayment by CHP to State.

EXHIBIT D
Interagency Agreement

Special Terms and Conditions

1. Termination

A. Either Party reserves the right to terminate this agreement without cause upon thirty (30) days written notice to the other Party, or immediately in the event of a material breach. In the event of termination, Contractor shall be paid for all allowable costs incurred up to the date of termination, including any non-cancelable obligations.

B. In the event that the total Agreement amount is expended prior to the expiration date, CA Department of Transportation may, at its sole discretion, terminate this Agreement with 30 days notice to contractor.

2. Subcontracting

The CHP shall perform the work contemplated with resources available within its own organization and no portion of the work shall be subcontracted without written authorization by the CA Department of Transportation Contract Manager.

3. Retention of Records/Audits

For the purpose of determining compliance with Public Contract Code Section 10115, et. seq. and Title 21, California Code of Regulations, Chapter 21, Section 2500 et. seq., when applicable, and other matters connected with the performance of the contract pursuant to Government Code Section 8546.7, the Contractor, subcontractors and CA Department of Transportation shall maintain all books, documents, papers, accounting records, and other evidence pertaining to the performance of the contract, including but not limited to, the costs of administering the contract. All parties shall make such materials available at their respective offices at all reasonable times during the contract period and for three years from the date of final payment under the contract. CA Department of Transportation, the State Auditor, FHWA, or any duly authorized representative of the Federal government having jurisdiction under Federal laws or regulations (including the basis of Federal funding in whole or in part) shall have access to any books, records, and documents of the Contractor that are pertinent to the contract for audits, examinations, excerpts, and transactions, and copies thereof shall be furnished if requested.

4. Disputes

A. Any dispute concerning a question of fact arising under the terms of this contract which is not disposed of within ninety (90) calendar days by Department and CHP employees normally responsible for the administration of this contract shall be brought to the attention of the Department Contract Officer and CHP Administrative Services Officer, or their designated representatives, for joint resolution. At the

EXHIBIT D
Interagency Agreement

request of either party, a forum for discussion of the disputed item(s) will be held, at which time the Department Contract Officer and CHP Administrative Services Officer, or their designated representatives, shall be available to assist in the resolution by providing advice to both parties as to Department and CHP policies and procedures. If agreement cannot be reached through the application of high level management attention, either party may assert its other rights and remedies within this contract or within a court of competent jurisdiction.

B. The rights and remedies provided in paragraph A. shall not be exclusive and are in addition to any rights and remedies provided by law or under the contract.

C. Department and CHP agree to continue to carry out all other responsibilities under this contract not affected by the dispute.

5. **Federal Lobbying Activities Certification**

A. The Contractor certifies, to the best of his or her knowledge and belief, that:

B. No State or Federal appropriated funds have been paid or will be paid, by or on behalf of the Contractor, to any person for influencing or attempting to influence an officer or employee of any State or Federal agency, a Member of the State Legislature or United States Congress, an officer or employee of the Legislature or Congress, or any employee of a Member of the Legislature or Congress in connection with the awarding of any State or Federal Agreement, the making of any State or Federal grant, the making of any State or Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any State or Federal Agreement, grant, loan, or cooperative agreement.

C. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal Agreement, grant, loan, or cooperative agreement, the Contractor shall complete and submit Standard Form-LL., "Disclosure Form to Report Lobbying", in accordance with its instructions.

D. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U. S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

E. The Contractor also agrees by signing this document that he or she shall require that the language of this certification be included in all lower tier subcontracts, which

EXHIBIT D
Interagency Agreement

exceed $100,000, and that all such subcontractors shall certify and disclose accordingly.

6. Rebates, Kickbacks and Other Unlawful Consideration

The Contractor warrants that this Agreement was not obtained or secured through rebates, kickbacks or other unlawful consideration either promised or paid to any state agency employee. For breach or violation of this warranty, the State shall have the right, in its discretion, to terminate the Agreement without liability, to pay only for the value of work performed, or to deduct from the Agreement price or otherwise recover the full amount of each rebate, kickback or other unlawful consideration.

7. Indemnification and Hold Harmless Requirement

Department shall defend, indemnify and save harmless the CHP, its officers, directors and employees from any and all claims, demands, causes of action, damages, losses or liabilities arising out of or in connection with work, responsibilities, or services to be performed by the CHP under this Agreement.

8. Audit Review Procedures

A. Any dispute concerning a question of fact arising under an interim or post audit of this Agreement that is not disposed of by agreement shall be reviewed by the Chairperson of the Audit Review Committee (ARC). The ARC will consist of the Deputy Director, Audits & Investigations (Chairperson); Deputy Director of the functional Program area; the Chief Counsel, Legal Division, or their designated alternates; and if the Department chooses, two representatives of CA Department of Transportation' choosing, from private industry. The two representatives from private industry will be advisory in nature only and will not have voting rights. Additional members or their alternates may serve on the ARC.

B. Not later than thirty (30) days after issuance of the final audit report, the Contractor may request a review by the ARC of unresolved audit issues. The request for review will be submitted in writing to the Chairperson of the ARC. The request must contain detailed information of the factors involved in the dispute as well as justifications for reversal. A meeting by the ARC will be scheduled if the Chairperson concurs that further review is warranted. After the meeting, the ARC will make recommendations to the appropriate CA Department of Transportation Chief Deputy Director. The Chief Deputy Director will make the final decision for the Department. The final decision will be made within three (3) months of receipt of the notification of dispute.

C. Neither the pendency of a dispute nor its consideration by CA Department of Transportation will excuse the Contractor from full and timely performance, in accordance with the terms of this Agreement.

EXHIBIT D
Interagency Agreement

9. Change in Term/Amendment

A. This contract may be amended or modified only by mutual written agreement of the parties.

B. Should there be a change in the Project Manager, both parties will be notified.

C. Modifications to Attachments 1 through 6, which are incorporated and made a part hereof by reference and attachment, may be made upon mutual agreement of both parties.

10. Task Orders

The Task Order (Attachment 1) is completed and signed by the Department Project Supervisor requesting the services. The signed Task Order is to be transmitted by facsimile machine to the appropriate CHP COZEEP area office where the work is to be performed (Attachment 6). The CHP area office will complete, sign and transmit the Task Order back to the requesting Department Coordinator.

11. Exceptions

It is mutually understood between the parties that this contract addresses normal daily encroachments into State right-of-way by construction forces acting as state agents. Exceptions must be addressed by the permit process working on a local level and are not included in this contract.

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

COZEEP DAILY REPORT

CEM-2101 (REV 10/2003) CT# 7541-3201-3

(JOB STAMP)

DATE

DAILY REPORT NUMBER * DISTRICT EA 4

SPECIAL DESIGNATION - **COZEEP**
Object Code: **042**

PROJECT LOCATION/DESCRIPTION

COUNTY	ROUTE	POST MILE

DESCRIPTION OF WORK

OFFICER/SERGEANT/VEHICLE INFORMATION

CHP DIVISION/AREA CODE _____

CHP SPECIAL PROJECT CODE _____

(Please Print)	1	2	3	4
MEMBER NAME				
ID NUMBER				
CHP Office				
RANK				
VEHICLE NUMBER				
ENDING TIME**				
STARTING TIME				
TOTAL TIME**				
ENDING MILEAGE**				
STARTING MILEAGE				
TOTAL MILEAGE**				
INITIALS *(end of shift)*				

CALTRANS INFORMATION

NAME AND TITLE *(print)*	RESIDENT ENGINEER'S NAME *(print)*	COST CENTER

SIGNATURE *(End of Shift)*	PHONE	FIELD OFFICE

* Use District Expenditure Authorization (EA) as the Daily Report Number.
** These figures are estimates and may be increased or decreased in accordance with the terms of the contract.

WHITE - CHP Officer YELLOW - Resident Engineer (Project Files) PINK - District COZEEP Coordinator

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

COZEEP/MAZEEP TASK ORDER

CEM-2102 (REV 10/2003)

DIST/EA	DATE OF REQUEST	CONTRACT NUMBER

This task order is entered into pursuant to the provisions of the Interagency Agreement No. _____ for the period of July 1, --- to June 30, ---, between Caltrans and the California Highway Patrol (CHP).

1. Project Description and Location (include the county, route, and post mile)

2. Type of Services Required

3. Date(s) and time(s) services are to be provided

Reporting Date _____	Reporting Date _____	Reporting Date _____
Reporting Time _____	Reporting Time _____	Reporting Time _____
*Completion Time _____	*Completion Time _____	*Completion Time _____
Reporting Date _____	Reporting Date _____	Reporting Date _____
Reporting Time _____	Reporting Time _____	Reporting Time _____
*Completion Time _____	*Completion Time _____	*Completion Time _____

* Estimated

4. Project Officials

Caltrans Project Supervisor
Name _____
Title _____
Telephone No. _____
Facsimile No. _____

CHP Coordinator (completed by CHP)
Name _____
Title _____
Telephone No. _____
Facsimile No. _____

5. Reporting

Caltrans and CHP agree that all reporting for this job shall be accomplished through the standard COZEEP/MAZEEP Daily Report Form. Revisions, other versions, or additional forms shall not be used.

Approvals

Caltrans

By _____
(Name and Title)

California Highway Patrol

By _____
(Name, ID # and Title)

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

STATE OF CALIFORNIA • DEPARTMANT OF TRANSPORTATION

COZEEP/MAZEEP CANCELLATION FORM

CEM-2103 (NEW 10/2003)

FIRST CANCELLATION

Resident Engineer's Name:	Phone Number:
Project EA	Scheduled Work Date and Time
Cancellation Notice Issued By (name of Caltrans Employee)	Signature:

Officer's Name	Officer's ID	When Notified	No Charge	$50	4 Hours

Person Receiving Notification (Print Name/ID#):	Signature
Date and Time Notification RECEIVED BY CHP	

SECOND CANCELLATION

Resident Engineer's Name:	Phone Number:
Project EA	Date and Time Notification Issued
Cancellation Notice Issued By (name of Caltrans Employee)	Signature:

Officer's Name	Officer's ID	When Notified	No Charge	$50	4 Hours

Person Receiving Notification (Print Name/ID#):	Signature
Date and Time Notification RECEIVED BY CHP	

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INVOICE: Sample

FLSA Report Period:

Date of Service	DAILY REPT. #	CHP AREA NAME	SPC	OFFICER/SGT. NAME	ID #	HOURLY RATE	C	HOURS WORKED	SHORT NOTICE CANCEL.	$ AMOUNT	# OF MILES	$ AMOUNT
4/12/99	07-123	(Contra Costa)	304		XXXX	$ 35.17		6		$ 211.02	16	$ 7.04
4/13/99	07-123	(Contra Costa)	304		XXXX	$ 33.92		8		$ 271.36	23	$ 10.12
4/7/99	07-125	(Contra Costa)	304		XXXX	$ 38.36		4.5		$ 172.62	25	$ 11.00
4/8/99	07-123	(Contra Costa)	304		XXXX	$ 38.36		5		$ 191.80	24	$ 10.56
4/16/99	07-125	(Contra Costa)	304		XXXX	$ 34.26		8		$ 274.08	23	$ 10.12
4/1/99	07-123	(Contra Costa)	304		XXXX	$ 34.30	C	4		$ 137.20	0	$ -
4/11/99	07-123	(Contra Costa)	304		XXXX	$ 43.65		8		$ 349.20	44	$ 19.36
4/6/99	07-125	(Contra Costa)	304		XXXX	$ 30.68		8		$ 245.44	22	$ 9.68
4/15/99	07-125	(Contra Costa)	304		XXXX	$ 35.17	C		$ 50.00	$ -	0	$ -
4/20/99	07-125	(Contra Costa)	304		XXXX	$ 36.70		9.5		$ 348.65	38	$ 16.72
4/23/99	07-123	(Contra Costa)	304		XXXX	$ 38.36		8.5		$ 326.06	16	$ 7.04
4/20/99	07-125	(Contra Costa)	304		XXXX	$ 38.36		7		$ 268.52	17	$ 7.48
				SUB TOTALS					$ 50.00	$ 2,795.95		$ 109.12
				Staff Benefits 7.268%						$ 203.21		
				Short Notice Cancellation						$ 50.00		
				SUB TOTAL						$ 2,999.16		
				Overhead 17.82%						$ 545.55		
				TOTAL SALARY						$ 3,544.71		
				MILEAGE @ .44/mi.						$ 109.12		
				TOTAL CHARGES						**$ 3,653.83**		

Special Notes:

* CHP will complete the invoice and submit to CALTRANS
* Column H "C" represents project cancellation made less than 24 hrs. prior to the scheduled detail.
* Form will need to be sorted by CHP area location and then by officer/sergeant name.
* FLSA Period must be within the FLSA range. The FLSA ranges will be supplied by CHP annually. There cannot be overlapping FLSA periods.
* Columns G, K, and M would be protected against update by unauthorized personnel.

STATE OF CALIFORNIA

INVOICE DISPUTE NOTIFICATION

STD. 209 (NEW 3-87) 93 96178

(Mail in a window envelope) **VENDOR ADDRESS**	DATE INVOICE NUMBER AMOUNT $ DATE RECEIVED REFERENCE NUMBER

(FOLD)

The invoice referred above is disputed for the following reasons:

- ☐ Goods /Services not received
- ☐ Noncompliance with contract
- ☐ Incorrect billing/amount due
- ☐ Partial shipment received
- ☐ Other
- ☐ Duplicate billing
- ☐ Invoice belongs to another department
- ☐ Damaged goods
- ☐ Invoice not properly executed

THIS NOTIFICATION IS A FOLLOW-UP TO A PHONE CONVERSATION WITH THE PERSON FROM YOUR COMPANY WHOSE NAME APPEARS BELOW

NAME | DATE OF CONVERSATION

IF YOU HAVE ANY QUESTIONS REGARDING THIS DISPUTE, CONTACT:

NAME | TELEPHONE NUMBER (include Area Code)

fold

RETURN THE GOLDENROD COPY OF THIS NOTIFICATION WITH THE CORRECTED NOTICE

(For your convenience, the return address has been positioned fro use in a window envelope)

FOR STATE AGENCY USE ONLY

DATE DISPUTE RESOLVED	INITIAL
RESOLUTION	

RETURN TO:

CHP Area Offices

DISTRIBUTION:

White	- Vendor
Canary	- Purchasing
Pink	- Accounting
Goldenrod	- Vendor (To be returned to agency)
Blue	- File

AREA/DIVISION	ADDRESS	CITY, ZIP	TELEPHONE NUMBER	FAX NUMBER
101 NORTHERN DIV.	2485 Sonoma St.	Redding 96001-3026	530-225-2715	530-241-1590
120 CRESCENT CITY	1444 Parkway Dr.	Crescent City 95531-8502	707-464-3117	707-465-6427
125 HUMBOLDT DISPATCH	255 East Samoa Blvd.	Arcata 95521-6797	707-822-5981	707-822-8939 707-268-2000
126 GARBERVILLE	30 West Coast Road	Redway 95560-9999	707-923-2155	707-923-2159
130 RED BLUFF	2550 Main Street	Red Bluff 96080-2336	530-527-2034	530-527-8432
131 COTTONWOOD INSPECT. FACILITY	19340 N/B Interstate 5	Cottonwood 96022	530-347-1813	530-347-1899
135 REDDING DISPATCH	2503 Cascade Blvd.	Redding 96003-0999	530-242-3200 530-242-3210	530-244-9389 530-225-2726
140 SUSANVILLE. DISPATCH	472-400 Diamond Crest Rd.	Susanville 96130-5001	530-257-2191 530-257-9605	 530-257-0244
145 YREKA DISPATCH	1739 South Main St.	Yreka 96097-9518	530-841-6006 530-841-6000	530-841-6055 530-841-6056
146 MT. SHASTA	618 West Jessie St.	Mt. Shasta 96067-9760	530-926-2627	530-926-6935
147 DUNSMUIR GRADE INSPECT. FACILITY	1001 I-5 South	Mt. Shasta 96067-9998	530-926-2425	530-926-6526
150 UKIAH DISPATCH	540 So. Orchard Ave.	Ukiah 95482	707-467-4040 707-467-4000	707-463-8662 707-463-5557
151 CLEAR LAKE	5700 Live Oak Drive	Kelseyville 95451	707-279-0103	707-279-2863
155 WILLIAMS	735 N. 7th Street	Williams 95987-0488	530-473-2821	530-473-5183
160 WILLOWS	464 No. Humboldt Ave.	Willows 95988-2612	530-934-5424	530-934-3238
165 QUINCY	86 West Main Street	Quincy 95971-9370	530-283-1100	530-283-5164
170 ALTURAS	905 West C Street	Alturas 96101-3117	530-233-2919	530-233-5720
175 TRINITY RIVER	Highway 299, 1261 Main St.	Weaverville 96093-1350	530-623-3832	530-623-4429
201 VALLEY DIVISION	11336 Trade Center Drive	Rancho Cordova 95742-6233	916-464-2090	916-464-2097
214 SACRAMENTO COMMUNICATIONS CENTER	3165 Gold Valley Drive	Rancho Cordova, 95670	916-861-1300	916-861-1346
220 AUBURN	9440 Indian Hill Road	Newcastle 95658-9304	916-663-3344	916-663-2859
221 GOLD RUN	50 Canyon Creek Road	Gold Run 95717-0008	530-389-2205	530-389-2298
222 TRUCKEE DISPATCH	10077 State Rte. 89 South	Truckee 96161	530-582-7570 530-582-7500	530-582-7505 530-582-7590
223 DONNER PASS INSP. FAC.	12800 I. S. 80	Truckee 96161	530-587-1242	530-587-0484
230 GRASS VALLEY	11900 Sutton Way	Grass Valley 95945-5113	530-273-4415	530-273-7143
240 OROVILLE	2072 Third Street	Oroville 95965-3416	530-538-2700	530-533-2703
241 CHICO DISPATCH	995 Fir Street	Chico 95928-6301	530-879-1999 530-879-1900	530-879-1998 530-879-1911
245 PLACERVILLE	3031 LoHi Way	Placerville 95667-1417	530-622-1110	530-621-0139
246 SO. LAKE TAHOE	2063 Hopi Ave	South Lake Tahoe 96150	530-577-1001	530-577-7625
250 NO. SACRAMENTO	5109 Tyler Street	Sacramento 95841-2583	916-338-6710	916-349-9826
252 SO. SACRAMENTO	6 Massie Court	Sacramento 95823-4390	831-681-2300	831-688-3109
255 SAN ANDREAS	749 Mountain Ranch Rd., Rte 1	San Andreas 95249-9801	209-754-3541	209-754-4842
265 STOCKTON DISPATCH	3330 N. Ad Art Road	Stockton 95208-2295	209-943-8666 209-943-8600	209-943-8661 209943-8660
266 TRACY	385 W. Grantline Road	Tracy 95376-2547	209-835-8920	209-835-7136
280 WOODLAND	1975 Wintun Drive	Woodland 95776-9219	530-662-4685	530-662-8599
285 YUBA-SUTTER	1619 Poole Blvd.	Yuba City 95993-2608	530-674-5141	530-674-8291
295 AMADOR	301 Clinton Road	Jackson 95642-2604	209-223-4890	209-223-4894
301 GOLDEN GATE DIV.	1551 Benicia Road	Vallejo 94591-7568	707-648-4180	707-648-4055
318 GOLDEN GATE COMMUNICATIONS	1551 Benicia Road	Vallejo 94591-7568	707-551-4180	707-551-4108

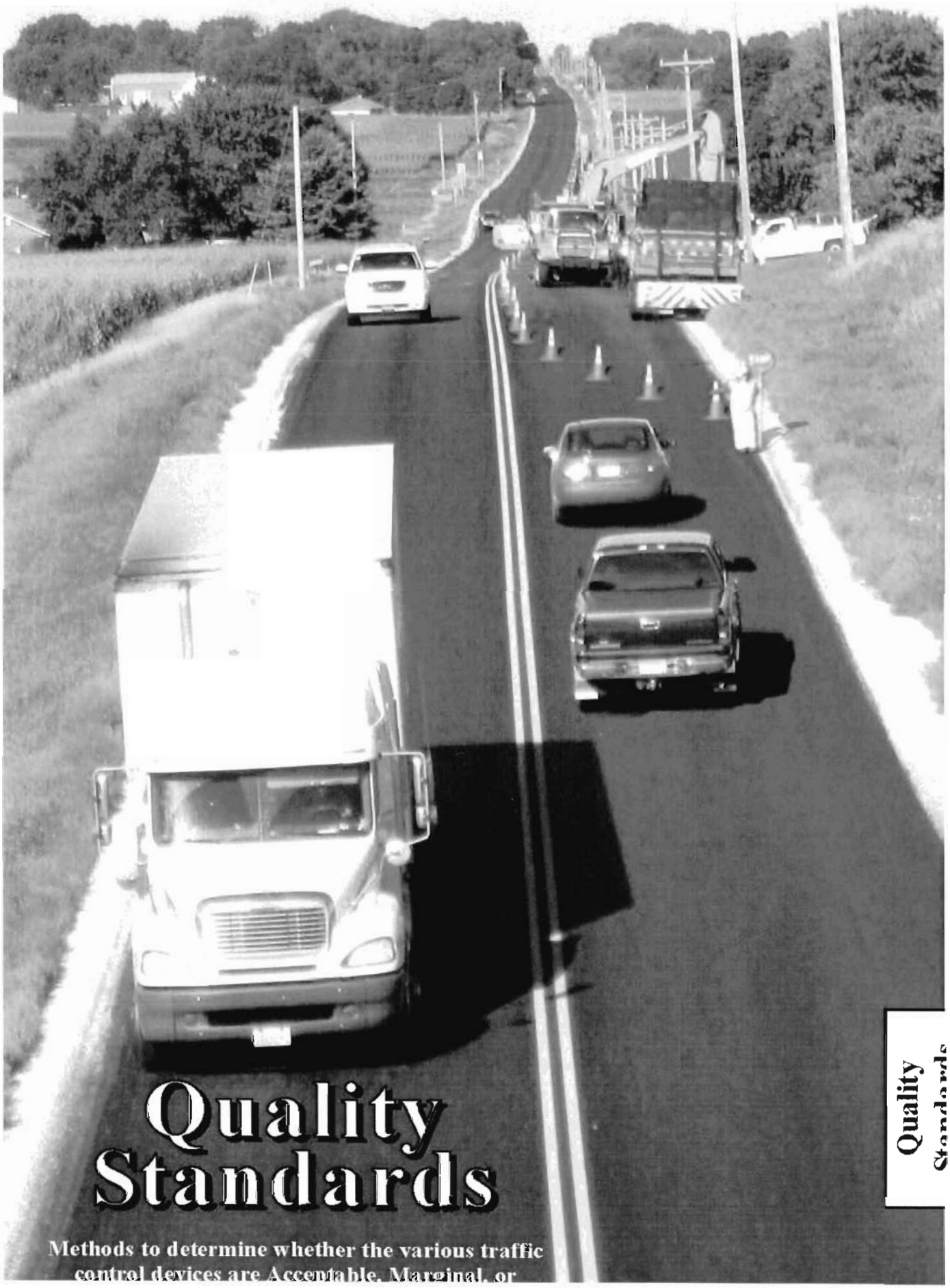
CENTER				
320 CONTRA COSTA	5001 Blum Street	Martinez 94553-4395	925-646-4980	925-646-4990
AREA/DIVISION	**ADDRESS**	**CITY, ZIP**	**TELEPHONE NUMBER**	**FAX NUMBER**
325 NAPA	975 Golden Gate Drive	Napa 94559-9601	707-253-4906	707-253-4949
330 REDWOOD CITY	355 Convention Way	Redwood City 94063-1475	650-369-6261	650-369-6268
335 SAN FRANCISCO	455 Eighth Street	San Francisco 94103	415-557-1094	415-557-1541
340 SAN JOSE	2020 Junction Avenue	San Jose 95131-2187	408-467-5400	408-467-5407
345 HAYWARD	2434 Whipple Road	Hayward 94544-7889	415-489-1500	415-489-8542
350 MARIN	53 San Clemente Drive	Corte Madera 94925-1206	415-924-1100	415-924-4074
360 SANTA ROSA	6100 LaBath Avenue	Rohnert Park 94928-7915	707-588-1400	707-588-1404
365 SOLANO	3050 Travis Blvd.	Fairfield 94533-3443	707-428-2100	707-428-2039
366 CORDELIA INSPECTION FACILITY	3895 Interstate 80	Suisun 94585	707-864-5535	707-864-0104
370 OAKLAND	3601 Telegraph Avenue	Oakland 4609-2498	510-450-3821	510-450-3829
375 CASTRO VALLEY	21020 Redwood Road	Castro Valley, 94546	510-581-9028	510-581-9187
390 DUBLIN	4999 Gleason Road	Dublin 94568-3310	925-828-0466	925-828-1377
391 MISSION GRADE INSPECTION FACILITY	4751 Highway 680	Sunol 94586-0553	925-862-2223	925-862-0100
401 CENTRAL DIVISION	5179 North Gates Avenue	Fresno 93722-6414	559-277-7250	559-277-7263
420 BAKERSFIELD DISPATCH	4040 Buck Owens Blvd.	Bakersfield 93308-4930	661-864-4444 661-864-4400	661-327-0704
424 GRAPEVINE INSPECTION FACILITY	32829 Interstate 5	Lebec 93243-0034	661-858-2540	661-858-6406
425 SONORA	18437 Fifth Avenue	Jamestown 95327-9601	209-984-3944	209-984-3660
426 BUTTONWILLOW	29449 Stockdale Hwy.	Bakersfield 93312-9644	661-764-5580	661-764-5608
430 FORT TEJON	1033 Lebec Road	Lebec 93243-0792	661-248-6655	661-248-5107
435 FRESNO DISPATCH	1382 West Olive Avenue	Fresno 93728-2890	559-441-5441 559-441-5400	559-441-5505 559-441-5506
440 HANFORD	1565 Glendale Avenue	Hanford 93230-0831	559-582-0231	559-582-7336
450 MADERA	3051 Airport Drive	Madera 93637-8709	559-675-1025	559-675-1029
455 MARIPOSA	5264 Highway 49 North	Mariposa 95338-9501	209-966-3656	209-966-6765
456 OAKHURST	35500 State Hwy 41	Coarsgold, 93614	559-683-6565	559-683-6566
460 MERCED DISPATCH	1500 Bell Drive	Atwater 95301	209-357-6910 209-357-6922	209-357-6918 209-357-6943
461 LOS BANOS	706 West Pacheco Blvd.	Los Banos 93635-3992	209-826-3811	209-826-9548
464 CHOWCHILLA RIVER INSPECT. FAC.	8820 S. Highway 99	Le Grand 95333	559-665-2904	559-665-3906
465 MODESTO	4030 Kiernan Avenue	Modesto 95356-9761	209-545-7440	209-545-2636
480 VISALIA	5025 West Noble Avenue	Visalia 93277-8310	559-734-6767	559-734-3007
481 PORTERVILLE	861 W. Morton Avenue	Porterville 93257-3193	559-784-7444	559-784-2146
495 COALINGA	125 S. Sixth Street	Coalinga 93210-0866	559-935-2093	559-935-2092
501 SOUTHERN DIV.	411 N. Central Ave., #410	Glendale 91203-2020	818-240-8200	818-240-5962
514 LOS ANGELES COMMUNICATIONS CENTER	4016 Rosewood Avenue	Los Angeles 90004-2959	323-906-3400	323-906-3491
525 BALDWIN PARK	14039 Francisquito Ave.	Baldwin Park 91706-5999	626-338-1164	626-814-2783
530 SO. LOS ANGELES	19700 Hamilton Avenue	Torrance 90502-1395	310-516-3355	310-323-5411
535 E. LOS ANGELES	1601 Corporate Center Drive	Monterey Park 91754-2020	323-980-4600	323-980-4623
540 NEWHALL	28648 The Old Road	Valencia 91355-1021	661-294-5540	661-294-5548
541 CASTAIC INSPECTION FACILITY	27858 Golden State Hwy.	Santa Clarita 91384-4415	805-294-5530	805-294-5535
545 ANTELOPE VALLEY	2041 West Avenue "I"	Lancaster 93534-1570	805-948-8541	805-948-8544
550 SANTA FE SPRINGS	10051 Orr and Day Road	Santa Fe Springs 90670-3597	562-868-0503	562-864-4218
565 W. LOS ANGELES	6300 Bristol Parkway	Culver City 90230	310-642-3939	310-670-0913

575 ALTADENA	2130 Windsor Avenue	Altadena 91001-5369	626-296-8100	626-296-8107
580 WEST VALLEY	5825 De Soto Avenue	Woodland Hills 91367-5297	818-888-0980	818-888-1034
590 CENTRAL LOS ANGELES	777 W. Washington Blvd.	Los Angeles 90015-4113	213-744-2331	213-744-2856
601 BORDER DIVISION	9330 Farnham Street	San Diego 92123-1216	858-650-3600	858-268-2851
AREA/DIVISION	**ADDRESS**	**CITY, ZIP**	**TELEPHONE NUMBER**	**FAX NUMBER**
618 BORDER COMMUNICATIONS CENTER	7183 Opportunity Road	San Diego 92111	858-467-3075	858-467-3255
620 WINTERHAVEN	1 Killingsworth Dr.	Felicity 92283-9707	760-572-0294	760-572-2510
625 EL CENTRO DISPATCH	2331 Highway 86	Imperial 92251	760-482-2500 760-482-2550	760-482-0937
626 CALEXICO INSPECTION FACILITY	1700 E. Carr Road	Calexico 92231	760-768-4000	760-768-4004
630 INDIO DISPATCH	79-650 Varner Road	Indio 92203-9704	760-772-8911 760-772-8900	760-360-7839
645 SAN DIEGO	4902 Pacific Highway	San Diego 92110-4097	619-220-5492	619-296-6667
646 OTAY MESA INSPECTION FACILITY	2335 Enrico Fermi	San Diego 92173	619-671-3000	619-671-3003
650 OCEANSIDE	1888 Oceanside Blvd.	Oceanside 92054-3486	760-757-1675	760-757-0907
651 SAN ONOFRE INSPECTION FACILITY	P. O. Box 2030	Oceanside 92051-2445	760-430-7026	760-430-7711
655 SAN GORGONIO PASS	195 Highland Springs Avenue	Beaumont 92223-3091	909-769-2000	909-769-2002
656 DESERT HILLS INSPECTION FACILITY	47250 Interstate 10	Banning 92220	951-849-5646	951-849-0815
660 BLYTHE	430 South Broadway	Blythe 92225-2898	760-922-6141	760-922-2405
670 WESTMINSTER	13200 Golden West Street	Westminster 92683-2299	714-892-4426	714-891-7615
675 SANTA ANA	2031 E. Santa Clara Avenue	Santa Ana 92705-7838	714-567-6000	714-547-8344
676 ORANGE COUNTY COMMUNICATIONS CENTER	6681 Marine Way	Irvine, 92618	949-559-7888	949-936-3627
680 EL CAJON	1722 East Main Street	El Cajon 92021-5259	619-401-2000	619-401-2002
685 TEMECULA	27685 Commerce Center Dr.	Temecula 92590	909-506-2000	909-506-2002
686 RAINBOW INSPECTION FACILITY	47950 Northbound Hwy 15	Temecula 92589-0625	909-694-0663	909-506-2022
690 CAPISTRANO	32951 Camino Capistrano	San Juan Capistrano 92675-4597	949-487-4000	949-487-4004
701 COASTAL DIVISION	4115 Broad Street, #B-10	San Luis Obispo 93401-7963	805-549-3261	805-549-3230
720 SANTA CRUZ	10395 Soquel Drive	Aptos 95003-4937	831-662-0511	831-662-0116
725 HOLLISTER-GILROY	740 Renz Lane	Gilroy 95020-9584	408-848-2324	408-848-2438
726 GILROY INSPECTION FACILITY	12000 South Valley Fwy.	San Martin 95046	408-683-9086	408-683-9089
730 MONTEREY DISPATCH	19055 Portola Drive	Salinas 93908-1212	831-455-4800 831-455-4860	831-455-1846 831-443-3147
735 KING CITY	2 Broadway Circle	King City 93930-3599	831-385-3216	831-385-3745
740 TEMPLETON	101 Duncan Road	Templeton 93465-0668	805-434-1822	805-434-2197
745 SAN LUIS OBISPO	675 California Blvd.	San Luis Obispo 93401-2591	805-549-3610	805-549-3616
750 SANTA MARIA	1710 N. Carlotti Drive	Santa Maria 93454-1505	805-349-8728	805-349-9567
755 BUELLTON	166 Industrial Way	Buellton 93427-0167	805-688-5551	805-688-7284
760 SANTA BARBARA	6465 Calle Real	Goleta 93117-1597	805-967-1234	805-967-7095
765 VENTURA DISPATCH	4656 Valentine Road	Ventura 93003-5740	805-477-4100 805-477-4174	805-642-5032 805-654-4535

766 CONEJO INSPECTION FACILITY	4001 U.S. Hwy 101	Thousand Oaks 91320	805-498-3853	805-498-9975
801 INLAND DIVISION	847 E. Brier Drive	San Bernardino 92408-2820	909-806-2400	909-888-4228
818 INLAND COMMUNICATIONS CENTER	847 E. Brier Drive	San Bernardino 92408-2820	909-388-8000	909-388-8021
820 BRIDGEPORT	125 Main Street	Bridgeport 93517-0158	760-932-7995	760-932-7352
AREA/DIVISION	**ADDRESS**	**CITY, ZIP**	**TELEPHONE NUMBER**	**FAX NUMBER**
825 BISHOP DISPATCH	469 S. Main Street	Bishop 93514-3490	760-872-5960 760-872-5900	760-873-8956 760-873-8940
830 MOJAVE	1365 Hwy. 58	Mojave 93501-1900	661-824-2408	661-824-4820
834 NEEDLES	1916 J Street	Needles 92363-2635	760-326-2000	760-326-4542
835 BARSTOW DISPATCH	300 E. Mt. View	Barstow 92311-2887	760-256-1727 760-256-1617	760-256-2321 760-256-2578
840 RIVERSIDE	8118 Lincoln Avenue	Riverside 92504-4316	909-637-8000	909-637-8003
850 VICTORVILLE	14210 Amargosa Road	Victorville 92392	760-241-1186	760-241-6409
855 RANCHO CUCAMONGA	9530 Pittsburg Street	Rancho Cucamonga 91730-6014	909-980-3994	909-980-4354
860 SAN BERNARDINO	2211 Western Avenue	San Bernardino 92411-1243	909-383-4247	909-383-6996
865 ARROWHEAD	31230 Highway 18	Running Springs 92382-0997	909-867-2791	909-867-2662
870 MORONGO BASIN	63683 29 Palms Hwy.	Joshua Tree 92252-9707	760-366-3707	760-366-3042

Appendix C

Example of Minnesota DOT



Quality Standards

Methods to determine whether the various traffic control devices are Acceptable, Marginal, or

Quality Standards

Contents

Introduction 6K-81
Crashworthy Criteria 6K-82
Quality Classification & Requirements of Devices 6K-83
Evaluation Guide - Warning Signs 6K-85
Evaluation Guide - Type A and B Channelizers 6K-88
Evaluation Guide - Type I, II or III Barricade Panels or Vertical Panels . . .6K-90
Evaluation Guide - Warning Lights Type A, B, & C 6K-91
Evaluation Guide - Arrow Panels 6K-92
Evaluation Guide - Portable Changeable Message Signs 6K-95
Evaluation Guide - Pavement Marking Tape and Paint 6K-96
Evaluation Guide - Temporary Raised Pavement Markers 6K-97

These Layouts as well as the entire Field Manual, the Flagging Handbook and other documents are available on the Mn/DOT, Traffic Engineering website at: http://www.dot.state.mn.us/trafficeng/

Traffic controls are a necessary part of a Temporary Traffic Control Zone to warn motorists of hazards, advise them of the proper path through the zone, delineate areas where they may not operate, and to separate them from the workers. This is accomplished by the deployment of a system of devices. The success of this system depends on the visibility of each device at the time of a project's initial installation as well as throughout the life of the project. Since it is not practical to require new devices at all times, standards are needed to evaluate the condition of the devices to assure their continued effectiveness. The standards in this publication should aid in the determination of the quality of temporary traffic control devices.

The use of temporary traffic control zone devices subjects them to wear which does not occur with permanent devices. Although errant vehicles cause much of the damage to the devices, they also deteriorate in appearance from wear occurred during their storage, shipment, installation, relocation, and removal. Whenever a high number of these worn and damaged devices appear on the same project, the general appearance of the Temporary Traffic Control Zone deteriorates, reducing the level of safety provided to the workers, pedestrians, and traveling public.

These standards have been developed in an effort to offset the deterioration in the appearance of Temporary Traffic Control Zone devices. A determination of the condition of device quality should be made at several stages: while in storage, during preparation for delivery to the Temporary Traffic Control Zone, during initial set up and periodically during the course of the work. Suppliers and contractors are encouraged to apply this standard prior to delivery of devices to the jobsite. Doing so will minimize agency involvement and reduce costs related to on-site replacement.

These standards are intended to address the day-to-day operations of traffic control within a Temporary Traffic Control Zone and are not meant to cover the needs of emergency situations.

FHWA policy requires that all roadside appurtenances such as traffic barriers, barrier terminals and crash cushions, bridge railings, sign and light pole supports, and Temporary Traffic Control Zone hardware used on the National Highway System meet the crashworthy performance criteria. Additionally, a definition for the word "crashworthy" was included. Crashworthy is now defined as "a characteristic of a roadside appurtenance that has been successfully crash tested in accordance with a national standard such as the National Cooperative Highway Research Program Report 350, 'Recommended Procedures for the Safety Performance of Highway Features'."

In the 2003 Federal MUTCD and the current edition of the 2005 MN MUTCD, a specific compliance date of January 17, 2005 was announced. Local road authorities were not adequately prepared for this "crashworthy" compliance.

Minnesota received permission from the FHWA to extend these compliance dates. Mn/DOT then issued Technical Memorandum No. 06-06-T-03, dated January 30, 2006, extending this compliance date to January 17, 2010, for all local roads in the State of Minnesota. Since local road authorities perform many operations on low-speed (0-40 mph) Trunk Highways, Mn/DOT also issued Technical Memorandum No. 06-09-T-04,

dated April 1, 2006, to extend the compliance date on low-speed Trunk Highways until January 17, 2010. The compliance date for high-speed Trunk Highways remained at the January 17, 2005 date and "crashworthy" compliance is required with respect to temporary (work zone) signs, barricades and channelizing devices.

The 2005 MN MUTCD has been updated to reflect these new compliance dates.

The quality of the Temporary Traffic Control Zone devices in this standard has been divided into three classifications: acceptable, marginal, and unacceptable. Acceptable devices meet the all MN MUTCD requirements such as design, size, color, weight, etc., and are properly placed as specified, and clearly perform their intended function. The term "Marginal" for the purpose of this manual means "marginally acceptable", reaching the lower end of acceptability. Devices that fall into the "unacceptable" classification shall not be delivered to the jobsite.

The required minimum percentage of acceptable devices has been established for each type of device and varies upon the duration of the Temporary Traffic Control Zone.

Intermediate and Long Term Duration

Within each Temporary Traffic Control Zone that is planned to remain in place for more than twelve (12) hours, the following requirements shall be followed:

O At the time of the initial set up or at the time of major stage changes, one hundred percent (100%) of each type of device (channelizers, barricades, signs, warning lights, arrow panels, portable changeable message signs, pavement tape and raised pavement markers) shall be classified as "acceptable".

O Throughout the duration of the project, the number of acceptable devices may decrease to seventy-five percent (75%) of the initial quantity of each particular device, as a result of damage and/or deterioration during the course of the work with the remainder of the devices in the "marginal" category.

O Devices in the marginal category may remain in the Temporary Traffic Control Zone until their total number exceeds the twenty-five percent (25%) maximum for that type of device, which is considered an "unacceptable" situation. Should the percentage of devices in the marginal category exceed twenty-five percent (25%), all marginal devices shall be replaced so as to bring the group of devices back up to acceptable standards.

O All devices categorized as unacceptable shall be replaced within twelve (12) hours of notification.

O Missing or knocked down devices should be replaced or re-set in a timely manner.

Short Term Duration

Within Temporary Traffic Control Zones that are planned to be in place for less than twelve (12) hours, the following requirements may be followed:

O At the time of the initial set up, one hundred percent (100%) of all TTC devices except channelizing devices and barricades shall be classified as "acceptable". During the short term duration of the project, the intermediate and long term duration standards shall be maintained for these devices.

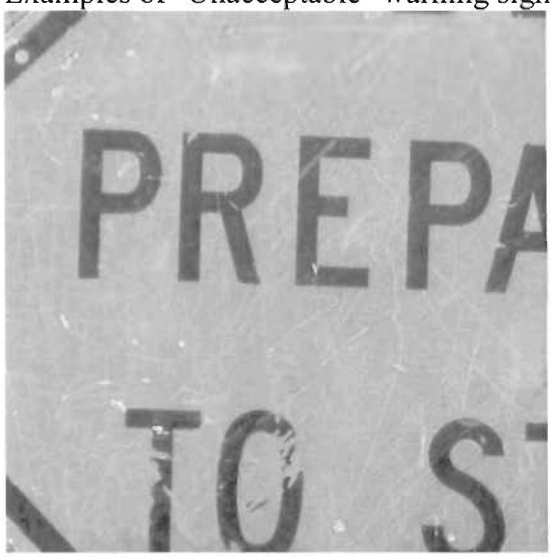
O At the time of the initial set up, a minimum of seventy-five percent (75%) of each type of channelizer and barricade shall be classified as "acceptable". Up to a maximum of twenty-five percent (25%) of these devices may be classified as "marginal". "Unacceptable" devices shall not be installed.

O During the short term duration of the project, the number of marginal devices may increase beyond the twenty-five percent (25%) of the initial quantity, as a result of damage and/or deterioration during the course of the work.
O Missing or knocked down devices should be replaced or re-set in a timely manner.
The following descriptions, together with the accompanying photographs, should be used to determine if the device is acceptable, marginal or unacceptable.
To be considered acceptable, a sign shall meet all of the following conditions: O There may be several abrasions on the surface, but very little loss of lettering.
O There has been no touchup of the lettering. O This message is legible both day and night.
O Signs on portable structures shall be longitudinally perpendicular to the ground and may be placed on a side slope resulting in 3 inches maximum out-of-plumb per foot of height.
O Post mounted signs shall be installed within 3 inches of plumb for the height of the posts.
O The back side is free of any reflective materials except small logos or identification markings and have a bare surface or be painted a uniform color as approved by the local road authority.
O The sign is in place at the specified spacing and properly aligned to traffic.
O The sign support structure has been installed according to the approved crashworthy requirements.
Examples of "Acceptable" warning signs

Marginal
The sign is considered marginal, if it meets any of the following conditions:
O There are many surface abrasions throughout the sign face, and only a few are within the individual letters of the message.
O The sign face is free of any residue.
O Some color fading may be evident, but the background color and reflectivity are still apparent at night.
O This message is legible both day and night.
O Signs on portable structures are longitudinally perpendicular to the ground and the side slope results in no more than 3 inches out-of-plumb per foot of height.

O Post mounted signs shall be within 3 inches of plumb for the height of the posts.
O All warning signs are inplace at the specified spacing and properly aligned to traffic.
Examples of "Marginal" warning signs A sign is considered unacceptable if it meets any of the following conditions:

O Asphalt splatter, cement slurry, or abrasions that are evident throughout the face of this sign.
O A letter has a loss of more than 50 percent or more of its stroke area or portions of letters are missing such that they become confusing to identify.
O There is noticeable color fading or loss of reflectivity is noticeable at night.
O The message is illegible.
O The sign is missing, knocked down or turned such that the message can not be seen.
Examples of "Unacceptable" warning signs

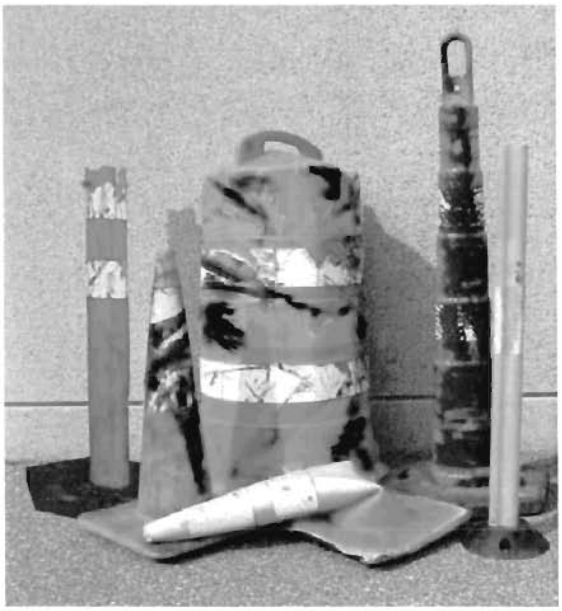


To be considered acceptable, a channelizing device shall meet all of the following conditions:
O The devices' shape should remain clearly identifiable with no significant distortion and must be free standing in its normal position.
O Surface is free of punctures and abrasions.

O Surface is free of asphalt splatter, cement slurry, or other material and will readily respond to washing.
O The reflective bands have little or no loss of reflectivity, with only minor tears and scratches.
O Any dents do not seriously reduce the reflectivity of the sheeting
O Any dents do not seriously reduce the reflectivity of the sheeting
Marginal
The channelizing device is considered marginal, if it meets any of the following conditions:
O The surface has some asphalt splattering or cement slurry and may not be readily cleaned due to abrasions and discoloration.
O The reflective bands have numerous tears and scratches; but have no large areas of residue or missing reflective material.
O Any dents do not reduce the strength of the device.
O The device maintains its intended shape.
O No more than one device in a row is missing.

A channelizing device is considered unacceptable if it meets any of the following conditions:
O Punctures and large areas of staining asphalt splatter or cement slurry that cannot be cleaned due to abrasions or discoloration.
O There is noticeable fading of the device's color.
O Large areas of missing or stained reflective material.
O Substantial deformation of a device, which reduces the original dimensions, or the device has lost the intended shape.
O Several dents or fractures that affect their stability or ability to retain the reflective sheeting.
O Two or more consecutive devices are missing.

To be acceptable, the panel shall meet all of the following conditions:
O Panels are not deformed to an extent so as to decrease the panels target value.
O There may be several abrasions on the surface but very little loss of reflective sheeting.
O The orange is vivid and the stripes provide contrast. O The barricade is installed in its specified location with adequate ballast, and properly aligned to traffic.
O The Type III barricade has been fabricated according to the approved crashworthy requirements.



Marginal
The panel is considered marginal, if it meets any of the following conditions:
O There are numerous surface abrasions through the panel surface.
O Some color fading is evident; however, it has no large areas of residue or missing reflective material.
O The orange is vivid and the stripes provide contrast.
O The barricade is turned at a skew to traffic that reduces it's effectiveness.
Unacceptable
A panel is considered unacceptable if it meets any of the following conditions:
O The surface is marred over a high percentage of the panel area.
O There is a noticeable loss of reflectivity and obvious color fading.
O Panels with asphalt splatter and/or cement slurry, or any combination of missing and covered reflective material would make the panel unacceptable.
O Barricades have bent or twisted legs, or deformation of the support assembly to the extent that the barricade panel is not reasonably parallel to the roadway surface.
O The barricade is missing, knocked down, or turned away from traffic.

To be acceptable, the warning lights shall meet all of the following conditions:
O One hundred percent (100%) of all warning lights shall be operating properly. Any warning light that is out of alignment from the intended driver's line of vision is considered not operating properly.

O Type A Low-Intensity Flashing warning lights and Type C Steady-Burn warning lights shall be maintained so as to be capable of being visible on a clear night from a distance of 3000 feet.
O Type B High-Intensity Flashing warning lights shall be maintained so as to be capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1000 feet.
O Warning lights shall have a minimum mounting height of 30 inches to the bottom of the lens.

Marginal

The warning light is marginal, when it meets any of the following conditions:
O Type A and C warning lights - at least ninety percent (90%) of the warning lights shall be operating properly with no more than three (3) adjacent lights failing.
O Type B warning lights - one (1) light failing.

Unacceptable

A warning light is considered unacceptable if it meets any of the following conditions:
O Type A and C warning lights - less than ninety percent (90%) of the warning lights operating properly, or more than three (3) adjacent lights failing.
O Type B warning lights - more than one (1) light failing.

Acceptable conditions for all arrow panels

For an arrow panel to be acceptable, it must meet all of the following conditions:
O All lamps are properly aligned for the intended driver's line of vision. Any operating lamp which is out of alignment shall be considered not functioning properly.
O No lamps are burnt out.
O All lamps dim properly.
O All lamps are the same level of intensity.

Unacceptable conditions only for trailer-mounted arrow panels

An arrow panel is considered unacceptable if it meets any of the following conditions:
O The arrow panel is not within 3 inches of plumb for the height of the panel.
O The arrow panel is not raised to at least 7 feet above the roadway surface (measured to the bottom of the panel).

FLASHING ARROW MODE (Sequential Arrow)

Marginal

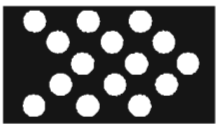
An arrow panel in this mode is marginal, when it meets the following condition:
O Up to two (2) lamps out in the stem and no lamps out in the head.

Unacceptable

An arrow panel in this mode is considered unacceptable if it meets any of the following conditions:
O Any lamp out in the head
O More than two (2) lamps out in the stem
O The arrow panel not dimming properly.

CHEVRON MODE

Marginal



An arrow panel in this mode is marginal, when it meets the following condition:
O No more than one (1) lamp out in any one chevron segment.

Unacceptable
An arrow panel in this mode is considered unacceptable if it meets any of the following conditions:
O Two (2) or more lamps out in any one chevron
O The arrow panel is not dimming properly.

CAUTION MODE (Bar or 4 Corners)

Marginal

An arrow panel in this mode is marginal, when it meets the following condition:
O At least four (4) lamps functioning properly.

or

Unacceptable

An arrow panel in this mode is considered unacceptable if it meets any of the following conditions:
O Less than four (4) lamps functioning properly
O The arrow panel is not dimming properly.

DOUBLE ARROW MODE

Marginal

An arrow panel in this mode is marginal, when it meets the following condition:
O Two (2) lamps out in the stem and both heads completely functional with no lamps out.

Unacceptable

An arrow panel in this mode is considered unacceptable if it meets any of the following conditions:
O More than two (2) lamps out in the stem
O One (1) lamp out in the head
O The arrow panel is not dimming properly.
To be acceptable, a PCMS shall meet the following condition:
O One hundred percent (100%) of the pixels per character module shall be operating properly.

Marginal

A PCMS is marginal, when it meets the following condition:
O At least ninety percent (90%) of the pixels per character module shall be operating properly.

Unacceptable for all PCMSs

A PCMS is considered unacceptable if it meets any of the following conditions:
O Less than ninety percent (90%) of the pixels per character module are operating properly
O The PCMS is not properly aligned for the intended driver's line of vision..
Unacceptable for Trailer-Mounted PCMS
A trailer-mounted PCMS is considered unacceptable if it meets any of the following conditions:
O The sign panel is not within 3 inches of plumb for the height of the panel.
O The sign panel is not raised to at least 7 feet above the roadway surface (measured to the bottom of the panel).
Pavement marking tape or paint is acceptable, when it meets the following condition:

O All pavement marking tape or paint (solid lines and skip lines) shall be in place and meet all material specifications.

Marginal

Pavement marking tape or paint is marginal, when it meets any of the following conditions:

O Less than ten percent (10%) of all tape, paint, message, or symbol is missing.

O Less than two (2) consecutive skip lines is missing.

O Less than a fifty (50) foot section of solid line is missing.

Unacceptable

Pavement marking tape or paint is considered unacceptable if it meets any of the following conditions:

O More than ten percent (10%) of all tape, paint, message, or symbol is missing.

O More than two (2) consecutive skip lines is missing.

O More than a fifty (50) foot section of solid line is missing.

TRPMs are acceptable, when it meets the following condition:

O All temporary raised pavement markers required are in place and meet all material specifications.

Marginal

TRPMs are is marginal, when it meets any of the following conditions:

O Less than ten percent (10%) of all TRPMs are missing.

O Less than three (3) consecutive temporary raised pavement markers are missing.

Unacceptable

TRPMs are considered unacceptable if it meets any of the following conditions:

O More than ten percent (10%) of all TRPMs are missing.

O More than three consecutive temporary raised pavement markers are missing.

Appendix D

Check list forms

Check list 1			
CWB decision matrix			
Work Zone	**Yes**	**No**	**N/A**
1. Project scope and duration?			
a. Short term	☐	☐	☐
b. Long term (longer than three days)	☐	☐	☐
c. Permanent lane/shoulder/ramp closures	☐	☐	☐
Comments:			
6. Anticipated traffic speeds through the work zone larger than 35 mph;	☐	☐	☐
7. Anticipated traffic volume; larger than 10,000	☐	☐	☐
8. Vehicle mix; more than 5% truck volume	☐	☐	☐
9. Type of work (as related to worker exposure and crash risks); High risk, bridge deck	☐	☐	☐
Comments:			
6. Distance between traffic and workers, and extent of worker exposure; Less than 6'	☐	☐	☐
Comments:			
8. Work area restrictions (including impact on worker exposure);	☐	☐	☐
8. Escape paths available for workers to avoid a vehicle intrusion into the work space;	☐	☐	☐
Comments:			
9. Time of day (e.g., night work);	☐	☐	☐
10. Consequences from/to road users resulting from roadway departure;	☐	☐	☐
Comments:			
12. Potential hazard to workers and road users presented by device itself and during device placement and removal;	☐	☐	☐
Comments:			
12. Geometrics that may increase crash risks (e.g., poor sight distance, sharp curves);	☐	☐	☐
Comments:			
2. Access to/from work space;	☐	☐	☐
Comments:			
14. Roadway classification;	☐	☐	☐
Comments:			
15. Impacts on project cost and duration.	☐	☐	☐
Comments:			
16. NMDOT drop off policy is met.	☐	☐	☐
Comments:			
Review all the factors. Safety of the workers and public should be evaluated and based on engineering judgment traffic control plan should be designed.			
Will CWB be required? Use this matrix and department policy to decide on the use of CWB. Refer to next pages for more guidance.	**Yes**	**No**	**N/A**

Check list 2				
Exposure Control Measures Matrix				
Ask the following questions:	**Can you provide?**		**Can you see any?**	
	Yes	**No**	**Cost saving**	**Time saving**
1. Full road closure **Comments:**	☐	☐	☐	☐
2. Ramp Closure **Comments:**	☐	☐	☐	☐
3. Median Crossovers **Comments:**	☐	☐	☐	☐
4. Full or partial detours and diversion **Comments:**	☐	☐	☐	☐
5. Protection of WZ setup and removal using rolling road block **Comments:**	☐	☐	☐	☐
6. Work area restrictions (including impact on worker exposure) **Comments:**	☐	☐	☐	☐
7. Performing night or during off-peak periods **Comments:**	☐	☐	☐	☐
8. Accelerated construction techniques **Comments:**	☐	☐	☐	☐
Will additional safety be provided taking available one or several measures?	**Yes**	**No**		**N/A**

Check list 3			
Law Enforcements MOU should address the following issues:			
Work Zone	**Yes**	**No**	**N/A**
Scope of Work, Description	☐	☐	☐
Statement of work	☐	☐	☐
Inter-agency agreement	☐	☐	☐
Law Enforcement Responsibilities	☐	☐	☐
Department Responsibilities	☐	☐	☐
Contract Period	☐	☐	☐
Contract management	☐	☐	☐
Budget DETAILS	☐	☐	☐
Payment	☐	☐	☐
Rates	☐	☐	☐
Cost Limitation	☐	☐	☐
Termination	☐	☐	☐
Subcontracting	☐	☐	☐
Retention	☐	☐	☐
Disputes	☐	☐	☐
Indemnification	☐	☐	☐
Change in Terms of agreement	☐	☐	☐
	☐	☐	☐
1- Pre Job/ Planning			
a. Understanding of site duties	☐	☐	☐
b. Method of Communication	☐	☐	☐
c. Defining acceptable traffic delay	☐	☐	☐
Comments:			
Each item should be reviewed and addressed in the MOU			
	Yes	**No**	**N/A**

Check list 4

Safe entry/exit for work vehicles and equipment

Ask the following questions:		**Comments on accommodations**
Characteristics of the Facility	☐	
Speed (acceleration /deceleration, alignment constraints?)		
Traffic Volumes and Queues	☐	
Configuration of Access	☐	
How do vehicles gain access?		
How is traffic affected? Decision sight distance		
Are turning radii appropriate?	☐	
Motorist Expectancy		
Is ample direction given to the motorist?	☐	
Work Zone Signing		
Is additional signing necessary for exit/entry locations?	☐	
Truck crossing signs requirements	☐	
Night time signing of delivery vehicles	☐	
Movement of work vehicles in the work zones.		
Probability for congestion causing movements	☐	
Mandates vehicle entrance and exit in the direction of traffic flow.	☐	
Light requirements for guidance to ensure proper visibility	☐	
Motorist awareness of work vehicle movement.	☐	
Recommendation for Delivery Coordination (off peak hours)	☐	
Environmental factors (dragging dirt into the roadway)	☐	
After examination of all the factors, how have the safety issues been accommodated:		