GUIDANCE FOR TEMPORARY TRAFFIC CONTROL DEVICES

Per 23 CFR Part 630 Subpart K

OKLAHOMA Transportation

Effective: December 31, 2025

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PURPOSE AND BACKGROUND

The Oklahoma Department of Transportation (ODOT) developed this guidance to improve safety and mobility for all road users and workers in highway work zones. This guidance implements the requirements of 23 CFR 630 Subpart K, Temporary Traffic Control Devices, published by the Federal Highway Administration (FHWA) on November 1, 2024. Subpart K applies to all state and local highway projects that receive Federal-aid highway funds, regardless of project size or complexity, and is intended to work in conjunction with the Work Zone Safety and Mobility Rule in Subpart J.

This guidance supports national objectives to reduce fatalities and serious injuries in work zones by suggesting the appropriate selection, use and management of temporary traffic control devices, exposure control strategies and positive protection systems. It also promotes the safe mobility of traffic through work zones while providing a safe and accessible environment for workers and roadway users.

To accomplish these objectives, Subpart K emphasizes:

- The use of positive protection devices or exposure control measures to separate workers from motorized traffic where conditions warrant.
- The installation, operation and maintenance of temporary traffic control devices that meet MUTCD and industry standards.
- The inclusion of appropriate contract pay items to support implementation of positive protection, intrusion mitigation and other required safety measures.
- The application of uniform procedures to assess, document and manage work zone safety needs on all Federal-aid highway projects.

Terms and Definitions

This guidance applies to all state and local highway projects that receive Federal-aid funds; however, ODOT defines a **significant project** based on the following criteria:

- A project that is alone or in combination with other concurrent projects nearby is anticipated to cause sustained work zone impacts greater than tolerable based on ODOT guidelines and engineering judgment. All “Significant Projects” require a Transportation Management Plan (TMP) consisting of a Temporary Traffic Control (TTC) plan, a Transportation Operations (TOP) plan, and a Public Information Plan (PIP).
- Interstate system projects within the boundaries of a designated Transportation Management Area (TMA) that occupy a location for three days or more with intermittent or continuous lane closures. The greater Oklahoma City and Tulsa

Metropolitan areas and the following counties will also be considered a TMA urbanized area: Oklahoma, Canadian, Cleveland & Tulsa.

- Significant projects will be identified when the State Transportation Improvement Program (STIP) is developed.

Additional definitions applicable to Subpart K include the following:

- **Agency:** A state or local highway agency or authority that receives Federal-aid highway funding.
- **Engineering Study:** The analysis and evaluation of available pertinent information, and the application of appropriate principles, provisions, and practices for the purpose of determining the choice and application of work zone positive protection devices, exposure control measures, or other traffic control measures to manage work zones safely.
- **Exposure Control Measures:** Traffic management strategies to avoid work zone crashes involving workers and motorized traffic by eliminating or reducing traffic through the work zone or diverting traffic away from the work area.
- **Federal-Aid Highway Project:** Highway construction, maintenance, and utility projects funded in whole or in part with Federal-aid funds.
- **Motorized Traffic:** The motorized traveling public. This term does not include motorized construction or maintenance vehicles and equipment within the work zone.
- **Other Traffic Control Measures:** All strategies and temporary traffic controls other than positive protection devices and exposure control measures, but including uniformed law enforcement officers, used to reduce the risk of work zone crashes involving motorized traffic.
- **Positive Protection Devices:** Devices that contain or redirect vehicles and meet applicable industry crashworthiness evaluation criteria. Industry crashworthiness evaluation criteria are not regulatory, and their use is voluntary and not required by law.

Methods and devices definitions applicable to Subpart K include the following:

- Acceleration and Deceleration Lanes: Designated lanes allowing vehicles to safely increase (accelerate) or decrease (decelerate) speed when entering or exiting traffic lanes near work zones.
- Arrow Panels: Electronic or non-electronic signs with flashing or sequential arrows used to guide drivers through or around work zones.
- Automated Flagger Assistance Device (AFAD): Automated flaggers to assist in traffic control within work zones.

- Channelizing Devices: Cones, barrels, tubular markers, or barricades used to direct traffic flow safely around work areas.
- Changeable Message Signs: Electronic signs that display real-time messages to motorists about road conditions, detours, or hazards in the work zone.
- Construction Pavement Markings: Temporary painted or taped lane or edge of pavement lines and symbols or raised pavement markers used to guide drivers through construction areas.
- Drone Radar: Devices that emit the frequency of law enforcement radar scanners to cause drivers with radar detectors to slow down.
- Dynamic Speed Message Signs: Electronic displays that show drivers their current speed and warn them if they are exceeding the posted limit.
- Effective, Credible Signing: Signs that are clear, consistent, and believable to drivers.
- Enhanced Flagger Station Setups: Improved safety measures for flaggers (traffic controllers), such as barriers or lighting.
- Enhanced Worker Visibility: Use of high-visibility safety apparel, reflective gear, or lighting to make workers easily seen by drivers.
- High-Quality Work Zone Pavement Markings and Removal of Misleading Markings: Ensuring temporary road markings or raised pavement markers are bright, durable, and that old or confusing lines are properly removed to avoid driver confusion.
- Increased Penalties for Driving Violations: Higher fines or penalties for speeding or unsafe driving in work zones.
- Intelligent Transportation Systems (ITS): Technology-based tools like sensors, cameras, or real-time traffic management systems that help monitor and control traffic flow through work zones and alert drivers to changes in traffic conditions.
- Intrusion Alarms: Devices that alert workers if a vehicle enters a protected or restricted work area unexpectedly.
- Law Enforcement: Police presence in or near work zones to enforce speed limits, traffic control, and promote safer driver behavior.
- Longitudinal and Lateral Buffer Space(s): Clear zones between traffic and work areas, or between lanes, providing safety space in case vehicles stray from travel paths.
- Longitudinal Channelizing Barricades: Continuous barriers that separate traffic lanes from work areas to prevent vehicles from entering the workspace.
- Pilot Vehicles: Vehicles that guide traffic safely through a work zone or detour.

- Protection or Shadow Vehicles: Vehicles (often equipped with impact attenuators) positioned behind workers or equipment to absorb collisions and protect crews.
- Public Information and Traveler Information: Communication provided to the public about upcoming work zones, detours, and travel impacts through media, apps, or signage.
- Rumble Strips (including temporary rumble strips): Grooved or raised patterns placed on the road to create noise and vibration that alerts drivers.
- Speed Limit Restrictions: Reduced speed limits established within or near work zones to enhance safety for drivers and workers.
- Static Signing: Permanent or temporary non-electronic signs conveying standard messages (e.g., “Road Work Ahead” or “Detour”).
- Temporary or Portable Traffic Signals: Movable traffic signals used to control vehicle flow through work zones, especially where lanes are reduced.
- Temporary Pedestrian Barrier/Channelizer: Barricades that physically separate pedestrians from work zones and traffic for safety.
- Trained Flaggers and Spotters: Workers certified and trained to control traffic movement and ensure the safety of other workers and drivers in the zone.
- Warning Flags and Lights: Bright, attention-grabbing devices used alongside signs or equipment to increase driver awareness.
- Worker Training: Education provided to workers about safety procedures, hazards, and best practices for operating in and around traffic.
- Work Zone Safety Monitoring System: Data analysis reports on speeds and incursions from cameras, radars, and alarms.
- Work Zone Service Patrol: Trained personnel to remove disabled vehicles, manage minor incidents, and assist drivers so that the work zone has minimal impacts and reduces the likelihood of crashes in the queue.

POLICY AND PROCEDURES

The following section describes policies and procedures related to work zone safety management. Three primary work zone safety management techniques are described: positive projection devices, exposure control measures, and other traffic control measures.

Positive Protection Devices

Positive protection systems should be considered on all Federal-aid highway projects to prevent intrusion of motorized traffic into the work area and other potential hazards in the work zone.

Exposure Control Measures

Exposure control measures minimize worker exposure to motorized traffic and road user exposure to work activities.

Other Traffic Control Measures

Other traffic control measures include the safe entry/exit of work vehicles onto/from the travel lanes.

Engineering Study and Analysis

To help determine the best strategy for a given scenario, an engineering study shall be conducted for construction projects that either meet the definition of a significant project or meet at least one criterion identified in the Work Zone Impact Checklist. The engineering study shall integrate data, analysis, and engineering judgement to help determine whether a project is classified as a work zone impact project.

When an engineering study is required, the study should take into consideration all the work zone impact criteria (no means of escape, long duration, high traffic speeds, proximity to traffic, and roadside hazards). The following provides a more detailed description of how each criterion is considered, and the next sections will delve further into work zone impact projects.

- No Means of Escape
    - Work zones with no means of escape are those that include tunnels, bridges, or a cliff on the mountainous side, where workers have no options to escape if the work area is encroached by an errant vehicle. The study should consider potential escape routes from the work zone and the impacts a crash may have within the work zone.
- Long-Duration Work Zones

- Long-duration work zones occur in projects where workers have substantial exposure to motorized traffic, typically considered two weeks or longer in duration. The engineering study should investigate how long it may take for drivers to become comfortable with the work zone, as accustomed drivers may speed or become numb to the requirements, such as posted speeds and lane shifts.

- High Traffic Speeds
  - Work zones with high traffic speeds (45 mph or more), especially when combined with high traffic volumes, have a significant potential for encroachments into work zones with catastrophic results. The engineering study should measure or estimate prevailing (85th percentile) average traffic speeds during anticipated work periods and evaluate appropriate options to protect the work zone from errant vehicles. If a speed study is available or conducted, use the 85th percentile speed.
- Proximity to Traffic
  - Work zones that have potentially hazardous proximity to traffic are those where construction activities occur close to moving traffic. This is usually within one lane width of traffic. The study should consider options to divert an errant vehicle that could enter the work area, as well as how the maintenance of traffic phases may be sequenced to minimize exposure to workers.
- Roadside Hazards Remaining in Place Overnight
  - Drop-offs, unfinished bridge decks, stored equipment, bridge piers, overhead sign supports, and temporary shoring locations are major examples of potential roadside hazards. To qualify as a roadside hazard, the objects must be within the clear zone. To determine the clear zone at a given location, the designer can refer to Section 3-1 of the *AASHTO Design Guide, 4th Edition*.

Policy Applicability

These guidelines apply to all highway projects that receive Federal-aid highway funds, whether federal funding covers the entire project or only a portion of it. The requirements extend to activities within the roadway right-of-way, including but not limited to installing traffic signals, landscaping, applying pavement markings and maintenance repairs that may affect traffic operations or worker safety. Project teams must adhere to the guidance and maintain complete documentation for every applicable project. Beginning December 31, 2026, all Federal-aid highway projects scheduled for contract letting must comply with these provisions unless FHWA grants an exception.

Aligned with the intent of 23 CFR 630 Subpart K, the objectives of this guidance are to promote a safe, consistent and efficient approach to temporary traffic control on roadway improvement projects. The objectives include:

- Provide a safe environment for highway workers and the traveling public
- Minimize potential conflicts between drivers and workers
- Verify contractors have sufficient access to the work zone to complete work safely and efficiently
- Reduce congestion through work zones to an extent practical
- Improve public understanding and satisfaction when traveling through work zones

Oklahoma's statutory and regulatory framework found in Title 730 of the Oklahoma Administrative Code, Title 69 (Highways and Bridges) and Title 47 (Motor Vehicles) provides the legal authority and mechanism for implementing Subpart K within the state. Title 730 establishes ODOT's rules for traffic control devices, roadway maintenance, project development and construction oversight, including the mandate that all traffic control devices conform to the Manual on Uniform Traffic Control Devices (MUTCD) 11th Edition and be approved by ODOT. Title 69 grants ODOT authority over the state highway system, right-of-way acquisition, construction contracting and safety responsibilities ensuring that work zone requirements are integrated into project delivery. Title 47 sets statewide standards for the placement, operation and legality of traffic control devices and prohibits unauthorized or non-compliant devices on public roadways. Together, these statutes and rules create the legal framework through which Oklahoma satisfies the applicability, safety objectives and implementation requirements of 23 CFR 630 Subpart K on all Federal-aid highway projects.

WORK ZONE SAFETY MANAGEMENT MEASURES AND STRATEGIES

Individual work zone safety measure checklists have been developed to assist project teams in selecting appropriate strategies based on existing conditions, the temporary traffic control plan, and the construction schedule. As part of the work zone safety management process and following the completion of the Transportation Management Plan (TMP) and any required engineering study, the checklists for positive protection devices, exposure control measures and other traffic control measures, at a minimum, must be completed prior to the start of construction and again during construction to reassess work zone conditions. Re-evaluating work zone performance during construction helps identify necessary adjustments, preventive measures, or additional safety improvements that support continued compliance with Subpart K and enhance worker and traveler safety as the project progresses.

The checklists listed below and provided in the corresponding Appendices A-F, are intended for use throughout the project lifecycle. The "Work Zone Impact Checklist" should be completed after the TMP or engineering study has been finalized. If the project meets any of the criteria for a "significant project," this checklist will document potential impacts that must be addressed during construction. The subsequent checklists are designed to support the selection and implementation of safety measures and strategies that are consistent with the provisions and intent of 23 CFR 630, Subpart K.

- Appendix A – Work Zone Impact Checklist
  - High traffic speeds
  - Projects with no means of escape
  - Proximity to traffic
  - Long-duration work zones
  - Drop-offs remaining in place overnight
  - Unfinished bridge decks remaining in place overnight
  - Stored equipment remaining in place overnight
  - Bridge piers remaining in place overnight
  - Overhead sign supports remaining in place overnight
  - Temporary shoring locations remaining in place overnight
  - Other roadside hazards remaining in place overnight
- Appendix B – Positive Protection Devices Checklist
  - Ballast-filled traffic barriers
  - Crashworthy barrier end treatments
  - Portable concrete traffic barrier

- Moveable concrete barriers
- Shadow vehicles (with or without attenuator)
- Steel barriers
- Treatment of pavement drop-offs
- Vehicle arresting systems

- Appendix C – Exposure Control Methods Checklist
  - Accelerated construction techniques
    - Precast concrete elements
    - High early-strength concrete
    - Self-propelled modular transports
    - Hot in-place asphalt recycling
  - Alternative Project Delivery
    - Liquidated damages
    - Design-build contracts
    - Cost+time bidding
    - Incentives/disincentives
    - Lane Rental
  - Full or partial detours or diversions
  - Median crossovers
  - Protection of work zone setup and removal operations using rolling roadblocks
  - Ramp closures
  - Removal of hazards from the clear zone
  - Road closures
  - Temporary ADA-compliant access
  - Temporary bicycle detour
  - Temporary pedestrian barrier/channelizer
  - Temporary pedestrian signals
  - Work during off-peak hours (i.e., night work, weekend work)
  - Work hour restrictions
- Appendix D – Work Zone Entry/Exit Methods Checklist
  - Acceleration and deceleration lanes
  - Automated flagger assistance devices
  - Breaks in the temporary precast concrete barrier wall
  - Changeable message signs
  - Pilot vehicle
  - Reduced speed in work zones
  - Static signing

- Trained flaggers and spotters

- Appendix E – Other Traffic Control Measures Checklist
  - Acceleration and deceleration lanes
  - Arrow panels
  - Automated flagger assistance devices
  - Channelizing devices
  - Changeable message signs
  - Construction pavement markings
  - Drone radar
  - Dynamic speed message signs
  - Effective, credible signing
  - Enhanced flagger station setups
  - Enhance worker visibility
  - High-quality work zone pavement markings and removal of misleading markings
  - Increased penalties for driving violations
  - Intelligent Transportation Systems (ITS) and other advanced technology solutions
  - Intrusion alarms
  - Longitudinal and lateral buffer space(s)
  - Longitudinal channelizing barricades
  - Pilot vehicles
  - Protection or shadow vehicles (including shadow vehicle with attenuator)
  - Public information and traveler information
  - Rumble strips (including temporary rumble strips)
  - Speed limit restrictions
  - Speed safety cameras (where permitted by State/local laws)
  - Temporary ADA-compliant access
  - Temporary bicycle detour
  - Temporary or portable traffic signals
  - Temporary pedestrian signals
  - Warning flags and lights
  - Worker and work vehicle/equipment visibility
  - Worker training
  - Work zone safety monitoring system
  - Work zone service patrol
- Appendix F – Post Construction Project Evaluation
  - Reflect on the usefulness of the TMP.

- Identify changes that were made to the TMP, why changes were made, and how successful those changes were.
- Average delay time, queue, etc., during construction.
- Type of crashes/incidents that occurred during construction, and how they were resolved.
- Highlight the areas of the TMP that were successfully implemented.
- Recommendations or suggestions for future projects.

PAYMENT FOR TEMPORARY TRAFFIC CONTROL

ODOT currently provides TTC device pay items that conform to MUTCD requirements and standard ODOT specifications. Special provisions may use either method-based or performance-based specifications, depending on how TTC activities are measured, evaluated and paid for, as well as the specific scope and complexity of the project. In alignment with Subpart K, TTC and work zone safety features must be paid for through appropriate bid items rather than being treated as incidental work. The following table identifies potential new pay items that could be incorporated into future contracts to support enhanced temporary traffic control activities and improved work zone safety compliance.

Item Name	Unit	Purpose/Description	Pay Item Notes
Automated Flagger Assistance Device (AFAD)	Day	Reduces worker exposure by automating flagging operations.	Includes setup, operation, and maintenance.
Intrusion Alarms	Day	Alerts workers of vehicles entering a restricted area unexpectedly.	Includes set-up and maintenance.
Off-Peak Work Hour Operations	Hour	Payment adjustment for work conducted during reduced volume times.	Supplemental pay item linked to approved schedule.
Temporary ADA-Compliant Walkway	LF	Ensures accessible pedestrian routes during construction.	Includes construction and maintenance.
Temporary Bicycle Detour	LF	Maintains safe passage for cyclists adjacent to or through work zones.	Includes marking, signage, and barrier.
Temporary Pedestrian Barrier/Channelizer	LF	Provides physical separation for pedestrians from work or traffic.	Includes installation, maintenance, and removal
Temporary Pedestrian Signal	Day	Provides controlled crossing for pedestrians during work zone operations.	Includes setup, programming, maintenance, and removal.
TTC Device Maintenance and Inspection	LS	Regular inspection and repair of all temporary traffic control devices.	Based on the duration of the project.

Item Name	Unit	Purpose/Description	Pay Item Notes
Variable Speed Limit Sign	Day	A speed limit sign that can be programmed to display different speed limits at different times.	Includes setup, programming, maintenance, and removal.
Work Zone Safety Monitoring System	Day	Data analysis reports on speeds and incursions from cameras, radars, and alarms.	Includes data reporting. Equipment is on the respective pay items.
Work Zone Safety and Mobility Plan	LS	Preparation and execution of a work zone safety plan to meet Subpart K requirements.	Includes analysis, documentation, and implementation.
Work Zone Service Patrol	Day	Trained personnel to remove disabled vehicles, manage minor incidents, and assist drivers.	Includes all equipment and personnel pay.

MAINTENANCE OF TEMPORARY TRAFFIC CONTROL DEVICES

ODOT's *Work Zone Review Guide*, published in 2025, provides a systematic, performance-based framework for evaluating the condition, functionality and effectiveness of TTC devices and work zone safety features used on Oklahoma Highway projects. In alignment with Subpart K, the guide supports ODOT's responsibility to monitor, assess and document work zone safety and mobility throughout construction. It establishes a consistent statewide process for routine inspections, identification of deficiencies, verification of MUTCD compliance and documentation of corrective actions. The guide ensures that ODOT project personnel, inspectors and contractors continually evaluate whether TTC elements are in acceptable condition and serving their intended function to reduce crash risk, maintain mobility and protect workers and the traveling public.

The Guide's evaluation criteria reflect nationally recognized best practices, as outlined in the American Traffic Safety Services Association's (ATTSA) Quality Guidelines for Temporary Traffic Control Devices and Features, emphasizing device performance, visibility, retro-reflectivity, proper placement, and work zone operational effectiveness. Individual TTC elements such as signs, channelizing devices, temporary barriers, impact attenuators, arrow boards, portable changeable message sign (PCMS) units and pedestrian accommodations are assessed not only for physical conditions but for functional performance, consistency with the project's TMP or TTCP and their contribution to the overall safety envelope of the work zone. The Guide incorporates ATTSA's quality categories by identifying whether devices "Pass,", "Need Improvement," or "Fail" focusing on aspects such as nighttime visibility, stability, conspicuity and structural integrity.

The *Work Zone Review Guide* reinforces ODOT's obligation to re-evaluate work zone conditions throughout the project lifecycle, document observed issues and promptly implement corrective actions. Taken together, the guide strengthens ODOT's Subpart K compliance by ensuring that TTC features and work zone strategies are properly installed, maintained, monitored and adapted as field conditions change, while promoting a uniform, high-quality standard of work zone operations that aligns with ATTSA's national guidance.

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APPENDIX A: WORK ZONE IMPACT CHECKLIST

Work Zone Impact Checklist

Project ID:		JP:	
District:		Residency:	
City:		County:	
Primary Hwy / Rd:		Secondary Hwy / Rd:	
Traffic Contractor:		Version Number:	

Checklist Objectives

- Determine if this project meets any one (1) of the work zone impact criteria.
- Determine if the checklists on positive protection devices, exposure control methods, work zone entry/exit methods, and other control measures shall be filled out.

Checklist Usage Notes

- Only edit cells highlighted in blue.
- This checklist is designed to be completed at each project phase.
- If the answers to the checklist change between project phases, document the reasoning in the comment section on Page 2. Examples of when the checklist answers may change are on Page 2 of this checklist.
- Click on the checkbox if the work zone impact criteria applies to the project.

Date Completed:								
	Project Stage							
	Design			Pre-Construction	Construction			
Work Zone Impact Criteria:	60%	90%	100%		Phase 1	Phase 2	Phase 3	Phase 4
High traffic speeds	☐	☐	☐	☐	☐	☐	☐	☐
Projects with no means of escape	☐	☐	☐	☐	☐	☐	☐	☐
Proximity to traffic	☐	☐	☐	☐	☐	☐	☐	☐
Long duration work zones	☐	☐	☐	☐	☐	☐	☐	☐
Drop-offs remaining in place overnight	☐	☐	☐	☐	☐	☐	☐	☐
Unfinished bridge decks remaining in place overnight	☐	☐	☐	☐	☐	☐	☐	☐
Stored equipment remaining in place overnight	☐	☐	☐	☐	☐	☐	☐	☐
Bridge piers remaining in place overnight	☐	☐	☐	☐	☐	☐	☐	☐
Overhead sign supports remaining in place overnight	☐	☐	☐	☐	☐	☐	☐	☐
Temporary shoring locations remaining in place overnight	☐	☐	☐	☐	☐	☐	☐	☐
Other roadside hazards remaining in place overnight	☐	☐	☐	☐	☐	☐	☐	☐

Work Zone Impact Checklist

Project ID:		JP:	
District:		Residency:	
City:		County:	
Primary Hwy / Rd:		Secondary Hwy / Rd:	
Traffic Contractor:		Version Number:	

The project meets at least one (1) of the work zone impact criteria and therefore the checklists on positive protection devices, exposure control methods, work zone entry/exit methods, and other control measures shall be filled out:

Yes	☐
No	☐

Comments:	

Checklist Revisions

Examples that may require revisions to the checklist include:

- Extended duration of temporary full roadway closures into weekday or weekend peak traffic hours (example - taking an unanticipated weekend full freeway closure to erect bridge girders or to trench a culvert across the freeway).
- Additional road closure, or additional ramp closure that adds more than 15 minutes of delay above typical travel time.
- Additional closures that affect freight movement.
- Changes in scope or intent of work, including work limits, work hours and time of year.
- Construction stage changes that affect roadway geometry, lateral clearance, design speed, vertical clearance, lane width and roadway closures.
- Both positive and negative lessons learned that impact safety, traffic flow and project delivery time.
- Revised detour routes that are an increase in distance and travel time for motorists compared to the original approved detour.

APPENDIX B: POSITIVE PROTECTION DEVICES CHECKLIST

Positive Protection Devices Checklist

Project ID:		JP:	
District:		Residency:	
City:		County:	
Primary Hwy / Rd:		Secondary Hwy / Rd:	
Traffic Contractor:		Version Number:	

Checklist Objectives

- Ensure positive protection devices are being utilized on every project that meets the work zone impact criteria.
- Identify the specific positive protection devices that are being used for this project.

Checklist Usage Notes

- Only edit cells highlighted in blue.
- This checklist is designed to be completed at each project phase.
- If the answers to the checklist change between project phases, document the reasoning in the comment section on Page 2. Examples of when the checklist answers may change are on Page 2 of this checklist.
- Click on the checkbox if the positive protection device is being used on this project.

Work Zone Impact Checklist has been completed:	
Yes	☐
No	☐

	Project Stage							
	Design			Pre-Construction	Construction			
Positive Protection Devices used:	60%	90%	100%		Phase 1	Phase 2	Phase 3	Phase 4
Date Completed:								
Ballast filled traffic barriers	☐	☐	☐	☐	☐	☐	☐	☐
Crashworthy barrier end treatments	☐	☐	☐	☐	☐	☐	☐	☐
Portable concrete traffic barrier	☐	☐	☐	☐	☐	☐	☐	☐
Moveable concrete barriers	☐	☐	☐	☐	☐	☐	☐	☐
Shadow vehicles (with or without attenuator)	☐	☐	☐	☐	☐	☐	☐	☐
Steel barriers	☐	☐	☐	☐	☐	☐	☐	☐
Treatment of pavement drop-offs	☐	☐	☐	☐	☐	☐	☐	☐
Vehicle arresting systems	☐	☐	☐	☐	☐	☐	☐	☐
Other (list): _____	☐	☐	☐	☐	☐	☐	☐	☐

Comments:	

Positive Protection Devices Checklist

Project ID:		JP:	
District:		Residency:	
City:		County:	
Primary Hwy / Rd:		Secondary Hwy / Rd:	
Traffic Contractor:		Version Number:	

Checklist Revisions

Examples that may require revisions to the checklist include:

- Extended duration of temporary full roadway closures into weekday or weekend peak traffic hours (example - taking an unanticipated weekend full freeway closure to erect bridge girders or to trench a culvert across the freeway).
- Additional road closure, or additional ramp closure that adds more than 15 minutes of delay above typical travel time.
- Additional closures that affect freight movement.
- Changes in scope or intent of work, including work limits, work hours and time of year.
- Construction stage changes that affect roadway geometry, lateral clearance, design speed, vertical clearance, lane width and roadway closures.
- Both positive and negative lessons learned that impact safety, traffic flow and project delivery time.
- Revised detour routes that are an increase in distance and travel time for motorists compared to the original approved detour.

APPENDIX C: EXPOSURE CONTROL METHODS CHECKLIST

Exposure Control Methods Checklist

Project ID:		JP:	
District:		Residency:	
City:		County:	
Primary Hwy / Rd:		Secondary Hwy / Rd:	
Traffic Contractor:		Version Number:	

Checklist Objectives

- Ensure exposure control methods are being utilized on every project that meets the work zone impact criteria.
- Identify the specific exposure control methods that are being used for this project.

Checklist Usage Notes

- Only edit cells highlighted in blue.
- This checklist is designed to be completed at each project phase.
- If the answers to the checklist change between project phases, document the reasoning in the comment section on Page 2. Examples of when the checklist answers may change are on Page 2 of this checklist.
- Click on the checkbox if the exposure control method is being used on this project.

Work Zone Impact Checklist has been completed:	
Yes	☐
No	☐

Date Completed:								
	Project Stage							
	Design			Pre-Construction	Construction			
Exposure control measures used:	60%	90%	100%		Phase 1	Phase 2	Phase 3	Phase 4
Accelerated construction techniques: • Precast concrete elements • High early-strength concrete • Self-propelled modular transports • Hit in-place asphalt recycling	☐	☐	☐	☐	☐	☐	☐	☐
Alternative Project Delivery: • Liquidated damages • Design-build contracts • Cost+time bidding • Incentives/disincentives • Lane Rental	☐	☐	☐	☐	☐	☐	☐	☐
Full or partial detours or diversions	☐	☐	☐	☐	☐	☐	☐	☐
Median crossovers	☐	☐	☐	☐	☐	☐	☐	☐
Protection of work zone setup and removal operations using rolling roadblocks	☐	☐	☐	☐	☐	☐	☐	☐

Exposure Control Methods Checklist

Project ID:		JP:	
District:		Residency:	
City:		County:	
Primary Hwy / Rd:		Secondary Hwy / Rd:	
Traffic Contractor:		Version Number:	

Date Completed:								
	Project Stage							
	Design			Pre-Construction	Construction			
Exposure control measures used:	60%	90%	100%		Phase 1	Phase 2	Phase 3	Phase 4
Ramp closures	☐	☐	☐	☐	☐	☐	☐	☐
Removal of hazards from clear zone	☐	☐	☐	☐	☐	☐	☐	☐
Road closures	☐	☐	☐	☐	☐	☐	☐	☐
Temporary ADA-compliant access	☐	☐	☐	☐	☐	☐	☐	☐
Temporary bicycle detour	☐	☐	☐	☐	☐	☐	☐	☐
Temporary pedestrian barrier/channelizer	☐	☐	☐	☐	☐	☐	☐	☐
Temporary pedestrian signals	☐	☐	☐	☐	☐	☐	☐	☐
Work during off-peak hours (i.e. night work, weekend work)	☐	☐	☐	☐	☐	☐	☐	☐
Work hour restrictions	☐	☐	☐	☐	☐	☐	☐	☐
Other (list): _____	☐	☐	☐	☐	☐	☐	☐	☐

Comments:	

Checklist Revisions

Examples that may require revisions to the checklist include:

- Extended duration of temporary full roadway closures into weekday or weekend peak traffic hours (example - taking an unanticipated weekend full freeway closure to erect bridge girders or to trench a culvert across the freeway).
- Additional road closure, or additional ramp closure that adds more than 15 minutes of delay above typical travel time.
- Additional closures that affect freight movement.
- Changes in scope or intent of work, including work limits, work hours and time of year.
- Construction stage changes that affect roadway geometry, lateral clearance, design speed, vertical clearance, lane width and roadway closures.
- Both positive and negative lessons learned that impact safety, traffic flow and project delivery time.
- Revised detour routes that are an increase in distance and travel time for motorists compared to the original approved detour.

APPENDIX D: WORK ZONE ENTRY/EXIT METHODS CHECKLIST

Work Zone Entry/Exit Methods Checklist

Project ID:		JP:	
District:		Residency:	
City:		County:	
Primary Hwy / Rd:		Secondary Hwy / Rd:	
Traffic Contractor:		Version Number:	

Checklist Objectives

- Ensure work zone entry/exit methods are being utilized on every project that meets the work zone impact criteria.
- Identify the specific work zone entry/exit methods that are being used for this project.

Checklist Usage Notes

- Only edit cells highlighted in blue.
- This checklist is designed to be completed at each project phase.
- If the answers to the checklist change between project phases, document the reasoning in the comment section on Page 2. Examples of when the checklist answers may change are on Page 2 of this checklist.
- Click on the checkbox if the work zone entry/exit method is being used on this project.

Work Zone Impact Checklist has been completed:	
Yes	☐
No	☐

Date Completed:								
	Project Stage							
	Design			Pre-Construction	Construction			
Measures used to address entry/exit of work vehicles:	60%	90%	100%		Phase 1	Phase 2	Phase 3	Phase 4
Acceleration and deceleration lanes	☐	☐	☐	☐	☐	☐	☐	☐
Automated flagger assistance devices	☐	☐	☐	☐	☐	☐	☐	☐
Breaks in temporary precast concrete barrier wall	☐	☐	☐	☐	☐	☐	☐	☐
Changeable message signs	☐	☐	☐	☐	☐	☐	☐	☐
Pilot vehicle	☐	☐	☐	☐	☐	☐	☐	☐
Reduced speed in work zones	☐	☐	☐	☐	☐	☐	☐	☐
Static signing	☐	☐	☐	☐	☐	☐	☐	☐
Trained flaggers and spotters	☐	☐	☐	☐	☐	☐	☐	☐
Other (list): _____	☐	☐	☐	☐	☐	☐	☐	☐

Comments:	

Work Zone Entry/Exit Methods Checklist

Project ID:		JP:	
District:		Residency:	
City:		County:	
Primary Hwy / Rd:		Secondary Hwy / Rd:	
Traffic Contractor:		Version Number:	

Checklist Revisions

Examples that may require revisions to the checklist include:

- Extended duration of temporary full roadway closures into weekday or weekend peak traffic hours (example - taking an unanticipated weekend full freeway closure to erect bridge girders or to trench a culvert across the freeway).
- Additional road closure, or additional ramp closure that adds more than 15 minutes of delay above typical travel time.
- Additional closures that affect freight movement.
- Changes in scope or intent of work, including work limits, work hours and time of year.
- Construction stage changes that affect roadway geometry, lateral clearance, design speed, vertical clearance, lane width and roadway closures.
- Both positive and negative lessons learned that impact safety, traffic flow and project delivery time.
- Revised detour routes that are an increase in distance and travel time for motorists compared to the original approved detour.

APPENDIX E: OTHER TRAFFIC CONTROL MEASURES CHECKLIST

Other Traffic Control Measures Checklist

Project ID:		JP:	
District:		Residency:	
City:		County:	
Primary Hwy / Rd:		Secondary Hwy / Rd:	
Traffic Contractor:		Version Number:	

Checklist Objectives

- Ensure traffic control measures are being utilized on every project that meets the work zone impact criteria.
- Identify the specific other traffic control measures that are being used for this project.

Checklist Usage Notes

- Only edit cells highlighted in blue.
- This checklist is designed to be completed at each project phase.
- If the answers to the checklist change between project phases, document the reasoning in the comment section on Page 3. Examples of when the checklist answers may change are on Page 3 of this checklist.
- Click on the checkbox if the other traffic control measure is being used on this project.

Work Zone Impact Checklist has been completed:	
Yes	☐
No	☐

Use of traffic control measures to minimize exposure and/or crashes:	
Yes	☐
No	☐

Date Completed:								
	Project Stage							
	Design			Pre-Construction	Construction			
Traffic control measures used:	60%	90%	100%		Phase 1	Phase 2	Phase 3	Phase 4
Acceleration and deceleration lanes	☐	☐	☐	☐	☐	☐	☐	☐
Arrow panels	☐	☐	☐	☐	☐	☐	☐	☐
Automated flagger assistance devices	☐	☐	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐	☐	☐
Channelizing devices	☐	☐	☐	☐	☐	☐	☐	☐
Changeable message signs	☐	☐	☐	☐	☐	☐	☐	☐
Construction pavement markings	☐	☐	☐	☐	☐	☐	☐	☐
Drone radar	☐	☐	☐	☐	☐	☐	☐	☐
Dynamic speed message signs	☐	☐	☐	☐	☐	☐	☐	☐
Effective, credible signing	☐	☐	☐	☐	☐	☐	☐	☐
Enhanced flagger station setups	☐	☐	☐	☐	☐	☐	☐	☐
Enhancer worker visibility	☐	☐	☐	☐	☐	☐	☐	☐

Other Traffic Control Measures Checklist

Project ID:		JP:	
District:		Residency:	
City:		County:	
Primary Hwy / Rd:		Secondary Hwy / Rd:	
Traffic Contractor:		Version Number:	

Date Completed:								
	Project Stage							
	Design			Pre-Construction	Construction			
Traffic control measures used:	60%	90%	100%		Phase 1	Phase 2	Phase 3	Phase 4
High-quality work zone pavement markings and removal of misleading markings	☐	☐	☐	☐	☐	☐	☐	☐
Increased penalties for driving violations	☐	☐	☐	☐	☐	☐	☐	☐
Intelligent Transportation Systems (ITS) and other advanced technology solutions	☐	☐	☐	☐	☐	☐	☐	☐
Intrusion alarms	☐	☐	☐	☐	☐	☐	☐	☐
Longitudinal and lateral buffer space(s)	☐	☐	☐	☐	☐	☐	☐	☐
Longitudinal channelizing barricades	☐	☐	☐	☐	☐	☐	☐	☐
Pilot vehicles	☐	☐	☐	☐	☐	☐	☐	☐
Protection or shadow vehicles (including shadow vehicle with attenuator)	☐	☐	☐	☐	☐	☐	☐	☐
Public information and traveler information	☐	☐	☐	☐	☐	☐	☐	☐
Rumble strips (including temporary rumble strips)	☐	☐	☐	☐	☐	☐	☐	☐
Speed limit restrictions	☐	☐	☐	☐	☐	☐	☐	☐
Speed safety cameras (where permitted by State/local laws)	☐	☐	☐	☐	☐	☐	☐	☐
Temporary ADA-compliant access	☐	☐	☐	☐	☐	☐	☐	☐
Temporary bicycle detour	☐	☐	☐	☐	☐	☐	☐	☐
Temporary or portable traffic signals	☐	☐	☐	☐	☐	☐	☐	☐
Temporary pedestrian signals	☐	☐	☐	☐	☐	☐	☐	☐
Warning flags and lights	☐	☐	☐	☐	☐	☐	☐	☐
Worker and work vehicle/equipment visibility	☐	☐	☐	☐	☐	☐	☐	☐

Other Traffic Control Measures Checklist

Project ID:		JP:	
District:		Residency:	
City:		County:	
Primary Hwy / Rd:		Secondary Hwy / Rd:	
Traffic Contractor:		Version Number:	

Date Completed:								
	Project Stage							
	Design			Pre-Construction	Construction			
Traffic control measures used:	60%	90%	100%		Phase 1	Phase 2	Phase 3	Phase 4
Worker training	☐	☐	☐	☐	☐	☐	☐	☐
Work zone safety monitoring system	☐	☐	☐	☐	☐	☐	☐	☐
Work zone service patrol	☐	☐	☐	☐	☐	☐	☐	☐
Other (list): _____	☐	☐	☐	☐	☐	☐	☐	☐

Comments:	

Checklist Revisions

Examples that may require revisions to the checklist include:

- Extended duration of temporary full roadway closures into weekday or weekend peak traffic hours (example - taking an unanticipated weekend full freeway closure to erect bridge girders or to trench a culvert across the freeway).
- Additional road closure, or additional ramp closure that adds more than 15 minutes of delay above typical travel time.
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- Changes in scope or intent of work, including work limits, work hours and time of year.
- Construction stage changes that affect roadway geometry, lateral clearance, design speed, vertical clearance, lane width and roadway closures.
- Both positive and negative lessons learned that impact safety, traffic flow and project delivery time.
- Revised detour routes that are an increase in distance and travel time for motorists compared to the original approved detour.

APPENDIX F: POST-CONSTRUCTION PROJECT EVALUATION

Post Construction Evaluation

Project ID:		JP:	
District:		Residency:	
City:		County:	
Primary Hwy / Rd:		Secondary Hwy / Rd:	
Traffic Contractor:		Version Number:	

Evaluation Objectives

- Determine how effective the applied strategies were in promoting the safety and mobility of a work zone.

Evaluation Usage Notes

- Only edit cells highlighted in blue.
- Provide a brief , but descriptive response for each of the areas.

Area	Response
Reflect on the usefulness of the TMP.	
Identify changes that were made to the TMP, why changes were made, and how successful those changes were.	
Average delay time, queue, etc., during construction.	
Type of crashes/incidents that occurred during construction, and how they were resolved.	
Highlight the areas of the TMP that were successfully implemented.	
Recommendations or suggestions for future projects.	