Washington State Department of Transportation

Memorandum

November 3, 2025

TO: WSDOT Traffic Engineers
WSDOT Project Development Engineers
WSDOT Region Construction Engineers
WSDOT Project Engineers

FROM: Mark Gaines, State Design Engineer
Development Division Director

SUBJECT: Project Delivery Memo #25-03 – Design Manual 1010: Work Zone Safety and Mobility Updates

Purpose

The purpose of this memo is to align Washington State Department of Transportation (WSDOT) Design Manual policy for Work Zone Traffic Control with revised federal laws, national guidance, and state laws/rules.

Background

United States Department of Transportation, Federal Highway Administration adopted new Code of Federal Regulations (CFRs). Specifically, 23 CFR 630 was amended to obligate the use of positive protection devices as part of work zone traffic control in certain circumstances and take action to ensure this policy is implemented at the end of 2025.

The Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) is published by the Federal Highway Administration (FHWA) as the national standard for all highways open to public travel. FHWA recently published the MUTCD 11th Edition. Since that action, WSDOT worked with local agencies to amend and adopt the MUTCD 11th Edition for Washington State highways via revised Washington Administrative Code (WAC).

To ensure the Department is aligned with the changes outlined above and other necessary updates related to work zones, Design Manual Chapter 1010 is being updated.

Direction

For all projects advertised for construction after December 31, 2025, the following sections of Design Manual Chapter 1010 are revised to read as follows:

1010.04(1) Key Considerations

The following list of actions and issues need to be addressed per WSDOT's work zone policy and federal regulations and are key to the successful development of a project's TMP:

- Hold a Work Zone Design Strategy Meeting during Scoping. Afterwards, create the Work Zone Design Strategy Statement and submit it to the Region Transportation Operations Office for acceptance.
- Integrate work zone impacts strategies during Scoping and early in Project Development to develop an accurate scoping estimate and integrate project constructability, work efficiency, and cost efficiency.
- Designers need to possess a good understanding of project constructability (work methods, needed work area, and reasonable work durations to complete the work). Contact the Construction Project Engineering Offices when making decisions on assessing and addressing constructability impacts.
- Designers need to possess a strong understanding of WZTC strategies. Contact the Region Transportation Operations Office to discuss WZTC strategies and obtain preliminary closure hours used to develop traffic control plans, determine project duration, and estimate project costs.
- Designers need to circle back with Construction to assess the project's constructability with the WZTC strategies and preliminary closure hours. This may be an iterative process involving both Construction, the Region Transportation Operations Office, and others as appropriate to arrive to the final WZTC strategies and project's permitted closures and closure hours.
- Identify work zone safety and mobility impacts accounting for all needed work areas, operations, and possible staging areas. Implement appropriate safety strategies based on Work Zone Safety Management in *Traffic Manual* Chapter 5. Address traffic impacts extending beyond the project limits and impacting other roads and consider seasonal/special event/business impacts. The Region Transportation Operations Office can help determine an impact assessment via work zone traffic analysis and develop mitigation strategies.
- Continue developing the Transportation Management Plan throughout Design, refer to the TMP Checklist in Exhibit 1010-2 to help identify and organize TMP components.
- Take work zone training to better understand requirements, standard practices, and expectations including the legally adopted *Manual on Uniform Traffic Control Devices* (MUTCD) with Washington State modifications per WAC 468-95 used to develop adequate traffic control plans.
- Approach work zone design from the road user's perspective. Except when required, consider positive protection devices when practical. Use established design criteria in work zone roadway and roadside design. A TMP will justify temporary design element modifications; a Design Analysis is not required.
- Address work vehicle ingress and egress to each work area.
- Consider impacts to freight based on Commercial Vehicle Considerations in *Traffic Manual* Chapter 5.
- Consider impacts to transit operations and impacts to pedestrian/bicycle access to transit facilities.
- Accommodate pedestrian access (including ADA and PROWAG requirements) and bicycle access through or around the work zone.
- Consider school, hospital, emergency services, and postal delivery impacts.

- Consider maintenance issues and needs through the duration of the project.
- Consider law enforcement assistance and enforcement.

1010.04(3) Transportation Management Plan Strategies

With a completed impact assessment, strategy and mitigation development can begin. There are often several methods available and engineering judgment is used to select the best option. Work closely with bridge, construction, maintenance, and transportation operations office personnel. It is critical to understand the extent of mobility impacts and needed mitigations versus gains in safety for workers and the traveling public, constructability benefits (quality of product and time savings), and cost savings. High short-term impacts (roadway closures or weekend-duration lane closures) may have substantially less overall adverse impacts while allowing Contractors to complete a substantial amount of work versus low impact strategies over longer durations that substantially limit the Contractor's available working hours.

Public's acceptance of mobility impacts has a limit, obtain region executive acceptance for strategies with significant impacts and delays. Selecting a strategy is often a compromise and involves many engineering and non-engineering factors. Do not assume strategies from similar past projects will work again, as each project is unique and traffic volumes change. Always look for other options or innovative approaches; many projects have unique features that can be turned to an advantage if carefully considered.

1010.04(4)(a) Long-Term Stationary Work Zone

Work occupying a location continuously for four days or more. Construction signs may be larger and typically post or barrier-mounted but tripod-mounted is allowed. All conflicting signs, including overhead signs, must be modified, covered, or removed. Larger and more stable channelizing devices should be used outside the work area, offset 2' from traffic to reduce movement. Temporary barriers, pavement markings, illumination, and other considerations may be required. Staged traffic plans including temporary alignment/channelizing are required for this type of work.

1010.04(4)(d) Short-Duration Work Zone

Work occupying a location for up to one hour. Short-duration work zones usually apply to maintenance or some utility work and are not used on construction projects. See Work Zone Traffic Control Guidelines for Maintenance Operations, M54-44 for more information.

1010.04(4)(e) Mobile Work Zone

This is work that moves intermittently or continuously where workers are inside vehicles, except for a few minutes infrequently. Mobile operations include activities such as sweeping, paint striping, and raised pavement marker installation. Truck-mounted attenuators with truck-mounted Portable Changeable Message Signs (PCMS) or warning signs provide advance warning and shadow and protect the work vehicles with flashing lights as they move along at low speeds with infrequent stopping. Channelizing devices are typically not used for mobile work zones, except for pavement marking operations where channelizing devices may be installed along wet paint/hot-applied thermoplastic pavement markings until dry.

Mobile closures are not appropriate for work operations such as pavement milling and paving activities where workers are on foot for significant durations. Instead, stationary WZTC closures are required.

1010.04(8) Pedestrian and Bicycle Accommodations

Many public highways and streets accommodate pedestrians and bicyclists. Unless accepted otherwise by Region Transportation Operations, legal access must be maintained through or around the work zones during construction if existing pedestrian and/or bicycle facilities or legal access exists unless accepted otherwise by

Region Transportation Operations. In general, the longer the work duration the more enhanced the WZTC should be.

For closures of four days or longer of Active Transportation (AT) facilities, contact the Region Active Transportation Coordinator to determine needed mitigation such as a signed detour, alternative route, or information signage.

Due to the restrictive and temporary nature of work zones and practicality, it is understood different modes of transportation need to work together to negotiate limited space available when combined in the same travel path.

Roadway surfaces that are reasonably smooth provide for greater AT accessibility.

Conditions such as loose gravel, uneven surfaces, milled pavement, or asphalt tack coats restrict access and may increase the potential for falling or tripping that should be avoided the extent feasible. When present, use warning signs to indicate the conditions.

For more information regarding pedestrian laws & safety, see Pedestrian laws & safety | WSDOT (wa.gov)

For more information regarding bicycle laws & safety, see Bicyclist laws & safety | WSDOT (wa.gov). For a list of Washington state highways permanently closed to bicycles, see WSDOT - Permanent Bike Restrictions.

1010.04(8)(a) Pedestrian Accommodation Strategies

When existing pedestrian access routes are closed, design and construct the temporary pedestrian access route to be detectable and to meet or exceed the existing level of accessibility to the maximum extent feasible meeting PROWAG accessibility criteria per R303: Alternative Pedestrian Access Routes. Consider the visually impaired and those with mobility limitations (ex., wheelchair and other assistive mobility devices users). Consider the impacts to transit stops for pedestrians. Covered walkways with vertical clearance of at least 80-inches are to be provided where there is a potential for falling objects.

Pedestrian accommodation strategies included but not limited to:

- Stop work operations and escort pedestrians through work area.
- Flaggers, when controlling traffic, may hold vehicles to allow pedestrians to cross the roadway.
- Provide free pedestrian shuttle through or around work area at 15-minute intervals. During off-peak or when pedestrian volumes are low, provide an on-demand shuttle via phone box.
- Extend pedestrian channelizing devices across entire sidewalk with SIDEWALK CLOSED sign attached. At strategic locations an audible information device shall be attached that plays prerecorded voice messages informing visually- impaired pedestrians of the sidewalk closure and detour route -that avoid backtracking and out of direction travel.
- Close sidewalk and provide signed detour onto opposite sidewalk or parallel pathway via existing curb ramps or infrastructure. For sidewalk closures away from existing marked crosswalks, provide SIDEWALK CLOSED AHEAD, CROSS HERE notification at marked crosswalk to eliminate the need for pedestrians to backtrack.
- For sidewalk closure detoured onto the adjacent roadway (via closed lane or parking stalls), use either a constructed or modular pedestrian curb ramp. Longitudinal grades are typically 12:1 but may be steeper in certain circumstances per PROWAG. Handrailing on ramps are required for ramps rising greater than 6-inches or longer than 72" in length or part of a pathway requiring handrails (bridge). Only curb ramps leading into traffic are equipped with truncated domes.
- For long-term closures, use pedestrian channelizing devices to delineate temporary pedestrian pathways. When separating pedestrian and vehicular traffic on roadways 40 mph or less, water-filled barriers may be used as a channelizing device. On roadways 45 mph or higher, temporary barrier is recommended to separate pedestrian and vehicular traffic on roadways.

Provide temporary pedestrian push-buttons at existing traffic signal crossings when existing push-buttons are inaccessible or at temporary traffic signals when applicable.

1010.04(8)(b) Bicyclist Accommodation Strategies

Information regarding bicycle volume, travel patterns, features, and connectivity can be gathered by contacting local bike clubs and local agencies. Coordination with local bike clubs increases the likelihood that their members are notified of work zone impacts, and it helps maintain good public relations. Region Transportation Operations and Region Active Transportation Coordinator are resources for bicyclist work zone strategies and detour/alternative route options.

Bicyclist accommodation strategies included but not limited to:

- Stop work operations and escort bicyclists through work area.
- Flaggers, when controlling traffic, may hold vehicles to allow bicyclists to cross roadway at marked crosswalks.
- Bicycles may be combined with vehicular traffic when alternating traffic is controlled via flagger, AFAD, or temporary signal on all roadways regardless of the posted speed limit.
- Provide a 4-foot minimum temporary bike lane either using channelizing devices or existing paved shoulder. For long-duration projects, if 4 feet of useable shoulder is not available between rumble strip and edge of paved shoulder then remove and fill existing rumble strip. Review existing drain grates for bicycle compatibility and address if needed.
- On highways posted 30 mph or less without separated bicycle lanes, a shared vehicle-bicycle lane may be used with a R9-20 sign (Bicycles ALLOWED USE OF FULL LANE).
- On highways posted 35 mph or higher without separated bicycle lanes, a shared-bicycle lane may be used with additional W11-1501 (Bicycles ON ROAD) warning signs placed in advance and along the route every ½ ± mile. This strategy should be limited to right shoulder closures, detours, or alternative routes with low bicycle volumes unless it is impractical to provide alternative bicycle accommodations.
- When existing separated bicycle lanes are closed during construction, bicycles are to be detoured onto the adjacent sidewalk. If that sidewalk is also closed, then a combined bicycle-pedestrian detour route, free shuttle, or another reasonable accommodation is to be provided.

Shared bicycle-vehicle lanes are prohibited on freeways and multilane roadways 45 mph and higher. On these routes, bicyclists will need either a 4-foot minimum shoulder, detour/alternate route (via sidewalk, shared path, or another roadway), shuttle, or some other reasonable accommodation through or around the work zone.

1010.04(9)(b) Corridor/Network Management

- Implement work zone corridor/network management strategies per Traffic Manual Chapter 5.
- Roadway improvements on detour and/or alternative routes (signal retiming/coordination improvements, widening, bus pullouts, added guide signage, etc.)
- Deploy traffic control technology such as temporary ramp metering and dynamic lane merging.
- Deploy road user information systems (PCMSs, travel time and congestion information, and integration with third-party trip planning applications).
- Alternate temporary center lane via moveable temporary barrier on temporary reconfigured 3/5-lane multilane roadways (existing 2/4-lanes) with both directions of travel on same side of median.
- Provide a temporary express lane with no access through the project.
- Use Oversize/Superload freight restrictions, provide alternative routes if feasible.

Use heavy-vehicle restrictions and provide alternate routes or lane use restrictions.

1010.04(9)(d) Work Zone Safety Management

- Use temporary barrier on 2+ week work zones to separate workers and road users.
- Use advanced queue mitigation systems for work zone congestion on roadways 45 mph or higher.
- Provide temporary access road with ingress/egress at near interchange ramp terminals on freeways.
- Refer to the Traffic Manual Chapter 5 for additional information, guidance, and approval requirements for speed limit reductions and advisory speeds in work zones. Utilizing radar speed display signs recommended.
- Employ temporary transverse rumbles strips and/or AFADs on highways 45 mph or higher, but consider noise impacts to local residents and businesses.
- Use temporary portable traffic control systems for long duration one-lane, two-way traffic control.
- Provide fences and/or traffic screens to reduce driver distraction.

1010.06(6) Speed Limit Reductions & Advisory Speeds

All work zone speed limit reduction and/or advisory speed requests shall be submitted through Region Transportation Operations for review and approval per *Traffic Manual Chapter 5)*, which includes required documentation and notification templates. Include approval documents in the Project File.

Designers shall collaborate with Region Transportation Operations and obtain their concurrence early in project development in the Work Zone Designer Strategy Meeting. The length of regulatory speed limit reductions shall be minimized to the extent possible, beginning no more than ½ mile prior to the restrictive roadway feature or condition, with the existing speed limit restored within 500 feet afterwards. Drivers tend to reduce their speed only if they perceive a need to do so; thus, the roadway configuration needs to change for drivers to perceive reasons to comply with the lower speed limit.

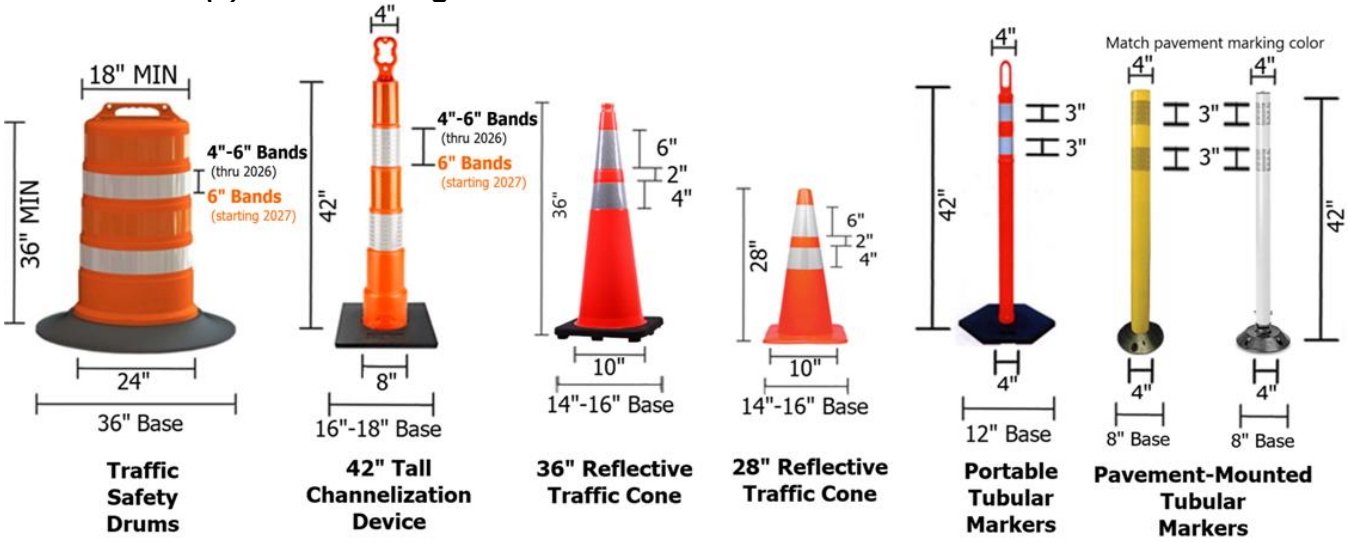
1010.06(8) Oversized and Superload Commercial Vehicles

Commercial Vehicle Services (CVS) issue permits allowing vehicles that exceed the legal width, height, or weight limits on certain routes. If a proposed work zone will reduce roadway width or vertical clearance, or have weight restrictions, adequate warning signs and 7 calendar day (up to 30 days if in place continuously for three days or more on major roadways) advance notification to CVS is required as a minimum and included in the Contract Provisions. In the notification, identify the restriction type (length, height, weight, or width) and specify the maximum accommodated size.

When the total roadway width is reduced to less than 16 feet continuously for more than three days on T-1, T-2, or T-3 FGTS Class Freight Corridors, communication with CVS and stakeholders is required (include documentation in the Project File) and include contract provisions that require the Contractor to provide a 30 calendar day advance notice prior to placing the restriction. In addition, provide a designated oversize detour route when practical. Oversized vehicles may arrive unexpectedly in work zones even with warning, restriction, or prohibition signs in place. Some, but not all, oversized loads may overhang the temporary barrier or channelizing devices and encroach on areas where workers are present; assess worker exposure and add additional protective features or active early warning devices if appropriate. The structure design, staging, and falsework openings may need to be reconsidered to accommodate oversized loads passing through these structures without striking them. If vertical clearance is reduced less than 16 feet 6 inches, use advanced height restriction and warning signage (see Low Vertical Clearance in *Traffic Manual* Chapter 2) and Section 1010.06(5). Consider additional bridge strike mitigation measures in cases where an over-height load has the potential to cause significant damage to structures or expose workers to injury.

See Commercial Vehicle Considerations in *Traffic Manual* Chapter 5 for more information.

1010.07(1) Channelizing Devices



Channelizing devices warn and guide road users through the work zone by channelizing traffic away from the work area, pavement drop-offs, or opposing directions of traffic. Channelizing device usage includes:

- On freeways and multilane roadways 45 mph or higher, traffic safety drums are required on lane closure and lane shift tapers and recommended on the tangents. In narrow, restrictive locations (narrow lanes & shoulders) 42-inch tall channelizing device, 36-inch traffic cone, or 28-inch traffic cones may be used. When a single open lane is shifted onto the shoulder, delineate the edge of the shoulder pavement with 28-inch traffic cones during hours of darkness (these 28-inch traffic may remain in place when lanes reopened).
- For one-lane, two-way traffic configurations using 28-inch traffic cones is recommended.
- Portable tubular markers are not a recommended device unless they are being used to separate 40 mph or less traffic and are located near or on existing pavement markings.
- Pavement-mounted tubular markers may be added to supplement long-term temporary pavement markings (such a double yellow centerline for two-lane, two-way traffic) but its color shall match the adjacent lane line.
- Longitudinal channelizing devices are interconnected devices that provide channelizing with no gaps but are not approved positive protection devices.
- Barricades are a channelizing device mostly used to supplement other channelizing devices in traffic control operations involving road and ramp closures. Avoid using barricades to delineate sidewalk closure limits.
- Pedestrian channelizing devices shall be used to delineate sidewalk closure limits and may be used to delineate pedestrian detour routes.

1010.07(2) Construction Signs

Construction signs are used to regulate, warn, or guide road users through a work zone. Class A construction signs remain in place throughout the entire or a major phase of the project and are typically mounted on posts, existing fixed structures, or substantial supports of a semi-permanent nature. Class A signs will be designated as such on the staged traffic plan. Class B construction signs remain in place for durations up to 7 calendar days and

are typically mounted on portable crashworthy sign stands with a minimum mounting height of 1 foot. The minimum height is increased to 5-feet when mounted behind a channelizing device or in urban areas with roadside parking that may obstruct sign visibility. Exceptions to minimum mounting heights must be approved by Region Transportation Operations.

Class B signs may be barrier-mounted. Construction signs need to be placed such that they do not obstruct active transportation facilities.

For Class A construction signs, use "ROAD WORK AHEAD" (W20-1) for projects up to 2.4 miles in length and "ROAD WORK NEXT # MILES (G20-1) on mainline for longer projects, intersecting roadways and ramps can still use W20-1. At end of the project limits, add "END ROAD WORK" (G20-2) with "FOR PROJECT INFORMATION…" (G24-501) stacked beneath. For projects obliterating existing pavement markings on highways, "DO NOT PASS" (R4-1) and "PASS WITH CARE" (R4-2) Class A signs shall mark the passing zones, see *Standard Specification* 2-04.3(6)A. Specify actual diamond-shape sign sizes for Class A signs, not 36"x36" MIN.

Per WAC 468-95-300, the recommended temporary sign spacing is as follows, but may be adjusted to fit:

RECOMMENDED TEMPORARY SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	ALL SPEEDS	1000' ±
HIGHWAYS & ROADS, & STREETS	60-70 MPH	800' ±
	45-55 MPH	500' ±
	35-40 MPH	350' ±
	25-30 MPH	200' ± (2)
(1) IF NECESSARY, SPACING SHOULD BE ADJUSTED (INCREASED OR DECREASED) FOR FIELD CONDITIONS. (2) SPACING IS 100' ± ON URBAN STREETS 25 MPH OR LESS.		

Typical work zone sign size is provided below for regulatory speed limits. For more details, see MUTCD Table 6H-1 and Table 6I-1.

Roadway Description	Diamond-Shape Signs	Speed Limit (R2-1) Signs	Detour Signs
Freeway (Mainline & Ramps)	48"x48"	36"x48"	Generic: 48"x36" Route-Specific: 48"x48"
Highways, 45 mph or higher	48"x48"	Multilane: 36"x48" 30"x36"	
Highways, 40 mph or lower	36"x36" MIN 30"x30" (30 mph or less)	Multilane: 30"x36" 24"x30"	Generic: 30"x24" Route-Specific: 36"x36"
Pedestrian and/or Bicycle Detour Signs: 24"x18"			

When barrier-mounted at locations with a shoulder less than 6 feet, a special 24"x48" rectangular warning sign, black on orange, should be used in lieu of a diamond-shaped warning sign.

Regulatory work zone speed limit signs are always black on white. Do not use the "WORK ZONE" (G20-5aP) plaque above the speed limit sign. When utilizing reduced work zone speed limits, all conflicting existing regulatory speed limit signs shall be removed or temporarily covered.

"FINES DOUBLE" (R2-6aP) below the speed limit sign or a separately mounted "NOTICE TRAFFIC FINES DOUBLE IN WORK ZONES" (I20-301) is optional and are not required to enforce double fine citations.

When a project is accepted for Speed Safety Camera Systems, projects may install "WORK ZONE SPEED LIMIT PHOTO ENFORCED" (I20-302) signs to replace the I20-301s. Additional I20-302 signs are needed at all on-ramps and significant intersecting roadways as determined by Region Transportation Operations.

Use a work zone speed limit reduction ahead sign (W3-5, black on orange) in advance of approved regulatory speed limit reductions of 10 mph or greater with the following temporary sign spacing in advance:

Recommended Speed Reduction Ahead Sign Spacing = Z									
Reduced Speed Limit	Existing Speed Limit (MPH)								
	70	65	60	55	50	45	40	35	30
60	720	390							
55	1000	660	350						
50	1250	910	600	310					
45	1470	1140	820	540	270				
40		1340	1030	740	470	230			
35		1520	1200	920	650	410	200		
30			1360	1070	810	570	350	160	
25				1200	940	700	480	290	120
20					1040	800	590	390	230
W3-5 Sign is Optional for 5 mph speed reductions.									

W3-5

For work zone regulatory speed limit reductions of 20 mph or greater, two separate reductions should be used unless accepted otherwise by Region Transportation Operations.

Work zone advisory speed signs, black on orange, shall be used with warning signs. The advisory speed is based on the design speed of the restrictive feature. Work crew advisory signs have also been created.

W13-1P

W23-5

W23-6

See Chapter 1020 and the *Standard Plans* for signing details. Sign messages, color, configuration, and usage are shown in the MUTCD and the *Sign Fabrication Manual*.

1010.07(6) Portable Temporary Traffic Control Signals

These versatile trailer-mounted portable temporary traffic control signals (temporary signals) that are battery powered, with the ability to be connected to AC power. When used for longer than 4 months, pole-mounted versions are more economical. Temporary signals can be traffic actuated (video/radar), pre-timed, or manually operated. Where this is no line of sight between stop bar locations, add a digital timer delay showing the time remaining to the next green indication. Other additional features include but not limited to pedestrian/bicycle push buttons and emergency vehicle/railroad preemption.

Temporary signals are typically used on highways to alternate traffic in a single lane for extended durations, but versions exist to control multilane approaches at complex intersections. When alternating traffic, it is best to limit distance between temporary signals to 1,500 feet with business accesses or driveways in between controlled by separate single-headed temporary signals. Temporary stop bars and illumination at the stop bars is required. Reduced regulatory work zone speed limit of 25 mph is typically used, but 35 mph may be used if distance between mainline temporary signals exceed 1500 feet. For guidance, contact Region Transportation Operations.

Residential Driveway Temporary Signals (RDTSs) may be used to control residential driveways along highways with alternating one-lane, two-way traffic between the mainline portable temporary traffic control signals. The RDTS consists of one three-section signal face comprising of a steady circular red signal indication below which are mounted two adjacent yellow arrow signal indications with attached NO TURN ON RED (R10-11b) and TURN ONLY IN DIRECTION OF ARROW (IA-23-1P). The RDTS shall be coordinated with the mainline signals such that the driveway vehicles can turn before, within, and after the main roadway traffic platoon with an all-red interval when mainline traffic direction switches.

1010.08 Positive Protection Devices (Rewritten 2025)

Positive protection devices provide enhanced worker and road user protection and include devices such as transportable attenuators, mobile barrier trailer systems, protective vehicles, and temporary barriers (see Chapter 1610) with appropriate impact attenuators or sloped barrier terminals (see Chapter 1620).

Transportable attenuators shall be located in advance of work areas within closures (e.g., shoulder, lane, or roadway closure) for posted speeds of 45 mph or higher unless:

- The work area is otherwise protected by temporary barrier or mobile barrier trailer systems, or
- There is alternating one-lane, two-way traffic control. In this case, protective vehicles may be used in lieu of transportable attenuators.

Protective vehicles should be located in advance of work areas within closures (e.g., shoulder, lane, or roadway closure) adjacent to vehicular traffic with posted speeds 40 mph or lower.

For any given scenario, additional positive protection devices may be utilized.

Temporary barriers are required in the following scenarios, unless Region Traffic accepts otherwise and noted in the TMP:

- Stationary work zones in the same location for two weeks or more with posted speeds 45 mph or higher to separate workers and vehicular traffic.
- Separating opposing two-way traffic for two weeks or more with posted speeds 45 mph and higher if traffic was separated by an existing median or barrier.
- For drop-off protection during widening or excavations (see Standard Specification 2-03.3(1)A).
- When existing traffic barriers or bridge railings need to be removed.
- For mitigation of steeper temporary slopes within design clear zone.
- For bridge falsework protection.
- When equipment or materials remain in the work zone clear zone.
- When newly constructed features within the design clear zone will not have permanent protection until later in the project.
- For temporary signs or light standards are not crashworthy and located within design clear zone.

When existing one-way facilities are reconfigured to two-way traffic, existing bridge rail ends, barriers, guardrails or other objects within the design clear zone shall be protected by either extending guardrail, replacing guardrail

anchors, or using temporary barrier with an appropriate impact attenuator or sloped barrier terminal. For durations of 3 days or less, a transportable attenuator may be used instead.

Positive protection devices shall be considered in other situations that place workers at increased risk from motorized traffic, and where positive protection devices offer the highest potential for increased safety for workers and road users.

1010.09(1) Delineation

Temporary pavement markings are required when permanent pavement markings are obliterated due to construction operations or temporary reconfigurations needed for long-term work zone strategies.
All temporary pavement markings shall be retroreflective and match permanent pavement marking colors.
All conflicting pavement markings are to be completely removed.

Short-duration temporary pavement markings (short-duration markings) are intended to be used up to two months until permanent markings can be installed on paving and BST projects. Short-duration markings consist of one application of paint with glass beads, short duration preformed tape, raised pavement markers, or flexible raised pavement makers (required on BST projects). Short-duration markings are abbreviated patterns. Broken line patterns typically consist of a 4-foot line with a 36-foot gap for paint and tape markings or a grouping of three raised pavement markings at 3-foot spacing with a 34-foot gaps. Contract Provisions may require a 10-foot broken line pattern for short-duration markings as an enhancement. Short-duration traffic arrows, HOV symbols, and other symbols mimic the *Standard Plans* Section M. Edge lines and gore lines are not installed unless otherwise specified in the Contract. When specified, temporary edge lines are either solid lines or raised pavement markers at 5-foot spacing. Specify short duration marking material type in the contract provisions.

Long-duration temporary pavement markings (long-duration markings) consist of two applications of paint with glass beads, long duration preformed tape, raised pavement markers, hot-applied thermoplastic, or cold applied MMA. Pre-formed tape should be used on the final pavement surface to avoid leaving scars when removed. Long-duration markings match the *Standard Plans* Section M and shall be used on long-term staged traffic configurations and projects spanning multiple seasons and/or wintering over. To enhance wet-weather visibility, supplement markings with reflective Type 2 Raised Pavement Markers when wintering over except when wet-reflective preformed markings are used. Long-duration markings need to be detailed in the contract plans for installation and material type.

Lateral clearance markers (OM3 series) are used at the angle points of barriers where they encroach on or otherwise restrict the adjacent shoulder. Temporary impact attenuators shall have OM3-501/502 series delineation signage. Temporary barrier delineation is required for its entire length and shall match the color of the adjacent edge line. Consider specifying linear delineation systems for barrier delineation on roadways 45 mph and higher for enhanced nighttime delineation. Barrier delineation shall match the adjacent edge line color.

Pavement-mounted tubular markers may supplement pavement markings, such as in temporary no passing zones when separating two-way traffic or to separate temporary bicycle lanes but consider needed oversize freight accommodations. Markers shall match the adjacent pavement marking color.

Guideposts may be considered to aid nighttime driving through temporary alignments or diversions. (See Chapter 1030 for delineation requirements.)

1010.12(2) Design Guidance

A Policy on Geometric Design of Highways and Streets (Green Book), AASHTO

Executive Order E 1001, Work Zone Safety and Mobility

wwwi.wsdot.wa.gov/publications/policies/fulltext/1001.pdf

Executive Order E 1033, WSDOT Employee Safety
wwwi.wsdot.wa.gov/publications/policies/fulltext/1033.pdf
Plans Preparation Manual, M 22-31, WSDOT
Standard Plans for Road, Bridge, and Municipal Construction (Standard Plans), M 21-10, WSDOT
Standard Specifications for Road, Bridge, and Municipal Construction (Standard Specifications), M 41-10, WSDOT
Traffic Manual, M 51-02, WSDOT
Work Zone Traffic Control Guidelines, M 54-44, WSDOT

Questions

For questions or information on how to implement this Project Delivery Memo, contact the State Work Zone Engineer at HQworkzone@wsdot.wa.gov or your Assistant State Design Engineer.

MG:fl/jp

cc: Regional Administrators
Assistant Regional Administrators
Assistant State Design Engineers
Assistant State Construction Engineers
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Frank Green - IBR WA Assistant Program Administrator
John H White - Puget Sound Gateway Program Administrator
Lisa Hodgson - I-405/SR 167 Program Administrator
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