

List of Proposed Revisions for Revision # 2 of the Virginia Work Area Protection Manual

Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
1	Cover	Update Revision 2 - March 2019.	Updates pictures and revision date	Replace bottom right photo with a new "Welcome to Virginia, Virginia is for Lovers" sign. Replaced picture of flagger wearing ANSI class 2 garments to one wearing ANSI class 3. Updated Revision number and date.
2	6A.01	Added guidance references to use for addressing the needs and control for pedestrians and bicyclist in a TTC zone: * Work Zone Pedestrian and Bicycle Guidance document * VDOT guidelines for the Installation of Marked Crosswalks * Section 1300 of the Road and Bridge Standards * Part 6 of the MUTCD * Chapter 4 of FHWA's designing sidewalks and Trails for Access Renumber paragraphs after 03	Change associated with ADA requirements	Added new guidance statement for P 03 to provide additional pedestrian and bicyclist document to comply with ADA requirements.
3	6A.01 (13)	* Added guidance references for pedestrian and bicyclist * Deleted reference to 2009 edition of the MUTCD * Deleted "The management of traffic incidents should follow the principles set forth in Chapter 6I"	Change associated with ADA requirements	Change reference to 33.1 in Paragraph 6 to § 33.2-400.
4	6A.02 (05)	VWAPM	Changed to VWAPM and added Virginia to coincide with Road & Bridge Specs.	
5	6A.03 19.	Added other road users to the flagger definition	Flagger may need to control other forms of road users through a TTC zone.	
6	6A.03 24.	To match the MUTCD, added the word "light" to the definition of Limited Access Highway.	Initial WZS revision to match MUTCD.	
7	6A.03 33.	"is" a transverse rumble strip that consists of intermittent, narrow, transverse areas of rough-textured, slightly raised or depressed surface that extend across . . .	SwRO-Salem. Requested that "is" be added to the beginning of the sentence. Accepted. Initial WZS revision to add the use of PTRS.	

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8	6A.03 40.	Queue Management System – a system that warns motorists of potential slowed or stopped traffic. The system can consist of warning signs, queue management vehicles or ITS technology.	Deleted QMV at this time until further research is completed 4/23/2018. Added QMV from January 31, 2017 FAQ document. Renumbered following paragraphs. Added Queue Management Systems to allow for various techniques to management traffic queues.	Added definition for Queue management
9	6A.03	Secondary Crash – a crash which occurs as a result of queued traffic when the roadway capacity is reduced either from a work zone operation or a traffic incident. Secondary crashes which occur outside of the work zone advanced warning area are classified as work zone crashes, regardless if workers are present or not, if the traffic queue occurred due to the presence of the work zone operation. Crashes which occur prior to an incident location are considered Secondary crashes if the traffic queue occurred due to the presence of the incident.	VDOT is raising a greater awareness of reducing exposure to the motorring public to reduce the number of secondary crashes from occurring in work zone queus and incidents.	Added definiton of a secondary crash
10	6A.03	Traffic Queue – the slowing or stoppage of traffic due to the reduction of roadway capacity either due to a work zone operation or from an incident.		Added definition of Traffic Queue
11	6A.03 70.	A certified flagger who alerts and assists motorist through a temporary traffic control zone on low volume (under 500 VDP), low speed (35 MPH or lower) roadways using	CO WZS increased speed limit to coincide with channelizing device requirements.	
12	6A.04 26.	26. PTRS—portable temporary rumble strip	Initial WZS revision on the use of PTRS.	
13	6A.04 46.	46. VWAPM—Virginia Work Area Protection Manual	Changed to VWAPM and added Virginia to coincide with Road & Bridge Specs.	
14	6B.01 (14 C.)	An internal traffic control plan should be submitted and approved by the Engineer identifying the equipment/materials ingress and egress points and parking areas for workers' private vehicles on long-term projects.	Added from January 31, 2017 FAQ document.	

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15	6B.01 15	All temporary traffic control devices shall be removed as soon as practical when they are no longer needed except the Flagger symbol sign shall be removed or covered whenever the flagging operation is suspended. Advance warning signs (including supports) that are no longer appropriate shall be removed from the roadway (including shoulders) at the end of the work shift.1	Removed initial revised statement: The advanced warning signs can be left in place while work is suspended for 30 minutes or less except for the Flagger (W20-1) symbol sign. The Flagger symbol sign shall be removed or covered from road users when the flagger operation is suspended for greater than 30 minutes. Advanced warning signs (including supports) that are no longer appropriate shall be removed from the roadway (including shoulders) at the end of each work shift.	
16	6B.01 15	All temporary traffic control devices shall be removed as soon as practical when they are no longer needed except the Flagger symbol sign...	Deleted the statement: "All temporary traffic control devices shall be removed as soon as practical when they are no longer needed. When work is suspended for periods longer than 30 minutes, advance warning signs (including supports) that are no longer appropriate shall be removed from the roadway (including shoulders). Other inappropriate devices shall be removed from the work area so they are not visible to drivers." And replaced with statement to match the MUTCD closer.	
17	6C.01 03	Added guidance references to use for addressing the needs and control for pedestrain and bicyclist in a TTC zone: <ul style="list-style-type: none"> * Work Zone Pedestrian and Bicycle Guidance document * VDOT guidelines for the Installation of Marked Crosswalks * Section 1300 of the Road and Bridge Standards * Part 6 of the MUTCD * Chapter 4 of FHWA's designing sidewalks and Trails for Access 	Added from January 31, 2017 FAQ document. Renumbered following paragraphs	Add new guidance statement for P 03 to provide additional pedestrain and bicycly document to comply with ADA requirements.
18	6C.04 (02)	On Limited Access Highways and higher volume primaries a portable changeable message sign and a queue management system may be used in addition to other advanced warning devices.2	Changed queue management vehicles to queue management system to allow flexibility in managing queues. Added from January 31, 2017 FAQ document.	

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19	6C.04 (05)	Table 6C-1, Recommended Spacing of Advance Warning Signs	Added "Recommended" to match MUTCD per recommendation by Juan Morales, JM Morales and Associates/ATSSA.	
20	6C.05	Figure 6C-1, Component Parts of a Temporary Traffic Control Zone (District Engineer not yet changed in Word Doc)	CO-TE added PTRS, its support signs, added arrow board, changed Regional to District TE and legends for PTRS and arrow board .	
21	6C.05	Figure 6C-1	11/12/2014, added "paved" per CRO-Richmond. Parsons Brinckerhoff suggested adding on shoulder width requirement to note and "2 Mile Max. to figure". CO WZS agrees to adding 2 mile max work space as note and adding reference to Section 6C.09 to shoulder note.	
22	6C.06 05	These distances should be increased for downgrades and other geometric conditions that affect stopping distance.	Added sentence as recommended by Juan Morales, JM Morales and Associates/ATSSA	
23	Table 6C-2	820 – 850	Initial WZS revision (25 mph distance) with additional distances as recommended by M. Larkin.	
24	6C.07 04	Add "if multiple work crews are active at various locations throughout the 2 mile work zone, a shadow vehicle should be used for each work crew."	Added from January 31, 2017 FAQ document.	Add to guidance state P 04 as last sentence.
25	6C.08 02	02 An END ROAD WORK sign should be used to inform road users that they can resume normal operations as determined by engineering judgment.	Initial WZS revision. Nw Region recommends removing "as determined by engineering judgment". Recommendation not accepted by C.O. WZS, sign is required (by Standard statement in this section, Paragraph 01, refer to Section 6A.03 for additional information).	

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26	6C.08 04	If the entire project is signed for a reduced speed, and an original speed limit sign is not within 1000 feet of the END ROAD WORK (G20-2 (V)) sign, signs depicting the original speed limit shall be erected 500'± past the END ROAD WORK sign. On secondary roads without posted speed limits, an END WORK ZONE SPEED LIMIT (R2-12) sign shall be used in place of erecting an R2-1 sign. If only part of the project is signed for a reduced speed, then the original speed limit shall be posted 500'± past the work area (see TTC-52).	CRO: Requested that statement match TTC-52.1. CO TE Agrees. Initial WZS revision. SwRO-Salem Stated that the March 2014 paragraph was flawed. CO TED agrees and replaced with Note 7 from TTC-52 for clarity. Nw Region recommends using Speed Limit sign to identify the end of the speed reduction instead of "End Work Zone Speed Limit" sign if roadway has a posted speed limit. If the road is unposted then utilize the "End Work Zone Speed Limit" sign. Not accepted by C.O. WZS, revision parallels requirements in TTC-52.	
27	Table 6C-3	Limited Access highways shall use SW=L for the shifting taper.2	CO WZS change the 1/2L minimum to full L for shifting tapers on Limited Access highway because district personnel and field reviews observed tractor trailer tracking when 1/2L has been used. The districts as well as work zone review teams.	
28	Table 6C-4	270 295	Initial WZS revision (correction).	
29	Table 6C-4	1000 feet regardless of the posted speed and SW=L is desired for the shall be used for the shifting taper.2 length with ½L being the minimum.	CO WZS change the 1/2L minimum to full L for shifting tapers on Limited Access highway because district personnel and field reviews observed tractor trailer tracking when 1/2L has been used. The districts as well as work zone review teams.	
30	6C.09 03.	Standard: On roadways with paved shoulders having a width of 8 feet or more, a shoulder taper shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.	Initial WZS revision for clarity.	

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31	6C.09 08	Due to the tracking of tractor trailers, a shifting taper should have a desired length of L on high speed primary roadways with $\frac{1}{2}$ L being the minimum length. All other shifting tapers should have a minimum length of approximately $\frac{1}{2}$ L (see Tables 6C-3 and 6C-4). Field observation should be conducted to verify tie ends of traffic shift are allow positive flow without braking or tracking of tractor trailers in adjacent travel lanes and if necessary adjustments need to be made in the field2..	CO WZS changed add tractor trailer tracking and length of lane shifts on primary roadways, shall be field reviewed and necessary changes made.	
32	6C.09 08	Limited Access highway shifting taper should be SW=L with $\frac{1}{2}$ L being the minimum	CO WZS feel L is the desired length.	
33	6C.09 09	Standard: When using the formula for SW=L to shift traffic on a Limited Access highway the full length of L shall be used otherwise the designed horizontal curve shall be used. Field observation shall be conducted to verify tie ends of traffic shift allow positive flow without braking or tracking of tractor trailers in adjacent travel lanes and if necessary corrective actions shall to be made in the field 2.	CO WZS & NOVA L is desired on limited access highways and shift shall be field verified to insure tractor trailers are not tracking into opposing lanes. Changed due to inadequate tracking of truck in short lane shift.	
34	6C.09 10	On roadways with paved shoulders having a width of 8 feet or more, a shoulder taper shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way	Initial WZS revision for clarity.	
35	Figure 6c-2	Examples of Types of Tapers and Buffer Spaces	VA Asphalt Association requested changing the work space note for the shoulder work area to activity area. CO WZS agrees. CRO Richmond requested clarity in the application of requirement (equation L= 4x speed limit). CO WZS changed requirement to 4 channelizing devices. Change will only incur minimal change is distance of the application. SwRO-Salem Questioned the "L=4 TIMES SPEED LIMIT IN FEET dimension. The dimension is from the MUTCD. All dimension extension extended to the dimensioned object.	

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36	6C.11 01	01 When traffic in both directions must use a single lane for a limited distance, movements from each end shall be coordinated as well as intersecting roadways. Entrances shall be controlled as directed by the Engineer.2	Added from January 31, 2017 FAQ document.	
37	6C.11 02	Provisions should be made for alternate one-way movement through the constricted section via methods such as flagger control 2	Deleted "a flag transfer" per from January 31, 2017 FAQ document.	Add P 01 intersections with in a work area must be controlled. Entrances shall be controlled as directed by the Engineer.
38	6C.12 02	A single flagger can be used on low volume (less than 500 vpl) two-lane roadways. The work zone must be short and the flagger must have a clear line of sight to both ends of the work zone2	Added from January 31, 2017 FAQ document. Renumbered following paragraphs	
39	6C.12 04	When good visibility and traffic control cannot be maintained by one flagger, traffic shall be controlled by a flagger at each end of the work area.2	Added from January 31, 2017 FAQ document.	
40	6C.12 05	One of the two2 flaggers should be designated as the coordinator or lead flagger. Flaggers should be able to communicate with each other orally, electronically, or with manual signals	Added from January 31, 2017 FAQ document.	
41	Figure 6C-3	Example of a One-Lane, Two-Way Taper2	CO-TE added PTRS and additional signs.	
42	6C.13	Pilot Car Method of One-Lane, Two-Way Traffic Control	Per January 31, 2017 FAQ document, deleted Section 6C.13, Flag Transfer Method of One Lane Two-way traffic Control. Renumbered following sections.	
43	6C.13 04	A flagger shall be stationed on the approach to the activity area to control vehicular traffic until the pilot vehicle is available. Flaggers shall coordinate traffic movement at intersecting roadways and other areas as directed by the Engineer. All Flaggers and pilot car operators shall be interconnected by radio communciations	Added from January 31, 2017 FAQ document.	

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44	6C.14 01	For long-term operations traffic control signals may be used to control vehicular traffic movements in one-lane, two-way TTC zones as approved by the District Traffic Engineer (see Section 6F.93,2 Figure TTC-25, Section 512 of the Road and Bridge Specifications, and Chapter 4H of the 2009 MUTCD.)	Revised per January 31, 2017 FAQ document and identified as long term projects and changed Regional to District.	
45	6D.02 02	The Virginia Department of Transportation Work Zone Pedestrian and Bicycle Guidance document, VDOT guidelines for the Installation of Marked Crosswalks, Section 1300 of the Road and Bridge Standards, Part 6 of the MUTCD and Chapter 4 of FHWA's Designing Sidewalks and Trails for Access should be used to address the needs and control for pedestrians and bicyclist through a TTC zone	Added from January 31, 2017 FAQ document.	
46	6D.03 04	Since, July 1, 2012 All Workers,2	Initial WZS revision. Nw Region recommends "as of" in lieu of "Since". Not accepted by C.O. WZS, Construction Division prefers the use of "since". Revised per January 31, 2017 FAQ document, deleted "Since, July 1, 2012	
47	6D.03 04	Performance Class 3 requirements of the ANSI/ISEA 107-2010 publication entitled "American National Standard for High-Visibility Safety Apparel and Headwear" (see Section 1A.11 of the Virginia Supplement to the 2009 MUTCD), or equivalent revisions, and labeled as meeting the ANSI 107-2010 standard performance for Class 3	Initial WZS revision.	
48	6D.03 05	Since, July 1, 2012 All Workers,2	Initial WZS revision. Nw Region recommends "as of" in lieu of "Since". Not accepted by C.O. WZS, Construction Division prefers the use of "since". Revised per January 31, 2017 FAQ document, deleted "Since, July 1, 2012	
49	6D.03 05	...shall wear full length ¹ Class E trousers or overalls ¹ in addition to the standard Performance Class 3 risk requirements of the ANSI/ISEA 107-2010 publication.	Added per agreement with Health & Safety.	
50	6D.03 05	Leg gaiters, chaps or ² shorts shall not be worn ¹ in lieu of Type E Trousers. ²	Added per January 31, 2017 FAQ document.	

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51	6D.03 05	Nighttime work zones are operations which occur from 30 minutes before sunset until 30 minutes after sunrise.	Added "At a minimum" to sentence as recommended by M. Lipschultz to match hardhats with one 20" (approx.) long, 1" wide stripe that wraps around the sides and back, and a 4"x1" stripe on top. 11/17/2014 – Deleted old paragraph 05 per S. Morales recommendation that VDOT policy governs VDOT staff. High visibility headwear for non-VDOT staff is the contractors choice. Renumbered remaining paragraphs.	
52	6D.03 06	The high-visibility safety apparel background (outer) material color shall be fluorescent orange-red, fluorescent yellow-green, or a combination of the two as defined in the ANSI standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. The retroreflective safety apparel shall be designed to clearly identify the wearer as a person. Class E trousers shall be defined as full length waistband trousers or overalls that meet all minimum requirements of the ANSI/ISEA 107-2010 publication. Shorts shall not be worn at any time	CO WZS add color information for high visibility apparel for workers to match flagger information	
53	6D.03 07	Lights internal to the high visibility apparel shall be steady burn yellow, white, or yellow-green. ²	CO WZS to address latest version of high visibility apparel with lights.	
54	6D.03 08	Headwear meeting ANSI 107/ISEA 107-2010 standards may be worn but is not required	Added per 11/18/2014 review.	
55	6D.03 09	Emergency and incident responders and law enforcement personnel within the TTC zone may wear high-visibility safety apparel that meets the performance requirements of the ANSI/ISEA 207-2011 ¹ publication entitled "American National Standard for High-Visibility Public Safety Vests" (see Section 1A.11 of the Virginia Supplement to the 2009 MUTCD), or equivalent revisions, and labeled as ANSI/ISEA 207-2011 ¹ , in lieu of ANSI/ISEA 107-2010 ¹ apparel worn by other highway workers ¹	Changes to this paragraph per S. Morales on 2/10/2015.	

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56	6D.03 10	high-visibility safety apparel that meets Performance Class 2 or 3 requirements of the ANSI/ISEA 107-2011 publication entitled "American National Standard for High-Visibility Public Safety Vests".	Deleted "this Section" and "Refer to Paragraph 7 of Section 6E.02 for additional guidance" and replaced with "that meets Performance Class 2 or 3 requirements of the ANSI/ISEA 107-2010 publication or as described in paragraph 9 shall be worn by law enforcement personnel."	
57	6D.03 10	high-visibility safety apparel that meets Performance Class 2 or 3 requirements of the ANSI/ISEA 107-2011 publication entitled "American National Standard for High-Visibility Public Safety Vests".	Added "... entitled "American National Standard for High-Visibility Public Safety Vests" per S. Morales on 2/10/2015 (full citation is needed because Paragraph 9 is referenced).	
58	6D.03 10	renumber paragraph, 6D.03 10		
59	6D.03 10 (2)	Except as provided in Paragraph 111, firefighters or other emergency responders working within the right-of-way shall wear high-visibility safety apparel as described in paragraph 9.	Deleted "Except as provided in Paragraph 10," and "this Section" and replaced with " in paragraph 9."	
60	6D.03 11	Firefighters or other emergency responders working within the right-of-way and engaged in emergency operations that directly expose them to flame, fire, heat, and/or hazardous materials may wear retroreflective turn-out gear that is specified and regulated by other organizations, such as the National Fire Protection Association	NFPA 1971-2013 incorporates the high-visibility 207-2010 Public safety requirement.	
61	6D.03 12	Workers not installing traffic control devices may wear gaiters to enhance visibility.	added per January 31, 2017 FAQ document. Renumbered following paragraphs	
62	6D.03 13	greater conspicuity provided by the fluorescent colors, retroreflectivity and pattern of the high-visibility apparel	Added by recommendation of S. Morales.	
63	6D.03 13	When the high visibility Class 3 apparel is blocked by the wearing of equipment (weed eaters, leaf blowers, etc.), the worker shall also wear Class E trousers	Added per January 31, 2017 FAQ document.	

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64	6E.01 03	03 A flagger shall be recertified every two years if the flagger is certified by the VDOT Flagger Certification Program. Recertification is required every four years if the flagger is certified by the VDOT Basic or Intermediate Work Zone Traffic Control Training course, or by the ATSSA's classroom Flagger Certification Program. ¹	Initial WZS revision. Corrected error cited by K. King, FHWA.	
65	6E.02 03	All2	Capitalized All from January 31, 2017 FAQ document.	
66	6E.02 03	Since July 1, 2012 All Workers	Delete and replace "Since July 1, 2012," with "All"	
67	6E.02 03	work vehicles and construction equipment within the TTC zone shall wear high-visibility safety apparel that meets Performance Class 3 requirements of the ANSI/ISEA 107–2010 publication entitled “American National Standard for High-Visibility Safety Apparel and Headwear” (see Section 1A.11 of the Virginia Supplement to the 2009 MUTCD), or equivalent revisions, and labeled as meeting the ANSI 107-2010 standard performance for Class 3 ¹	Initial revision to match Chapter 6D.	
68	6E.02 04	During day and night flagging operations including emergency operations	CO WZS flaggers shall wear Type E trouser with their Class 3 apparel.	
69	6E.02 04	During day and night flagging operations including emergency operations, ² flaggers shall	Added per agreement with Health & Safety.	
70	6E.02 04	wear full length ¹ Class E trousers or overalls ¹ in addition to the standard Performance Class 3 risk requirements of the ANSI/ISEA 107–2010 publication. Shorts shall not be worn	Added per agreement with Health & Safety.	
71	6E.02 05	Class E trousers are defined as full length waistband trousers or overalls that meet all minimum requirements of the ANSI/ISEA 107-2010 publication	Added per agreement with Health & Safety.	
72	6E.02 06	Electrical Cooperative flaggers may wear high visibility Class E leg gaiters or chaps made of fire-retardant material that is specified and regulated by other organizations, such as the National Fire Protection Association.	CO WZS added information at the request of the electrical cooperatives.	

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73	6E.02 07	All apparel shall be securely fastened such as that the greater conspicuity provided by the fluorescent colors, retroreflectivity and pattern of the high-visibility apparel is visible for 360° around the wearer	Added per agreement with Health & Safety.	
74	6E.02 08	Lights internal to the high visibility apparel shall be steady burn yellow, white, or yellow-green. ²	CO WZS to address latest version of high visibility apparel with lights	
75	6E.02 09	When uniformed law enforcement officers, firefighters and other first responders ¹ are used to direct traffic within a TTC zone,	Adder per S. Morales on 2/10/2015.	
76	6E.02 09	they shall wear high-visibility safety apparel as described in Section 6D.03(09)	Added by CO WZS.	
77	6E.02 10	10 In lieu of ANSI/ISEA 107-2010 apparel, law enforcement personnel, firefighters and other first responders directing traffic within the TTC zone may wear high-visibility safety apparel	Adder per S. Morales on 2/10/2015.	
78	6E.02 10	the ANSI/ISEA 207-2011 ¹ publication entitled “American National Standard for High-Visibility Public Safety Vests” (see Section 1A.11 of the Virginia Supplement to the 2009 MUTCD) and labeled as ANSI 207-2011 ¹	Was ANSI/ISEA 207-2010. Change per S. Morales 2/10/2015.	
79	6E.02 11	Headwear meeting ANSI 107/ISEA 107-2010 standards may be worn but is not required	Added per 11/18/2014 review.	
80	6E.03 15	15 Flags, when used, shall be red or fluorescent orange/red in color; shall be a minimum of 24 x 241 inches square; and shall be securely fastened to a staff that is 1 to 1¼ inches in diameter and 1 approximately 36 inches in length.	Initial CO WZS revision for clarity.	
81	6E.03 17	both sides of the flag ¹ shall be retroreflectorized orange/red in color	Initial CO WZS revision for clarity.	
82	6E.04 13	A. An AFAD at each end of the TTC zone using Stop/Slow signs (Method 1). ¹ B. An AFAD at each end of the TTC zone using Red/Yellow Lens (Method 2). ¹	Initial CO WZS revision for clarity.	

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83	6E.04 14	14 Two AFADs shall be used to control one-lane, two-way traffic as illustrated in Figures 6E-1 and 6E-2.1	Initial CO WZS revision for clarity.	
84	6E.04 15	When one flagger is used to operate both AFADs, the flagger shall have an unobstructed view of the AFADs and approaching traffic in both directions.	Initial CO WZS revision for clarity.	
85	6E.04 19	19 Four (4) cones shall be used to form a taper in advance of the AFAD when in operation. If the AFAD is not operational and is located within the clear zone in an unmanned work zone four (4) drums shall be used to form a taper in advance of the AFAD.	CO WZS added requirement to delineate the AFAD with cones per January 1, 2017 FAQ.	
86	6E.05	STOP/SLOW Automated Flagger Assistance Devices	CO WZS moved Figure 6E-1 Example of the Use of the Stop/Slow AFAD	
87	6E.05 01	shall include a STOP/SLOW sign that alternately displays the STOP (R1-1) face and the SLOW (W20-8 (V)) face of a STOP/SLOW paddle (see TTC-XX Figure 6E-1).	Add reference to new TTC in Chapter 6H – TTC – XX.0. Both STOP/SLOW and RED/YELLOW Lens will be on one TTC. Delete reference to Figure 6E-1 and add new TTC in 6H.	
88	6E.06	Red/Yellow Lens Automated Flagger Assistance Devices	CO WZS moved Figure 6E-2 Example of the Red/Yellow Lens AFADdeveloping TTC in Chapter 6E	
89	6E.06 01	shall alternately display a steadily illuminated CIRCULAR RED LED lens and a flashing CIRCULAR YELLOW LED lens to control traffic without the need for a flagger in the immediate vicinity of the AFAD or on the roadway (see TTC-XX Figure 6E-2).	Add reference to new TTC in Chapter 6H – TTC – XX.0. Both STOP/SLOW and RED/YELLOW Lens will be on one TTC. Delete reference to Figure 6E-1 and add new TTC in 6H.	
90	6E.06 04	A. The minimum vertical aspect of the arm and sheeting shall be 4 inches ² ;	CO WZS deleted 2 inches gate arm requirement per January 17, 2017 FAQ document. CO WZS changed to 4 inches to match other gate arm requirement per January 17, 2017 FAQ document.	

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91	6E.07 10	10 The flagger should stand either on the shoulder adjacent to the road user being controlled or in the closed lane prior to stopping road users.	CO WZS - to improve safety for flaggers remove the guidance statement to allow flaggers to stand in the roadway per January 17, 2017 FAQ document.	
92	6E.07 12	When shoulder space is limited the flagger shall stand as close to the shoulder as possible and never move into the travel lane being used by stopped or moving traffic at any time. A flagger shall never stand in the center of the roadway or control traffic from the middle of the intersection.	CO WZS define location for flagger to stand on or near as possible to shoulder per January 17, 2017 FAQ document.	
93	6E.07 13	The flagger shall approach the vehicle from the passenger side to speak with a driver if directions or information must be given to a driver. Do not touch the vehicle	CO WZS added information about how to safely approach a vehicle to answer motorist question(s) per January 17, 2017 FAQ document.	
94	6E.07 14	Flaggers shall not use cellular phones, head/ear phones, Bluetooth or other similar devices while at the flagger station	CO WZS added devices that shall not be used by a flagger per January 17, 2017 FAQ document.	
95	6E.07 15	01Radio communication shall be used between flaggers and between flaggers and pilot vehicle operators. ²	CO WZS added standard statement radio communications between flaggers and between the pilot vehicle operation per January 17, 2017 FAQ document	
96	6E.07 16	All approaches of an intersecting roadway between mainline flaggers shall be controlled by a flagger as shown in Figure TTC-67, Lane Closure Operation Through an Unsignalized Intersection or as directed by the Engineer	CO WZS added reference to TTC-67 for flagging at an unsignalized intersection per January 17, 2017 FAQ document	
97	6E.07 17	<i>Flaggers should be necessary to control ingress and egress of commercial and private entrances as directed by the Engineer. If possible, advance notification can be given to the property owner</i>	CO WZS added flagger control needs for commercial and private entrances per January 17, 2017 FAQ document.	
98	6E.07 19	19 When stoppage timeframes are greater than 12 minutes, advance notification should be given to the motorist with either a PCMS message or a static sign	CO WZS added guidance on: <ul style="list-style-type: none"> • timeframe for flaggers to stop road users. • If stoppage is longer than 15 minutes provide advance notification using signs or PCMS. per January 17, 2017 FAQ document.	

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99	6E.07 20	20 These maximum stoppage times may need to be reduced based on traffic conditions, roadway geometrics, presence of emergency vehicles and other site conditions. ²	CO WZS added delay times may need to be adjusted per January 17, 2017 FAQ document.	
100	Figure 6E-3	Figure 6E-3, Use of Hand Held Signal Devices ²	CO TE requiring flaggers to wear Type E trousers.	
101	Figure 6E-4	Figure 6E-4, Flagger Requirements (Sheet 1 of 2)	CO TE requiring flaggers to wear Type E trousers and word smithing	
102	Figure 6E-4 (pt2)	Figure 6E-4, Flagger Requirements (Sheet 2 of 2)	Initial CO WZS revision. 2/24/2015, revised the table and the last sentence in Note 4. CO WZS revised to coincide with the new Flagger Training Video.	
103	6E.07 23	23 A single flagger shall only be used on low volume roadways (less than 500 vehicles per day) for short-term stationary operations	CO WZS defined traffic volumes for using a single flagger per January 17, 2017 FAQ document.	
104	6E.07 26	26 A flagger shall control only one lane of traffic approaching an intersection as shown in Figure TTC-30.02. Flagging Operation at a Signalized Intersection ² .	Delete .0 from TTC-30 CO WZS added TTC name	
105	6E.08 01	Except in emergency situations, flagger stations shall be preceded by an advance warning sign or signs. The Flagger (W20-1) symbol sign shall be removed or covered from road users when the flagger operation is suspended.	Added sign designation and "symbol" per 11/18/2014 review. Deleted "turned away" to match Section 6B.01.	
106	6E.08 13	A person designated by the employer shall coordinate all work operations on or over the railway's right-of-way with the Railway Company and make all arrangements for necessary flagger and watchperson service.	CO WZS added information stressing the importance of notifying the R&R to January 31, 2017 FAQ document.	
107	Table 6E-1	Table 6E-1, Length of the Longitudinal Buffer Space ¹	Added "Length of the Longitudinal" and deleted "Flagger Distance from Work Area" to title to match MUTCD per recommendation by Juan Morales, JM Morales and Associates/ATSSA.	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
108	Table 6E-1	<p>Posted Speed Limit (mph) Distance (Feet)</p> <p>< 20 115 – 120</p> <p>25 155 – 1651</p> <p>30 200 – 210</p> <p>35 250 – 260</p> <p>40 305 – 3251</p> <p>45 360 – 380</p> <p>50 425 – 445</p> <p>55 500 – 5301</p> <p>60 570 – 6001</p> <p>65 645 – 675</p> <p>70 730 – 760</p>	Initial CO WZS revision (25 mph distance) with 40 mph, 55 mph and 60 mph distances per M. Larkin.	
109	6E.09 01	A traffic spotter is a certified flagger whose primary function is to alert and assist motorists through temporary traffic control zones on low volume (under 500 VPD), low speed (35 MPH or lower) roads ² .	CO WZS added 35 MPH or lower and changed subdivision streets to roads.	
110	6F.02 02	Regulatory, warning, guide, and incident management signs used in TTC zones, shall be in compliance with Sections 247 and 5122 of the Road and Bridge Specifications	CO WZS added reference to 512 because specifications are found in both sections 247 and 512.	
111	6F.02 02	Regulatory, warning, guide, and incident management signs used in TTC zones, shall be in compliance with Sections 247 and 5122 of the Road and Bridge Specifications and the Road and Bridge Standards Section 13202.	CO WZC added reference to Standard Section 1320.	
112	6F.02 07	In order to maintain the systematic use of yellow or fluorescent yellow-green backgrounds for pedestrian, bicycle and school warning signs in a jurisdiction, fluorescent yellow-green background for pedestrian, bicycle and school warning signs may be used in TTC zones	CO WZS deleted optional yellow or yellow-green for pedestrian, bicycle and per January 1, 2017 FAQ.	
113	6F.02 11	Sign design details are contained in the 2004 MUTCD's "Standard Highway Signs and Marking" (SHSM) book, its 2012 Supplement to 2004 Edition ²	CO WZS added reference to the 2012 Supplement to the 2004 addition	
114	6F.02 11	VDOT Road and Bridge Standards punching requirement for sign panels as well as the VDOT Road and Bridge Specifications, Section 2472	CO WZS added due to work zone field reviews found sign panels with incorrect punching patterns.	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
115	6F.02 15	the Regional District2 Traffic Engineer	CO WZS delete Regional replace with District.	
116	6F.02 20	20 Sign substrates for signs mounted on plastic drums, Type 3 Barricades, and portable sign stands2 shall be either a flexible retroreflective roll up material, or a 0.4 inch thick corrugated polypropylene or polyethylene plastic material, or a 0.079 inch thick aluminum/plastic laminate material, shall be in compliance with Section 512 of the Road and Bridge Specifications.	CO WZS removed from WAPM sign substrate for sign (roll up material, corrugated polypropylene, polyethylene plastic and aluminum/plastic laminate material which is covered in Section 512 of the Road & Specifications. CO WZS removed from WAPM sign substrates for drums, ty. 3 barricade and portable sign supports because itis covered in Section 512 of the Road & Specifications.	
117	6F.02 22	22 Post-mounted signs shall be made of rigid material2 (aluminum 0.080 inch thickness1) or sign substrates2 (0.4 inch thick corrugated polypropylene or polyethylene plastic material, or a 0.079 inch thick aluminum/plastic laminate material) and shall be in compliance with Sections 512 and 701 of the Road and Bridge Specifications	CO WZS removed from WAPM aluminum thickness requirement for post mounted signs because it is covered in Section 512 of the Road & Specifications. Initial CO WZS revision CO WZS revision to match current industry standard (2/2/2015). CO WZS removed from WAPM. This is covered in Section 512 of the Road & Specifications. CO WZS removed from WAPM sign substrate materials for post mounted signs because itis covered in Section 512 of the Road & Specifications.	
118	6F.03 08	08 The height of ground-mounted signs, measured vertically from the bottom of the sign to the elevation of the near edge of the pavement shall be a minimum of 7 feet and a maximum of 8 feet1	Initial CO WZS revision, paragraph was revised by adding an 8 foot maximum sign height.	
119	6F.03 09	a minimum of 7 feet and a maximum of 8 feet1	Initial CO WZS revision, paragraph was revised by adding an 8 foot maximum sign height	
120	6F.03 10	10 The height of ground-mounted signs, measured vertically from the bottom of the sign to the sidewalk, shall be a minimum of 7 feet and a maximum of 8 feet1	Initial CO WZS revision, paragraph was revised by adding an 8 foot maximum sign height.	
121	Table 6F-1 (1/8)	In-Street (Yield) Pedestrian Crossing2 R1-6b 6F-36 TTC-36 12 x 36 12 x 36 12 x 36	CO WZS highlighted row green for pedestrian signs.	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
122	Table 6F-1 (1/8)	6F.17	Initial CO WZS revision, Gannett Fleming noted that reference to TTC-25 is in error because R1-V1 does not appear in TTC-25. Changed reference to Section 6F.17	
123	Table 6F-1 (1/8)	36 x 541 24 x 301	Initial CO WZS revision, 2/24/2015, revised sign sizes from 36 x 46 to 36 x 54 and 24 x 30 respectively. Recommended by A. Lesser.	
124	Table 6F-1 (1/8)	Work Zone \$500 Max. Fine For Exceeding Speed Limit When Flashing ¹	Initial CO WZS revision, Section §46.2-878.1 of the Code of Virginia was amended July 1, 2012 by the 2012 General Assembly to add flashing lights when workers or present therefore the sign was redesigned..	
125	Table 6F-1 (1/8)	Begin Right Turn Lane w/ Arrow ¹	Initial CO WZS revision, changed from 6F.06 as requested by G. Quinn.	
126	Table 6F-1 (1/8)	TTC-26 TTC-27	Initial CO WZS revision, changed from 6F.06 as requested by G. Quinn.	
127	Table 6F-1 (1/8)	Bike (Symbol) May Use Full Lane ²	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016.	
128	Table 6F-1 (2/8)	Turning Vehicles Yield to Pedestrians ¹	nitial CO WZS revision (addition).	
129	Table 6F-1 (2/8)	R10-15L, 15R 6F.17 30 x 30 30 x 30 30 x 30	CO WZS background changed to green for pedestrian references.	
130	Table 6F-1 (2/8)	Bike Lane Closed ² R11-V3 WZPBG 54 x 30 54 x 30 54 x 30	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016	
131	Table 6F-1 (2/8)	Path Closed ² R11-V4 WZPBG 48 x 30 48 x 30 48 x 30	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016.	
132	Table 6F-1 (2/8)	Weight Limit R12-1, 2 6F.10 36 x 48 36 x 48 36 x 48	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
133	Table 6F-1 (2/8)	Crash Area Keep Clear ¹	Initial CO WZS revision sign added.	
134	Table 6F-1 (3/8)	Bicycle Traffic (Symbol)	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016.	
135	Table 6F-1 (3/8)	Pedestrian Traffic (Symbol)	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016	
136	Table 6F-1 (3/8)	Combined Bike and Pedestrian Crossing	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016	
137	Table 6F-1 (3/8)	Bikes Merge w/ Arrow ²	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016	
138	Table 6F-1 (3/8)	On Road (Plaque)	CO WZS added based on should condition of the VA Supplement to the MUTCD.	
139	Table 6F-1 (4/8)	On Road (Plaque)	CO WZS added based on should condition of the VA Supplement to the MUTCD.	
140	Table 6F-1 (4/8)	30 x 182	CO WZS changed size based on panel size in the MUTCD	
141	Table 6F-1 (4/8)	Arrow (Plaque – Diagonal Downward Pointing)	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016	
142	Table 6F-1 (4/8)	Ahead (Plaque) ²	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016.	
143	Table 6F-1 (4/8)	On Road (Plaque)	Check for design	
144	Table 6F-1 (5/8)	Grooved Pavement Ahead ¹	Initial CO WZS revision (addition).per SW Regional Maintenance Eng	
145	Table 6F-1 (5/8)	Median Crossover Closed Ahead ¹	Initial CO WZS revision sign (addition).	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
146	Table 6F-1 (5/8)	Median Crossover Closed ¹	Initial CO WZS revision sign (addition).	
147	Table 6F-1 (5/8)	Rumble Strips Ahead ¹	Initial CO WZS revision sign (addition).	
148	Table 6F-1 (5/8)	Emergency Work Ahead ¹	Initial CO WZS revision sign (addition).	
149	Table 6F-1 (5/8)	Rumble Strips with	Initial CO WZS revision sign (addition).	
150	Table 6F-1 (5/8)	Road Patching Ahead ¹	Initial CO WZS revision sign (addition).	
151	Table 6F-1 (5/8)	Road Patching Next X Miles ¹	Initial CO WZS revision sign (addition).	
152	Table 6F-1 (6/8)	Bike Lane Closed Ahead ²	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016.	
153	Table 6F-1 (6/8)	Bike (Symbol) Detour Ahead ²	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016.	
154	Table 6F-1 (6/8)	Bike (Symbol) Diversion Ahead ²	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016.	
155	Table 6F-1 (6/8)	Path Closed Ahead ²	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016.	
156	Table 6F-1 (6/8)	Path Work Ahead ²	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016.	
157	Table 6F-1 (6/8)	Bridge Inspection Ahead ²	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016.	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
158	Table 6F-1 (6/8)	Work Zone (Plaque) ¹	Initial CO WZS removed Virginia Sign Designation	
159	Table 6F-1 (6/8)	(Vehicle-Mounted Sign) ¹	Initial CO WZS revision sign added. Work Vehicle Do Not Follow sign deleted. The Work Vehicles Frequent Turns replaced the Work Vehicle Do Not Follow on July 1, 2017	
160	Table 6F-1 (6/8)	48 x 362 48 x 362 48 x 362	Corrected sign size per January 1, 2017 FAQ.	
161	Table 6F-1 (6/8)	Left (Right) Turn Lane Open ¹	Initial CO WZS revision sign (addition).	
162	Table 6F-1 (6/8)	48 x 362 48 x 362 48 x 362	Corrected sign size per January 1, 2017 FAQ.	
163	Table 6F-1 (6/8)	Left (Right) Turn Lane Closed ¹	Initial CO WZS revision sign (addition).	
164	Table 6F-1 (6/8)	Turn Lane with Arrow ² E5-V5L, 5R2 48 x 482 48 x 482 36 x 362	O WZS added new sign per January 1, 2017 FAQ.	
165	Table 6F-1 (6/8)	Interstate Route Shield for Independent Use (1 or 2 digits) ¹	Initial CO WZS revision sign (addition).	
166	Table 6F-1 (6/8)	Interstate Route Shield for Independent Use (3 digits) ¹	Initial CO WZS revision sign (addition).	
167	Table 6F-1 (6/8)	U.S. Route Marker for Independent Use (1 or 2 digits) ¹	Initial CO WZS revision sign (addition).	
168	Table 6F-1 (6/8)	U.S. Route Marker for Independent Use (3 digits) ¹	Initial CO WZS revision sign (addition).	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
169	Table 6F-1 (6/8)	VA Primary Route Marker for Independent Use (1 or 2 digits) ¹	Initial CO WZS revision sign (addition).	
170	Table 6F-1 (6/8)	VA Primary Route Marker for Independent Use (3 digits) ¹	Initial CO WZS revision sign (addition).	
171	Table 6F-1 (7/8)	VA Circular Sec. Route Marker for Independent Use (3 digits)	Initial CO WZS revision sign (addition).	
172	Table 6F-1 (7/8)	Cardinal Directional Auxiliary (NORTH, EAST, SOUTH, WEST)	Initial CO WZS revision sign (addition).	
173	Table 6F-1 (7/8)	M6-5(V),	Initial CO WZS, added turn arrow for incident management detours	
174	Table 6F-1 (7/8)	Work Zone (Plaque) ¹	Initial CO WZS removed Virginia Sign Designation	
175	Table 6F-1 (7/8)	(Vehicle-Mounted Sign) ¹	Initial CO WZS revision sign added. Work Vehicle Do Not Follow sign deleted. The Work Vehicles Frequent Turns replaced the Work Vehicle Do Not Follow on July 1, 2017	
176	Table 6F-1 (7/8)	Left (Right) Turn Lane Open ^{1,2} E5-V3L, V3R 48 x 362 48 x 362 48 x 362	Corrected sign size per January 1, 2017 FAQ.	
177	Table 6F-1 (7/8)	Left (Right) Turn Lane Closed ¹ E5-V4L, V4R 48 x 362 48 x 362 48 x 362	Corrected sign size per January 1, 2017 FAQ.	
178	Table 6F-1 (7/8)	Turn Lane with Arrow ² E5-V5L, 5R 48 x 48 48 x 48 36 x 36	CO WZS added new sign per January 1, 2017 FAQ.	
179	Table 6F-1 (7/8)	Interstate Route Shield for Independent Use (1 or 2 digits)	CO WZS added new sign per January 1, 2017 FAQ.	

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180	Table 6F-1 (7/8)	Interstate Route Shield for Independent Use (3 digits) ¹	CO WZS added new sign per January 1, 2017 FAQ.	
181	Table 6F-1 (7/8)	U.S. Route Marker for Independent Use (1 or 2 digits) ¹	CO WZS added new sign per January 1, 2017 FAQ.	
182	Table 6F-1 (7/8)	U.S. Route Marker for Independent Use (3 digits) ¹	CO WZS added new sign per January 1, 2017 FAQ.	
183	Table 6F-1 (7/8)	VA Primary Route Marker for Independent Use (1 or 2 digits) ¹	CO WZS added new sign per January 1, 2017 FAQ.	
184	Table 6F-1 (7/8)	VA Primary Route Marker for Independent Use (3 digits) ¹	CO WZS added new sign per January 1, 2017 FAQ.	
185	Table 6F-1 (7/8)	VA Circular Sec. Route Marker for Independent Use (3 digits) ¹	CO WZS added new sign per January 1, 2017 FAQ.	
186	Table 6F-1 (8/8)	M5-1(V), M5-2(V), M6-1(V), M6-2(V), M6-3(V), M6-4(V), M6-5(V),	Initial CO WZS, added turn arrow for incident management detours	
187	Table 6F-1 (8/8)	End2 M4-8b WZPBG 12 x 24 12 x 24 12 x 24	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016.	
188	Table 6F-1 (8/8)	Pedestrian (Symbol2)	CO WZS added Symbol to description.	
189	Table 6F-1 (8/8)	(Symbol2)	CO WZS added Symbol to description.	
190	Table 6F-1 (8/8)	(Symbol2)	CO WZS added Symbol to description.	
191	Table 6F-1 (8/8)	Bike Detour2 M4-V7bL, V7bR 60 x 48 48 x 36 36 x 30	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
192	Table 6F-1 (8/8)	Bicycle (Symbol) w/ Horizontal Arrow (diversion) 2 M4-V8L, V8bR 60 x 48 48 x 36 36 x 30	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016.	
193	Table 6F-1 (8/8)	Symbol2	CO WZS added Symbol to description.	
194	Table 6F-1 (8/8)	Bike (Symbol2) Diversion w/ Horizontal Arrow2 M4-V9cL, 9cR 60 x 48 48 x 36 30 x 24	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016	
195	Table 6F-1 (8/8)	Bike (Symbol) Division2 M4 – 9(VA) WZPBG 60 x 48 48 x 36 36 x 30	CO WZS added sign per Work Zone Pedestrian and Bicycle Guidance May 1, 2016	
196	Figure 6F-1	Height and Lateral Location of Signs – Typical Post-Mounted Installations	<p>CO WZS added the foot mark per January 31, 2017 FAQ.</p> <p>CO WZS added the foot mark per January 31, 2017 FAQ.</p> <p>10/28/2014, CO TE added 7 foot minimum dimension per recommendation by M. Lipschultz.</p> <p>CO TE changed 7 foot minimum dimensions in Typical C & D to 8 foot maximum.</p> <p>Nw Region recommends removing the 7'-6" revision (dimension to GL). Also, adding 2' Max. dimension to Example "D".</p> <p>Both recommendations accepted by C.O. WZS.</p>	
197	Figure 6F-1	NOTE: FOR POST SIZE & INSTALLATION PROCEDURES SEE EITHER THE PLAN INSERTABLE SHEET OR VIRGINIA ROAD AND BRIDGE STANDARDS WSP-1 & ED-3 OR TEMPORARY SIGNS.1	Initial CO WZS revision deleted Standard STP-1 reference.	
198	6F.03 17	Except as provided in Paragraph 18 or Figures TTC-57 through TTC-59, signs mounted on portable sign supports should not be used for a duration of more than 3 consecutive days (72 consecutive hours)	Initial CO WZS revision WZS corrected paragraph reference.	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
199	6F.03 18	18 The R9-8 through R9-11a (pedestrian signs) series, R11 (road closed signs) series, W1-6 through W1-8 (arrow and chevron signs) series, M4-10 (detour arrow), E5-V1 (exit sign), or other similar type signs (see Figures 6F-2, 6F-3 and 6F-5) may be used on portable sign supports that do not meet the minimum mounting heights provided in Paragraphs 6 through 8 for longer than 3 days.	Initial CO WZS revision. Nw Region recommends that these sign have a 5' minimum height requirement from the ground line. C.O. WZS only accepts 5' minimum height requirement for "Exit" (E5-V1) sign.	
200	6F.03 20	fully extended and 1 flush as possible to the ground or roadway surface for stability. If the legs cannot be fully extended then they should be weighted per Paragraph 26.1	Initial CO WZS revisions as indicated in the paragraph..	
201	6F.03 21	Paragraph 18,1 or shown in the typical traffic control figures in Chapter 6H, should be supported with a sand bag weighting approximately 25 pounds on each leg or two (2) drum collar weights ¹	Initial CO WZS revisions as indicated in the paragraph..	
202	6F.03 24	The following signs shall be mounted a minimum of 7 feet from the pavement surface to the bottom of the sign: Stop, Yield, Left/Right Turn Lane Open, Left/Right Turn Lane Closed, Turn Lane with Arrow (located at turn lane temporary gore), Exit Open, Exit Closed, Exit w/Arrow (located at exit's temporary gore). When placed on portable sign supports, it must be crashworthy with legs flush to the ground and extended to meet a 5 foot mounted height requirement. ²	Required regulatory and decision warning signs to be mounted height of 7 feet to improve visibility to these signs. A 5 feet mounting height for Portable sign supports due to limitations of portable sign supports.	
203	6F.03 27	27 Additional weight consisting of one 25 pound sand bag may be placed on each leg of a sign stand or no more than two (2) drum collar weights ¹ positioned on the center of the sign stand and around the mast may be used to comply with the portable sign requirement.	Initial CO WZS revision.	
204	6F.04 03	27 Additional weight consisting of one 25 pound sand bag may be placed on each leg of a sign stand or no more than two (2) drum collar weights positioned on the center of the sign stand and around the mast may be used to comply with the portable sign requirement.	Initial CO WZS revisions as indicated in the paragraph.	
205	6F.08	Section 6F.08 Pedestrian and Bicycle Regulatory Signs and Plaques for TTC ²	WZS added section for pedestrian signs for TTC	

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206	6F.09	Section 6F.09	Section number change due to addition for pedestrian regulatory signs.	
207	6F.09	Bike Lane Closed (R11-V3) and Path Closed Sign (R11-V4)	WZS added signs for Bike and Path closures per January 1, 2017 FAQ.	
208	6F.09 07	Standard: 07 The BIKE LANE CLOSED (R11-V3) and PATH CLOSED (R11-V4) sign shall be installed above a Type 3 Barricade on short-term and long-term projects.	WZS added Bike and Path closure for installation on Ty. 3 Barricades per January 1, 2017 FAQ.	
209	Figure 6F-2 (1/2)	Figure 6F-2, Regulatory Signs and Plaques in Temporary Traffic Control (Sheet 1 of 2)2	Added pedestrian signs R1-5R & R1-6B and use BICYCLE MAY USE FULL LANE (R11-1) CO WZS removed Revision 1 gray highlights.	
210	Figure 6F-2 (2/2)	Figure 6F-2, Regulatory Signs and Plaques in Temporary Traffic Control (Sheet 2 of 2)2	CO WZS added BIKE LANE CLOSED, SHOULDER CLOSED & PATH CLOSED based on VDOT – WZPB Guidelines	
211	6F.14	Work Zone \$500 Max. Fine For Exceeding Speed Limit When Flashing	Initial CO WZS revision (entire section) for compliance with Code.	
212	6F.14 01	This Code section was amended by the 2012 General Assembly by adding “for projects covered by contract entered into on or after July 1, 2012, with attached flashing light” or other traffic control device indicating that work is in progress. The intent of this change in the Code is for flashing lights to be activated indicating to motorists when workers are present and work is in progress.1	SwR-Salem: Recommended adding “only” after activated and make “motorist” plural. CO TE rejected adding only to sentence. CO TE will make motorist plural. Initial CO WZS revision based on July 1, 2012 General Assembly.	
213	6F.14 02	WORK ZONE \$500 MAX. FINE FOR EXCEEDING SPEED LIMIT WHEN FLASHING	Initial CO WZS revision based on July 1, 2012 General Assembly.	
214	6F.14 02	the Regional District2 Traffic Engineer	CO WZS delete Regional replace with District.	
215	6F.14 03	03 The first line “WORK ZONE” shall have a black legend and border on a fluorescent orange rectangular background.	Initial CO WZS revision based on July 1, 2012 General Assembly.	
216	6F.14 05	the Regional District2 Traffic Engineer	CO WZS delete Regional replace with District.	

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217	6F.14 06	The Type B flashing warning lights shall be remotely operated and activated only when workers are present in the work zone.	SwRO-Salem: Recommended adding "only" to sentence. Accepted by CO TE.	
218	6F.18 01	The BEGIN LEFT/RIGHT TURN LANE w/ Arrow (R3-20L, R3-20R) sign shall be used on long-term conditions (for longer than 3 consecutive days) in conjunction with the LEFT/RIGHT TURN LANE OPEN and place at the beginning of the turn lane taper or the open turn lane.2	CO WZ directs when to use BEGIN LEFT/RIGHT TURN LANE w/ ARROW and LEFT/RIGHT TURN LANE OPEN sign per January 31, 2017 FAQ.	
219	6F.19 01	the Virginia Supplement to the MUTCD1	Initial CO WZS revision added by CO TED WZS.	
220	6F.19 03	signs are the PROCEED WHEN WAY IS CLEAR (R1-V1) and1	Initial CO WZS revision added R1-V1 sign.	
221	6F.19 04	An engineering study should determine the use of the PROCEED WHEN WAY IS CLEAR sign when a stop or yield condition is used to control traffic on a two-lane roadway.1	Initial CO WZS revision added new paragraph, renumbered remaining paragraphs.	
222	6F.19 05	05 The FENDER BENDER MOVE VEHICLES1 sign should be installed for TMP Category C projects	Initial CO WZS revision deleted sign designation R16-4(V).	
223	6F.19 09	In order to remind drivers who are making turns to yield to pedestrians, a TURNING VEHICLES YIELD TO PEDESTRIANS (R10-15) sign may be used.1	Initial CO WZS revision.added paragraph.	
224	6F.20 03	Parts 2 or 7 of the 2009 MUTCD and Parts 2 and 9 of the Virginia Supplement to the 2009 MUTCD shall have fluorescent yellow-green backgrounds.2	CO WZS added allows fluorescent yellow-green warning signs as allowed in MUTCD & VA Supplement per January 1, 2017 FAQ.	
225	6F.20 14	Advanced warning signs shall be installed on entrance ramps if the advanced warning signs installed on the roadway are not visible to road users on the ramp.1	Initial CO WZS based on SwRO-Salem: Recommends changing "to" to "too" and making "sign" plural. CO TE deleted "to" and pluralized "sign".	
226	6F.22 01	the Regional District2 Traffic Engineer	CO WZS delete Regional replace with District.	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
227	6F.23	and Emergency Work Ahead Sign (W20-V27) ¹	Initial CO WZS revision, added sign per request of the maintenance division.	
228	6F.23 03	03 The ROAD (STREET) WORK AHEAD sign (see Figure 6F-3) which serves as a general warning of obstructions or restrictions,	Initial CO WZS revision, deleted sign designation R16-4(V).	
229	6F.23 06	the Regional District ² Traffic Engineer	CO WZS delete Regional replace with District.	
230	6F.23 13-16	<p>Guidance:</p> <p>13 The EMERGENCY WORK AHEAD sign should be the first advance warning sign encountered by road users in a TIMC zone.¹</p> <p>Option:</p> <p>14 The Emergency Work Ahead sign may be used in lieu of the Road Work Ahead sign when unexpected or natural event occurs that requires urgent work activity.¹</p> <p>15 Other supporting advance warning signs may have a fluorescent orange background with a black legend and border.¹</p> <p>Support:</p> <p>16 Work caused by an unexpected or natural event that must be dealt with urgently, but is not part of daily operations or planned work, can be classified as a traffic incident. Temporary traffic control for incident management can be found in Chapter 6I.1</p>	Initial CO WZS revision, based on request from the Maintenance Division.	
231	6F.28	Median Crossover Closed Ahead Signs (W20-V15), and Median Crossover Closed Sign (W20-V16) ¹	Initial CO WZS added 10/30/2014.	
232	6F.28 02	Required as of July 1, 2014¹	Deleted July 1, 2014 reference. per January 31, 2017 FAQ.	
233	6F.28 04	04 A base sign, such as the CENTER LANE CLOSED AHEAD sign may be modified with a RIGHT or LEFT overlay panel shown in the 2011 VSHS book	Initial CO WZS revision. SwRO-Salem: Recommended removing references to out-of-date "Optional" signs. CO TE agrees.	

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234	6.F28 05	05 The MEDIAN CROSSOVER CLOSED AHEAD (W20-V15) and MEDIAN CROSSOVER CLOSED (W20-V16) signs shall be used in advance of the point where the median crossover is closed. A NO LEFT TURN (R3-2) sign shall be used in conjunction with the MEDIAN CROSSOVER signs and be installed at the beginning of the turn lane taper or 200 to 300 feet in advance of the of a crossover without turn lane.1	Initial CO WZS revision. WZS added 10/30/2014.	
235	6F.30 02	Required as of July 1, 20141	Initial CO WZS revision, added per M. Lipschultz.; Initial CO WZS revision, Corrected error (“Optional but...”) cited by RK&K; Deleted July 1, 2014 reference. per January 31, 2017 FAQ.	
236	6F.32 03	the Regional District2 Traffic Engineer	CO WZS delete Regional replace with District.	
237	Figure 6f-3 (1/5)	Warning Signs and Plaques in Temporary Traffic Control (Sheet 1 of 5)	CO WZS removed Revision 1 gray highlights.	
238	Figure 6f-3 (1/5)	Warning Signs and Plaques in Temporary Traffic Control (Sheet 3 of 5)	Initial CO WZS revision.	
239	Figure 6f-3 (3/5)	Warning Signs and Plaques in Temporary Traffic Control (Sheet 3 of 5)	CO WZS removed Revision 1 gray highlights and add pedestrian and bicycle related signs.	
240	Figure 6f-3 (4/5)	Warning Signs and Plaques in Temporary Traffic Control (Sheet 4 of 5)2	Signs adjustment caused by adding new signs. Removed gray shading from Revision 1 signs	
241	Figure 6f-3 (5/5)	Warning Signs and Plaques in Temporary Traffic Control (Sheet 5 of 5)2	Signs adjustment caused by adding new signs.	
242	6F.37 04	EXIT OPEN, EXIT CLOSED	Initial CO WZS revision included EXIT OPEN and EXIT CLOSED signs	
243	6F.37 04	EXIT OPEN, EXIT CLOSED , LEFT/RIGHT TURN LANE OPEN (E5-V3), LEFT/RIGHT TURN LANE CLOSED (E5-V4L), TURN LANE WITH ARROW (E5-V5) and BEGIN LEFT/RIGHT TURN LANE WITH ARROW2	Added LEFT/RIGHT TURN LANE OPEN/CLOSED, TURN LANE w/ ARROW, & BEGIN LEFT/RIGHT TURN LANE w/ ARROW signs to the minimum mounting height of 5 feet based on the physical requirements of portable sign stands.	

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244	6F.37 04	Figures TTC-26, TTC-27, and 2	Added additional TTC Figures to listing per January 31, 2017 FAQ.	
245	6F.37 05-06	<p>Guidance:2</p> <p>05 The LEFT/RIGHT TURN LANE OPEN (E5-V3L, V3R) sign should be used where work is being conducted in the vicinity of turn lanes and where the entrance maneuver for vehicular traffic using the turn lane is different from the normal condition. The LEFT/RIGHT TURN LANE OPEN sign should be installed in advance of the TURN LANE w/ Arrow (E5-V5L, E5-V5R). The signs are only required on the side of the open turn lane.</p> <p>06 When a turn lane is closed, a LEFT/RIGHT TURN LANE CLOSED (E5-V4L, V4R) sign should be place at the beginning of the closed turn lane. The LEFT/RIGHT TURN LANE CLOSED AHEAD sign should be installed in advance of the LEFT/RIGHT TURN LANE CLOSED sign. The signs are only required on the side of the open turn lane.</p>	Added guidance statement for installing LEFT/RIGHT TURN LANE OPEN/CLOSED, LEFT TURN LANE CLOSED AHEAD TURN LANE w/ ARROW per January 31, 20-17 FAQ.	
246	6F.37 07	<p><u>Option:2</u></p> <p><u>07 On long-term work zones the right and left sign assemblies may be used for LEFT/RIGHT TURN LANE OPEN or the LEFT/RIGHT TURN LANE CLOSED AHEAD signs .</u></p>	Allows LEFT/RIGHT TURN LANE OPEN or LEFT/RIGHT TURN LANE CLOSED AHEAD signs to be on both right and left side on long term projects per January 31, 2017 FAQ	
247	6F.38 01	The gore EXIT with arrow sign shall correctly identify that the	The temporary gore Exit w/ arrow sign shall match permanent Exit signs per January 31, 2017 FAQ.	
248	6F.40 02	02 The Flagger symbol sign shall be removed or covered whenever the flagging operation is suspended.	Initial CO WZS revision added whenever.	
249	6F.40 06	Required as of July 1, 2014	Initial CO WZS revision, added "as of" per M. Lipschultz. Initial CO WZS revision; SWRO-Salem: Recommended removing references to out-of-date "Optional" signs. CO TE agrees. Deleted July 1, 2014 reference. per January 31, 2017 FAQ.	
250	6F.43 05	sign shall not be used .1,2	Initial CO WZS revision, revised by replacing "is not allowed for use" with "shall not be used" per M. Lipschultz. CO WZS changed use to used.	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
251	6F.43 06	identify ingress points for deliveries and the TRUCKS ENTERING HIGHWAY sign should be used to identify egress point for trucks entering roadways on large scale projects. The CONSTRUCTION ENTRANCE and the TRUCKS ENTERING HIGHWAY signs should be covered or removed when the daily work activity cease. ²	Identifies when to use CONSTRUCTION ENTRANCE and TRUCKS ENTERING HIGHWAY signs and covering of TRUCKS ENTERING HIGHWAY sign per January 31, 2017.	
252	6F.44	and Grooved Pavement Sign (W20-V14)	Initial CO WZS revision added GROOVED PAVEMENT sign.	
253	6F.44 02-03	Option: 02 The GROOVED PAVEMENT (W20-V14) sign may be used as an alternative to the ROUGH ROAD sign. ¹ 03 A MOTORCYCLE (W8-15P) plaque (see Figure 6F-3) may be mounted below a ROUGH ROAD sign or a GROOVED PAVEMENT sign when the sign is mounted on a post. ¹	Initial CO WZS revision, allows supplemental MOTORCYCLE plaque to be used with ROUGH ROAD sign and added GROOVED PAVEMENT sign.	
254	6F.47 02	Required as of July 1, 2014	Initial CO WZS revision, added "as of" per M. Lipschultz. Initial CO WZS revision, SwRO-Salem: Recommended removing references to out-of-date "Optional" signs. CO TE agrees Deleted July 1, 2014 reference. per January 31, 2017 FAQ.	
255	6F.53 04	Required as of July 1, 2014	Initial CO WZS revision, added "as of" per M. Lipschultz. Initial CO WZS revision, SwRO-Salem: Recommended removing references to out-of-date "Optional" signs. CO TE agrees Deleted July 1, 2014 reference. per January 31, 2017 FAQ.	
256	6F.56 01	The UNMARKED PAVEMENT AHEAD (W8-V4) sign shall be erected in advance of resurfaced, roadway sections 500 feet or more in length, where the edge lines have been removed until pavement marking are applied. ²	Let's discuss further.	
257	6F.56 01	Required as of July 1, 2014	Initial CO WZS revision, added "as of" per M. Lipschultz. Initial CO WZS revision, SwRO-Salem: Recommended removing references to out-of-date "Optional" signs. CO TE agrees Deleted July 1, 2014 reference. per January 31, 2017 FAQ.	

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258	6F.61 02	the Regional District2 Traffic Engineer	CO WZS delete Regional replace with District.	
259	6F.61 04	Required as of July 1, 2014	Initial CO WZS revision, added "as of" per M. Lipschultz. Initial CO WZS revision, SwRO-Salem: Recommended removing references to out-of-date "Optional" signs. CO TE agrees Deleted July 1, 2014 reference. per January 31, 2017 FAQ.	
260	6F.62 04	Required as of July 1, 2014	Initial CO WZS revision, added "as of" per M. Lipschultz. Initial CO WZS revision, SwRO-Salem: Recommended removing references to out-of-date "Optional" signs. CO TE agrees Deleted July 1, 2014 reference. per January 31, 2017 FAQ.	
261	6F.67	Work Vehicle Frequent Turns Sign (G20-V1a)1	Initial CO WZS revision by adding sign and sign application guidance.	
262	6F.67	and Work Vehicle Do Not Follow Sign (G20-V1) -	Delete all references associated to Work Vehicle Do Not Follow (title, old paragraphs 03 and 04.	
263	6F.67 01	01 The WORK VEHICLE FREQUENT TURNS (G20-V1a)1	Initial CO WZS revision by adding sign and sign application guidance.	
264	6F.67 01	vehicle-mounted sign (see Figure 6F-4) shall be mounted as high as possible2 in a conspicuous position on the rear of a vehicle hauling/delivering material to the work space.	CO WZS added to clarify location and improve visibility of the sign at the request of field personnel.	

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265	6F.67 02-04	<p>1: Revision 1 – 4/1/2015 2: Revision 2 – 4/1/2015</p> <p>03 The WORK VEHICLE FREQUENT TURNS border may be split into two separate panels in order to be placed within the indention(s) of the tailgate.² Standard: 04 The altered sign shall fit snugly within the indentions of the tail gate. The WORK VEHICLE FREQUENT TURNS shall maintain two lines of legend and be split in no more than two pieces. The vertical and horizontal measurement of the indention(s) of the truck’s tail gate shall be provided to the sign manufacturer. The sign message shall be center both vertically and horizontally in the panel. The letter size of the WORK VEHICLE FREQUENT TURNS message shall be fabricated as shown in the Virginia Standard Highway Signs book.²</p>	Allow the sign to be split into equal parts, eliminate border and place within the intention	
266	6F.67 05	05 When the tailgate has been removed or lowered for work operations (such as with an Athey Loader), the vehicle would be exempt from having to display the sign. The sign is not required to be placed on the back of pickup trucks, SUV’s, vans or other vehicles such as safety service patrol, which can enter or exit the work zone at higher speeds. ¹	XX	
267	6F.69 05	05 The DETOUR M4 series signs and plaque sizes for Non-Restricted Right-of-Way Roadway may be reduced to Restricted Right-of-Way Roadway sizes as approved by the District Traffic Engineer. ²	CO WZS changed Regional to District Engineer. Allow detour signs sized to be reduced by the District Engineer noted in January 31, 2017 FAQ and work zone roundtable discussion July 2017.	
268	Figure 6F-4	Vehicle-Mounted Signs for Temporary Traffic Control	Initial CO WZS revision by adding sign and sign application guidance to match Section 6F.64.	
269	Figure 6F-4	Vehicle-Mounted Signs for Temporary Traffic Control	CO WZS deleted Work Vehicle Do Not Follow and July 1, 2017 requirement note for Work Vehicle Frequent Turns	
270	Figure 6F-5	Exit, Pull Off Area, Exit Open, and Detour Signs for Temporary Traffic Control	CO TE changed the background color on the Cardinal signs directional plaques with approval of FHWA VA Division office.	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
271	Figure 6F-6	and other Trailer Mounted Devices ¹	Initial CO WZS revision for clarity.	
272	6F.71 15	shadow vehicles (pick-ups) ²	CO WZS added shadow vehicles (pick-ups) and queue management vehicles may use a vehicle mounted CMS after input from work zone roundtable meeting July 2017.	
273	6F.71 31	31 When closing a lane on a multi-lane highway, if all of the advance warning signs cannot be installed on both the right and left side of the highway, a PCMS displaying lane closure information should be used in advance of the first warning sign. ²	CO WZS added PCMS should be used if signs cannot be installed on both the right and left side of the highway on a multi-lane highway per January 31, 2017 FAQ.	
274	6F.71 35	or other non-crashworthy trailer mounted devices such as but not limited to intelligent transportation systems (ITS), Highway Advisory Radio, Speed Trailers, CB Wizards, ITS cameras, Portable Traffic Control Signals, light towers, etc.	Initial CO WZS revision for clarity. Deleted AFAD delineation.	
275	6F.71 38	or other non-crashworthy trailer mounted devices such as but not limited to intelligent transportation systems (ITS), Highway Advisory Radio, Speed Trailers, CB Wizards, ITS cameras, Portable Traffic Control Signals, light towers, etc., ^{1,2}	CO WZS deleted AFAD units shall use cones in lieu of drums. Initial CO WZS revision to add ITS equipment.	
276	6F.72 03	If placed on roadways with paved shoulders having a width of 8 feet or more, a shoulder taper shall be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way. ¹	Initial CO WZS revision added sentence per comment by J. Morales/ATSSA	
277	Figure 6F-7	Advance Warning Arrow Board Display Specifications ¹	Initial CO WZS revision. Old Dominion Highway Contractors Association & VA Asphalt Association questioned need for this change. Addition bulb was made to match arrow boards current in use. Change will not affect current use of arrow boards.	

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278	6F.74 09	Figures TTC-21 and 2	CO WZS added TTC-21 for extending channelizing devices	
279	6F.74 09	with 4 additional channelizing devices 2	CO WZS changed simplified the requirement of 4 additional channelizing devices per January 31, 2017 FAQ. CO WZS deleted to match the spacing of other channelizing devices	
280	6F.74 14	Retroreflective barrier 1	Initial CO WZS revision. Last sentence changed "Barrier retroreflective panels" to "Retroreflective barrier" panels	
281	6F.75 02	02 For nighttime use, cones shall be retroreflectized or equipped with lighting devices for maximum visibility. Retroreflectorization of cones that are 36 inches in height shall be provided by a 6-inch wide white band 2 and located 3 to 4 inches from the top of the cone and an additional 4-inch wide white band located approximately 2 inches below the 6-inch band.	CO WZS added band after 6-inch white to match MUTCD cone description.	
282	6F.75 06	06 A four cone taper shall be used to delineate AFAD units when in use.	CO WZS added 4 cones taper shall delineate AFAD units when in use. CO WZS deleted drum requirement for AFAD units. They are not left unmanned.	
283	6F.76 01	constructed of lightweight, deformable 1	Initial CO WZS revision.	
284	6F.76 02	retroreflective, ASTM Type III Reboundable 1	Retroreflective material requirement is in R&B Specifications Initial CO WZS revision recommended change based on Jim Swisher's input	
285	6F.77 04	the Regional District 2 Traffic Engineer	CO WZS delete Regional replace with District.	

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286	6F.78 01	ASTM Type III Reboundable ¹	Retroreflective material requirement is in R&B Specifications.	
287	6F.78 01	All drums shall meet the retroreflective sheeting requirements of Section 247.2	CO WZS removed all July 1, 2012 reference dates and all associated wording per January 31, 2017 FAQ.	
288	6F.78 08	including tapers for off ramp gore areas ²	CO WZS added to clarify drum to be used for gore area tapers after work zone roundtable meeting July 2017.	
289	6F.78 08	for non-crashworthy trailer mounted devices such as but not limited to intelligent transportation systems (ITS), PCMS, Highway Advisory Radio, Speed Trailers, CB Wizards, ITS cameras, Portable Traffic Control Signals, AFAD units, light towers, etc. ¹	Initial CO WZS delineate trailer mounted devices	
290	6F.78 09	09 Drums may be left on the shoulder between work operations but must not interfere with the road user's use of the shoulder or travel way. ¹	Initial CO WZS revision to allow drums to be left on the shoulder	
291	6F.79 04	04 The minimum length for Type 3 Barricades shall be 48 inches. Each barricade rail shall be approximately 81 to 12 inches wide. Barricades used on Limited Access highways shall have a minimum of 2 exposed rails ¹ of retroreflective area facing road users.	Initial CO WZS revision (correction to match MUTCD). Deleted "inches" to match Figure 6F-9 and MUTCD per M. Lipschultz. Initial CO WZS revision NW Region recommends replacing the 270 in ² requirement with a "...minimum of two exposed rails...". C.O. WZS accepts recommendation.	
292	6F.79 05	01 Where Type 3 Barricades extend entirely across a roadway, a sidewalk, bike lanes, or a shared use path, ² the stripes should slope downward in the direction toward which road users must turn (see Figures 6F-8 and 6F- 9).	CO WZS added Type 3 Barricades should extend entirely to close a sidewalk, bike lanes, or share use path per January 31, 2017.	
293	6F.79 11	Guidance	CO WZS changed from guidance to standard.	
294	6F.79 12	12 On Limited Access highways or in other situations where Type 3 Barricades may be susceptible to overturning in the wind, ballasting shall be used. ²	CO WZS change from guidance to standard. Ty 3s blow over during WZ field reviews.	

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295	Figure 6F-8	Figure 6F-8, Type 3 Barricade Placement Guidelines ²	CC WZS updated Ty 3 Barricade drawings with ROAD CLOSED and DIRECTION ARROW placement and supporting notes.	
296	6F.79 15	15 Type 3 Barricades should be used to close or partially close a road or when shift a travel more than original lane width ² .	CO WZS revision made to provide more guidance to motorists in lane shift areas which derived from work zone reviews. Initial CO WZS revision deleted "or a work access opening or construction entrance" per G. Quinn. CO WZS added per G. Quinn recommendation.	
297	6F.79 17	a Type 3 Barricade shall be used to close a work access opening or construction entrance.	Initial CO WZS revision deleted "the responsibility for ensuring the placement of Type 3 Barricades shall be assigned to a person who will provide proper closure at the end of each work day" and replaced with "a Type 3 Barricade shall be used to close a work access opening or construction entrance".	
298	6F.79 18	18 The responsibility for ensuring the placement of Type 3 Ba	Added new Paragraph 18 "The responsibility for ensuring the placement of Type 3 Barricades shall be assigned to a person who will ensure proper closure at the end of each work day". Renumbered remaining	
299	6F.79 21	21 Signs mounted on Type 3 Barricades should not cover more than half of the top two rails. ²	Initial CO WZS revision deleted "50 percent of the top two rails or 33 percent of the total area of the three rails" and replaced with "the top rail. CO WZS revision changed to more than half of the top two rails	
300	6F.86 07	Figure 6 in Appendix A of this manual or IIM-LD-93 for specific details on ¹	Initial CO WZS revision by adding hyperlink per recommendation by B. Fry.	
301	6F.88 05	05 For long-term stationary operations, pavement markings in the temporary traveled way that are no longer applicable shall be 100 percent removed or obliterated as soon as practical	CO WZS removed from 100 percent from WAPM. This is covered in Section 512 of the Road & Specifications.	

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302	6F.88 05	and shall be in compliance with Section 512 of the Road and Bridge Specifications ² .	Added reference to Section 512	
303	6F.89 05	05 Temporary delineation may be provided by the use of flexible temporary pavement markers (FTPMs) for up to ten consecutive days	Initial CO WZS added FTPMs may be used as directed by the Engineer	
304	6F.89 05	for up to ten consecutive days as directed by the Engineer ¹ , see VDOT special provision for application details.	Initial CO WZS added FTPMs may be used as directed by the Engineer	
305	6F.89 05	FTRMs may be used on final surfaces on long-term projects to complete paving and striping operations up to five consecutive days as directed by the Engineer.	CO WZS added FTPMs may be used as directed by the Engineer on construction project up to five consecutive days.	
306	6F.89 06-09	<p>Standard:²</p> <p>06 Eradication of pavement markings shall be performed to minimize damage to the roadway surface as well as provide a safe travel way for road users, including, but not limited to, motorcyclist and bicyclist. Damaged roadway or deterioration of the pavement surface caused by eradication shall be repaired as direct by the Engineer.</p> <p>07 Transverse crosswalk lines shall be a minimum of 6 inches wide and shall be used on long-term projects, see TTC-36 and refer to the Virginia Department of Transportation Work Zone Pedestrian and Bicycle Guidance document.</p> <p>08 When used in conjunction with a transverse crosswalk, yield lines shall be 24" x 36" and supported by YIELD HERE TO PEDESTRIANS (R1-5) sign, see TTC-36 & Figure 3B-16(b) of the Virginia Supplement to the 2009 MUTCD.</p> <p>Option:²</p> <p>09 Transverse crosswalk lines may be supplemented with a yellow 6 inch wide temporary detectable warning strip, refer to the Virginia Department of Transportation Work Zone Pedestrian and Bicycle Guidance document.</p>	CO WZS added information about transverse crosswalk lines per January 31, 2017 FAQ.	
307	6F.93 06	06 If glare from standard types of floodlight equipment cannot be eliminated, then consideration should be made for the use of non-glare lighting devices such as non-glare air-filled lighting devices or anti-glare shields. ¹	Initial CO WZS revision addition for clarity.	

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308	6F.95	Vehicle Warning Lights	Initial CO WZS revision, 2011 WAPM included a Table specifying intensity of lighting system. Table was deleted due to lack of a device to measure light intensity.	
309	6F.95 02	02 The use of high intensity white rotating, flashing, or oscillating lights ¹ of any kind positioned anywhere ² is reserved for emergency response vehicles and school buses only in the Commonwealth and shall not be used on construction/maintenance vehicles.	Initial CO WZS revision, deleted reference to strobe lights. CO WZS no white lights of any type positioned anywhere so it is brought to the forefront to attempt to reduce the misuse of white lights and explain why white lights are not allowed CO WZS relocated this paragraph to the forefront to attempt to reduce the misuse of white lights.	
310	6F.95 03	03 Non-flashing white light(s) mounted on the back of a vehicle, TMA vehicle or a piece of equipment shall not be directed toward oncoming traffic ² .	CO WZS work zone reviews found problems with white lights shining toward oncoming traffic.	
311	6F.95 04	04 Vehicle warning lights shall be a high intensity amber rotating, flashing, or oscillating ¹ light or combinations of and meet the following conditions:	Initial CO WZS revision, deleted reference to strobe lights.	
312	6F.95 04	Sealed beams shall have a flash rate of 75 to 135 flashes per minute.	Initial CO WZS revision, changed flash rate from "80-100" to match current devices. Flash rate within MUTCD guidance.	
313	6F.95 05	such as mowers (including zero turn), motor graders, etc. and on equipment with rollers or wheels by June 2020. ²	CO WZS to better define added mowers, zero turn mowers, motor graders and equipment with rollers or wheel for warning lights.	

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314	6F.95 06	06 During day and 2 night operations, work vehicles entering and exiting the work area shall be equipped with and have operating at least one high intensity amber rotating, flashing, or oscillating light visible from 360 degrees.	Initial CO WZS revision to comply with 2009 MUTCD. CO WZS changed the day and nighttime amber warning light requirement to a Standard statement from a guidance. Initial CO WZS revision deleted "strobe."	
315	6F.95 06	Option: If the work operation vehicle in a moving/mobile operation is a motorized piece of equipment, such as a motor grader, grad-all, etc., warning lights may be optional.	CO WZS removed because most all equipment now has vehicle warning light	
316	6F.95 07	the Regional District 2 Traffic Engineer	CO WZS delete Regional replace with District.	
317	6F.95 07	Any field adjustments or changes to the temporary traffic control signal shall be in compliance with Section 5121 of the Road and Bridge Specifications prior to implementation.	CO WZS added field adjustments or changes shall comply with 512 (j) per January 31, 2017 FAQ. CO WZS this subheading may change in the future so reduce future change.	
318	6F.95 17	When the temporary traffic control signals are used on a long-term project four (4) drums shall be used to form the taper.	CO WZS added delineation requirement for channelizing devices per January 31, 2017. Eliminated cone requirement later during review.	
319	6F.96 06	selected from VDOT's Approved Products list	Initial CO WZS revision based on NRO: requested adding statement. CO TE agrees.	
320	6F.98 04	When a non-redirective crash cushion (impact attenuator) is used a CRASH AREA KEEP CLEAR (W0-V1) sign shall be installed as directed by the plan assembly (see IIM-LD-222).	Initial CO WZS revision to comply with new L&D impact attenuator guidance. Added "see IIM-LD-222" per Old Dominion Highway Contractors Association and Virginia Asphalt Association.	
321	6F.98 06	shall remain in place for no more than 24 hours after the initial scene response.	Initial CO WZS revision, 10/29/2014, limits the use of TMA to protect fixed objects to emergencies.	

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322	6F.98 07	07 The rear panel of the TMA cushion shall have alternate 6 to 8-inch wide orange and black or yellow and black1 chevron (inverted v) stripes. Stripes shall be sloped at a 45 degree angle downward in both directions from the upper center of the rear panel. Fluorescent orange or yellow retroreflective sheeting1 shall be in compliance with Section 247 of the Road and Bridge Specifications.	Initial CO WZS revision to comply with current field practice.	
323	6F.98 08	and installed as tested per NCHRP350/Mash Test Level 3 criteria1	Initial CO WZS revision added installation guideline for clarity per CO WZS and B. Green comment.	
324	6F.98 10	These shadow vehicles are normally equipped with flashing arrows, changeable message signs, and/or high-intensity rotating, oscillating, or flashing1 lights located properly in advance of the workers and	Initial CO WZS revision to comply with current industry practice.	
325	6F.98 11	B. On shoulders of multilane roadways with a posted speed of 45 mph or greater for operations with a duration greater than 60 minutes2	CO-TE added to match TTC-4	
326	6F.98 11	E. For planned work operations involving snooper trucks or bucket trucks regardless of the posted speed limit;2	Personnel working on a Snooper and bucket trucks are vulnerable.	
327	6F.98 11	the Regional District2 Traffic Engineer	CO WZS delete Regional replace with District.	
328	6F.98 20	All other1 material and/or equipment on the shadow vehicle TMA shall be properly secured to prevent spillage if struck by an errant vehicle.	Initial CO WZS revision for clarity by replacing "all" with "all other."	
329	6F.99 01	01 Portable Temporary Rumble Strips (PTRS) is a transverse rumble strip that consists of intermittent, narrow, transverse areas of rough-textured or slightly raised or depressed surface that extends across the travel lane to alert drivers to unusual vehicular traffic conditions. Through noise and vibration they attract the driver's attention to such features as unexpected changes in alignment and to conditions requiring a stop. The PTRS can be quickly installed and removed.1	Initial CO WZS revision added PTRS and replaced "consist" with "consists" per the comment from Comcast.	

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Item	Section	Suggested Revision / Supplement Comment	Comment	Technical Logistics of Change
330	6F.99 01	If it is desirable to use a color other than the color of the pavement for a longitudinal rumble strip, the color of the rumble strip shall be the same color as the longitudinal line the rumble strip supplements.	Delete	
331	6F.99 02	meet the requirements of the Road and Bridge Specification, Section 5122	CO WZS added reference to R & B Specification Section 512.	
332	6F.99 03	black or white. 2 or orange.	CO WZS deleted orange due to run a rounds.	
333	6F.99 05	05 PTRS shall not be used on loose gravel, bleeding asphalt, heavily rutted pavements or unpaved surfaces, nor shall they be placed through pedestrian crossings or marked bicycle lanes. PTRS are not required if the work is of emergency nature, or if the work zone is in rain, snow or icy weather conditions. ²	CO WZS transferred IIM-TE-386.1.	
334	6F.99 06-07	06 have a recessed, raised or grooved design prevent movement and hydroplaning. The PTRS shall consist of interlocking or² hinged segments that prevent separation and shall be installed without the use of adhesives or fasteners.¹ 07 PTRS shall be used in arrays of three rumble strips spaced 10 to 20 ² feet center to center, placed transverse across the travel lane. Incidental movement of the PTRS shall be parallel with other rumble strips in an array but shall not move so that its placement compromises the performance and safety of the other rumble strips, workers or the traveling public. ¹	Initial CO WZS added PTRS	
335	6F.99 06	and shall be installed.	Initial CO WZS revision added per the comment from Comcast.	
336	6F.99 07	10 to 20 ²	CO WZS changed based on industry spacing.	

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337	6F.99 06-07	<p>06 have a recessed, raised or grooved design prevent movement and hydroplaning. The PTRS shall consist of interlocking or 2 hinged segments that prevent separation and shall be installed without the use of adhesives or fasteners.¹</p> <p>07 PTRS shall be used in arrays of three rumble strips spaced 10 to 202 feet center to center, placed transverse across the travel lane. Incidental movement of the PTRS shall be parallel with other rumble strips in an array but shall not move so that its placement compromises the performance and safety of the other rumble strips, workers or the traveling public.¹</p>	CO WZS is moving this information to the R&B Specifications.	
338	6F.99 08	08 PTRS shall be used on roadways using flaggers that meet the conditions in paragraph 4 (see TTC-23, TTC-24, TTC-28, TTC-31, and TTC-67) ² .	CO WZS added references to TTCs for flagging operations.	
339	6F.99 09	<p>Guidance²:</p> <p>09 Portable Temporary Rumble Strips (PTRS) should be:</p> <p>a. Considered for use on unmarked two-lane roadways at least 18 feet wide or wider.</p> <p>b. Located in advance of horizontal curves when possible so they are visible to approaching motorists.</p> <p>c. Installed using Section 6G.25 Installing/Removing Temporary Traffic Control devices.</p> <p>10 PTRS should be used when flaggers are controlling a signalized intersection (see TTC-30).</p>	CO WZS added guidance statement for signalized intersection using flaggers to control traffic.	
340	6F.99 12	12 PTRS may be used on multi-lane roadways (see TTC-16, TTC-17, TTC-18, TTC-19, and TTC-33). Other TTC layouts may be modified using TTC-16, TTC, 17 or TTC-19 ²	CO WZS add option statement to PTRS use on multilane roadways and using TTC-16 – 18 to modify other drawings.	
341	6F.99 13	13 Long-term ²	CO WZS clarify the use of long-term transverse markings.	
342	6F.100 03	<i>see TTC-44.</i> ²		
343	6G.02 02	(72 consecutive hours) ²	CO WZS clarifies 3 days with 72 consecutive hours to match other areas in the VWAPM.	

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344	6G.02 02	(or non-stationary operations) ²	CO WZS to define a non-stationary operation as well as other short-term operations.	
345	6G.02 02	E. Mobile is work that moves intermittently (1 to 15 minutes) ¹ or continuously	Initial CO WZS revision for clarity. Nw Region recommends that 1000' distance to be covered be added. C.O. WZS does not accept at the present time (future discussion).	
346	6G.02 11	amber high-intensity rotating, flashing, or ¹ oscillating lights	Initial CO WZS revision by deleting "strobe" to match current industry practice.	
347	6G.02 13	amber high-intensity rotating, flashing, or ¹ oscillating lights	Initial CO WZS revision by deleting "strobe" to match current industry practice.	
348	6G.02 13	These simplified temporary traffic control procedures are shown in TTC-3, Mobile or Short Duration Shoulder Operations and TTC-15 Short Duration Operation on a Multi-Lane Roadway ²	CO WZS at the request of Lynchburg District ask for clarification on the use of minimum TTC devices.	
349	6G.02 14	Standard: ² 14 Modifications to standard TTC figures for short-duration operations require approval from the District Traffic Engineer	CO WZS at the request of Lynchburg District ask for clarification on the use of minimum TTC devices.	
350	6G.02 16	16 Vehicle mounted ²	CO WZS clarified vehicle mounted warning signs are to be used in mobile operations.	
351	6G.02 16	shown in Chapter 6H (LINE PAINTING NEXT 5 MILES, SPRAYING NEXT 5 MILES, MOWING NEXT 2 MILES, etc.) ²	CO WZS clarified vehicle mounted warning signs are to be used in mobile operations.	

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352	6G.02 16	amber high-intensity rotating, flashing, or 1 oscillating lights	Initial CO WZS revision by deleting "strobe" to match current industry practice.	
353	6G.02 22	amber high-intensity rotating, flashing, or 1 oscillating lights	Initial CO WZS revision by deleting "strobe" to match current industry practice.	
354	6G.02 24	amber high-intensity rotating, flashing, or 1 oscillating lights	Initial CO WZS revision by deleting "strobe" to match current industry practice.	
355	6G.02 26	amber high-intensity rotating, flashing, or 1 oscillating lights	Initial CO WZS revision by deleting "strobe" to match current industry practice.	
356	6G.06 03	a+C404	Initial CO WZS revision by deleting "strobe" to match current industry practice.	
357	6G.07 10	all planned work operations involving snooper trucks or bucket trucks regardless of the posted speed limit. ²	Personnel working on a Snooper and bucket trucks are vulnerable.	
358	6G.08 05	2A lane width of 10 feet may be used for work activities located on entrance and exit ramps of Limited Access highways.	CO WZS deleted ramp width of 10 and replaced with Guidance statement of 14 feet width.	
359	6G.08 08	Guidance: 08 Truck off-tracking should be considered when determining whether the minimum entrance and exit ramps width of 14 feet is adequate.	CO WZS vehicle tracking of ramps verify trucks do not track into activity area.	
360	6G.10 02	6E.08, and 6F.932	Added from January 31, 2017 FAQ document.	
361	6G.10 06	Support: 06 When a work zone on a two-lane highway transitions to a multi-lane highway the temporary traffic control continues as a two-lane highway. Lane closure signs and arrow boards typically used for temporary traffic control on multi-lane highways are not needed. ¹	CO WZS added paragraph to resolve work zone traffic control issues when a two-lane road transitions to a multi-lane road.	

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362	6G.11 14	amber high-intensity rotating, flashing, or1 oscillating lights	Initial CO WZS revision by deleting "strobe" to match current industry practice.	
363	6G.14 16	as shown in Figure TTC-672	CO WZS added reference to TTC-67	
364	6G.17 04-06	<p>04 When the center lane of a multi-lane roadway must be closed for work activities, an additional adjoining lane on one side shall be closed such that through traffic is not split around the work area (see Figure TTC-18).2</p> <p>05 If the center lane closure must encroach on the remaining lanes, a minimum 11 foot travel lane(s) shall be maintained.2</p> <p>06 A center lane shall not be closed when work is only being performed in an adjacent lane unless the lane closure encroached into the center lane resulting is a travel lane width of less than 11 feet.2</p>	Added by July 2017 FAQ. Replaces Voided/sunset TED 342. Renumbered remaining paragraphs.	
365	6G.17 07	for short-term and intermediate-term stationary operations.2. When the capacity of the other lanes is needed, the method shown in Figure 6H-38 in Chapter 6H of the 2009 MUTCD should be used for long-term operations.2	Added both application statements on the length of operations to the paragraph per July 2017 FAQ.	
366	6G.18 04	<p>Standard:2</p> <p>04 To avoid conflicts with disabled vehicles and construction equipment the pull-off areas shall not be used as construction ingress/egress points.2</p>	CO WZS added to eliminate conflict between disabled vehicles and heavy equipment; added based on field review problems.	
367	6G.18 11-12	<p>Standard:2</p> <p>11 Pull-off areas shall be a paved surface defined by barrier or outlined by temporary pavement markings and drums as shown in TTC-8.</p> <p>12 Pull-off area shall be maintain free of debris and other roadway materials.</p>	CO WZS added based on field review problems.	
368	6G.19 02	barriers2 (concrete safety shape or approved alternate),	CO WZS deleted concrete safety shape or approve alternate. Temporary traffic barrier covers concrete and alternate barriers.	

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369	6G.19 04	the Regional District2 Traffic Engineer	CO WZS delete Regional replace with District.	
370	6G.20 01	G. Non-glare roadway lighting should be considered at crossover locations.	CO WZS added because roadway lighting improves motorists visibility at crossovers.	
371	6G.21 02-04	Standard:2 02 For shorty-term projects, a taper (full L length) with drums shall be used to delineate the left side of a right exiting ramp and on the right side of left exiting ramp. Cones shall be used on the opposite side of the taper, see TTC-37. If the work is unmanned, drums shall be used.2 03 On all projects, early coordination with officials having jurisdiction over the affected cross streets and providing emergency services shall occur before ramp closings.2 04 For long-term projects, relocated interchange ramps on limited-access highways shall have conflicting pavement markings and markers removed. The ramps access point shall be identified with pavement markings and pavement markers. 2	CO WZS added drums requirement due to improper use during field reviews; changed ramp notification to a shall condition as well as added pavement markers to long-term projects to improve motorists guidance to ramp access point.	
372	6G.22 03	the Regional District2 Traffic Engineer	CO WZS delete Regional replace with District.	
373	6G.24 03	the Regional District2 Traffic Engineer	CO WZS delete Regional replace with District.	
374	6G.24 03	or their designee1	Co WZS revision (added) for clarity.	
375	6G.24 05	the Regional District2 Traffic Engineer	CO WZS delete Regional replace with District.	
376	6G.24 08	08 A control vehicle (contractor, public agency1, or VSP) shall occupy each travel lane of the route affected	Co WZS replaced "state" with 'public agency" for clarity.	

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377	6G.24 10	10 On Limited Access highways the slow roll procession shall enter from the nearest entrance ramp to where the slow roll begins. On other roadways the slow roll operation begins at a staging point. All vehicle warning lights are activated and the TMAs shall be deployed and travel at the recommended speed of the TMA manufacturer. The slow roll procession shall occupy the right lane with the shadow vehicle leading and the TMA vehicles follow. The TMA vehicles shall safely move into the adjacent lane(s) until all lanes are closed while traveling at the recommended speed. Once all lanes are controlled, the shadow vehicle separates from the procession and follows the last motorist to the activity area to signify that the roadway is closed and free of approaching motorist. The TMA vehicles gradually reduce their speeds to a minimum of 10 miles per hour. ²	CO WZS added information to clarify staging and starting slow roll operations and reducing speed of the motorists.	
378	6G.25	Installing/Removing Temporary Traffic Control	Initial CO WZS revision to paragraphs 1 through 11 rewritten for clarity.	
379	6G.25 01	Care must be exercised when installing and removing temporary traffic control devices	Initial CO WZS revision by deleting all other sentences in paragraph.	
380	6G.25 02	02 The acts of installing and removing TTC on a two-lane roadway should begin as a non-stationary flagging operation using a flagger ² , a shadow vehicle, and a work operations vehicle.	Initial CO WZS revision. CO WZS addition per recommendation of M. Lipschultz.	
381	6G.25 02	02 The acts of installing and removing TTC on a two-lane roadway should begin as a non-stationary flagging operation using a flagger ² , a shadow vehicle, and a work operations vehicle.	Replaced "temporary traffic control spotter" with "flagger" per January 31, 2017 FAQ.	
382	6G.25 03	03 On a two-lane roadway, when a shadow vehicle is not available the work operations vehicle may act as a shadow vehicle to protect workers installing and removing TTC devices.	Initial CO WZS revision. CO WZS added per recommendation from M. Lipschultz.	
383	6G.25 04	04 On a two-lane roadway, where pull off areas are limited, a flagger ² using a STOP/SLOW paddle, ² and proper flagger procedures should temporarily stop traffic	Replaced "temporary traffic control spotter" with "flagger" per January 31, 2017 FAQ.	

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384	6G.25 04	04 On a two-lane roadway, where pull off areas are limited, a flagger,1,2 using a STOP/SLOW paddle1,2 and proper flagger procedures should temporarily stop traffic while advanced warning signs and additional2 TTC devices are being installed.	Replaced "temporary traffic control spotter" with "flagger" per January 31, 2017 FAQ. Initial CO WZS revision. Added per 11/18/14 review. Nw Region recommends adding language that the red-orange flag be reflectorized. Not accepted by C.O. WZS, this requirement is covered in Section 6E.10, Paragraph 02.	
385	6G.25 04	04 On a two-lane roadway, where pull off areas are limited, a flagger,1,2 using a STOP/SLOW paddle1,2 and proper flagger procedures should temporarily stop traffic while advanced warning signs and additional2 TTC devices are being installed.	Replaced " a red or red-orange1 flag' with "STOP/SLOW paddle" per January 31, 2017 FAQ.	
386	6G.25 04	04 On a two-lane roadway, where pull off areas are limited, a flagger,1,2 using a STOP/SLOW paddle1,2 and proper flagger procedures should temporarily stop traffic while advanced warning signs and additional2 TTC devices are being installed.	Added per January 31, 2017 FAQ	
387	6G.25 04	After the advanced warning area is installed, the flagger occupies the flagger station while the channelizing devices are installed. The advanced warning signs are installed in the opposite direction then the flagger is positioned at their flagger station.	Added sentence and deleted "The TTC Spotter1 moves with the operation or can be stationary. At nighttime, road flares, a red glow-cone flashlight, or a red traffic wand can be used to increase the visibility of the flagger" per January 31, 2017.	
388	6G.25 05	05 The flagger1 moves with the operation or can be stationary. At nighttime, road flares, a red glow-cone flashlight, or a red traffic baton/wand can be used to increase the visibility of the flagger. 1,	Replaced Option statement in Paragraph 05 with the last two sentences from previous guidance statement per January 31, 2017 FAQ.	
389	6G.25 06	06 The flagger shall2 remain highly visible to oncoming traffic at all times	Replaced TTC spotter must with flagger shall per 1/31/17 FAQ.	

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390	6G.25 07-08	<p>07 When a work operations vehicle acts as shadow vehicle, two TTC Spotters should be used. One TTC Spotter</p> <p>1: Revision 1 – 4/1/2015 2: Revision 2 – 6/1/2019</p> <p>08 to control traffic and the other to alert co-workers who are installing and removing TTC of approaching traffic and control traffic when necessary.1,2</p>	<p>Deleted “a TTC Spotter should be used in addition to the Traffic” replaced with “two TTC Spotters should be used”. Added additional TTC Spotter to control traffic. Recommendations per 11/18/2014 review.</p> <p>Changed Guidance statement to an Option statement per January 31, 2017 FAQ.</p> <p>Initial CO WZS revision. Sw-Salem: The paragraph 07 and paragraph 09 contradicts each other as it relates to operational and work vehicles. CO TE added multi –lane roadway to paragraph 09 to clarify the difference between two-lane roadway (paragraph 07) and a multi-lane roadway requirements and options.</p>	
391	6G.25 09	operation (for an example, see TTC-13) 1,2	<p>Initial CO WZS revision. CO WZS addition per G. Quinn recommendation.</p> <p>Replaced TTC-62 with TTC-13 per January 31,2017 FAQ.</p>	
392	6G.25 10	10 On a multi-lane roadway the work operations vehicle may be equipped with a TMA; however it must also be protected by a shadow vehicle equipped with a TMA (for an example, see TTC-13).1,2	<p>Initial CO WZS revision. Sw-Salem: The paragraph 07 and paragraph 09 contradicts each other as it relates to operational and work vehicles. CO TE added multi –lane roadway to paragraph 09 to clarify the difference between two-lane roadway (paragraph 07) and a multi-lane roadway requirements and options.</p>	
393	6G.25 10	for an example, see TTC-13) .1,2	<p>Replaced TTC-62 with TTC-13 per January 31,2017 FAQ. Initial CO WZS revision. CO WZS addition per G. Quinn recommendation.</p>	
394	6G.25 10	10 On a multi-lane roadway the work operations vehicle may be equipped with a TMA; however it must also be protected by a shadow vehicle equipped with a TMA (for an example, see TTC-13) .1,2	<p>Replaced Option statement with a Guidance statement and added reference to TTC-13 per January 31. 2017.</p>	
395	6G.25 11-12	<p>11 On a multilane roadway TTC devices shall not be stored, installed or removed from a shadow vehicle or a shadow vehicle with a TMA. Temporary traffic control devices shall be stored, installed or removed from a work operation vehicle. 1</p> <p>12 When a shadow vehicle on a multilane roadway is unable to be positioned on the shoulder and is partially or fully in the travel lane it shall be equipped with a TMA when the posted speed limit is 45 mph or greater.1</p>	<p>Initial CO WZS revisions.</p>	

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396	6G.25 15	<p>Option:2 15 When a trailer mounted TMA is used all TTC devices may be removed with the flow of traffic for a stationary lane closure on a multi-lane roadway in the following sequence:2 A. Remove or deactivate the arrow board. If the arrow board is not removed it must be delineated with four channelizing devices. 2 B. Remove the channelizing devices with the flow of traffic starting at the merging taper and continue to remove the remaining channelizing devices through the termination area. Remove the END ROAD WORK sign adjacent to the lane.2 C. Remove the advanced warning signs.2 D Remove the arrow board and its delineation if necessary.2</p>	CO WZS at the request of maintenance forces an option statement was developed to remove TTC devices with the flow of traffic when a trailer mounted TMA is used.	
397	6G.25 20	<p>Support:1 20 For activities where a TMA will not be required in the operation, such as work beyond the shoulder (TTC-1.0), litter removal or mowing (non-Limited Access) off of the travelway and shoulder, surveying operations (TTC-49.0), or logging operations (TTC-63.) as examples, a shadow vehicle with a TMA will not be required since the placement of warning signs for these operations can be performed quickly with no further use of the TMA vehicle needed. 1</p>	CO WZS revision. Statement added for clarity.	
398	6G.26 10	<p>10 A PCMS may be placed up to 1 mile in advance of the advance warning signs, with the message NIGHT WORK AHEAD, to supplement the advance warning signs.1</p>	CO WZS revision for additional guidance.	
399	6G.27 02-03	<p>Standard:2 02 Ingress points shall be designed so heavy trucks can exit traffic and decelerate safely into the activity area. Egress points must be designed so loaded trucks can accelerate to roadway speeds and merge safely into traffic. Trucks shall not track debris onto the roadway at egress points.2 03 Limited Access highway egress points shall use a detectable system that warns motorist of trucks entering highways.2</p>	CO WZS added acceleration and deceleration requirements and detectable systems that warn motorist of truck entering highways.	
400	Table 6G-1	<p>Intersection Sight Distance (ISD) in Feet for Construction Entrances2</p>	Replaced the old table with one line of distances with current table from the Road Design Manual per January 31, 2017 FAQ.	

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401	6G.27 14-15	<p>14 The spacing of work area ingress/egress should be as follows:</p> <p>a. For projects with activity areas up to 2.0 miles in length, one every 0.5 to 0.75 mile.</p> <p>b. For projects with activity areas greater than 2.0 miles in length, one every mile.</p> <p>15 Work area ingress/egress should be a minimum of 1320 feet long. The width of ingress/egress areas should be a desirable distance of 15 feet.</p>	CO WZS revision for additional guidance.	
402	6G.27 16	16 During day and 1 night operations, work vehicles entering and exiting the work area should be equipped with and have operating at least one high intensity amber rotating, flashing or 1 oscillating light visible from 360 degrees	Added to match revision to 6F.92.	
403	6G.27 16	amber high-intensity rotating, flashing, or 1 oscillating lights	CO WZS revision to match current industry practice.	
404	6G.27 18	18 The width of the work area ingress/egress may be reduced to a minimum of 12 feet on roadways with Right-of-Way constraints.	CO WZS revision for additional guidance (Paragraphs 8 through 10).	
405	6G.27 19	with a 48" DO NOT ENTER (R5-1) sign ²	CO WZS add description to match Appendix A, Figure 5 as well as statement to assign a person to closure access points and construction entrances at the end of the work day.	
406	6G.27 19	19 Type 3 barricades with a 48" DO NOT ENTER (R5-1) sign ² shall be used to close or partially close work access points or construction entrances. ¹ The responsibility for ensuring the placement of Type 3 Barricades shall be assigned to a person who will ensure proper closure at the end of each work day. ²	CO WZS added paragraph per G. Quinn recommendation.	
407	6G.27 20	2 or WORK VEHICLE DO NOT FOLLOW (G20-V1)	CO WZS removed obsolete Work Vehicle Do Not Follow sign.	

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