

Technical Changes in Revision 1 of the 2011 Virginia Work Area Protection Manual

- In January 2012, the 2011 Virginia Work Area Protection Manual, Part 6 of the 2009 MUTCD, became effective.
- This table provides an overview of technical changes between Revision 1 of the 2011 Virginia Work Area Protection Manual and the original version.
- The effective date of Revision 1 of the 2011 Virginia Work Area Protection Manual is: January 1, 2015 for day-to-day operations and July 1, 2015 for projects advertised for bid on or after that date.
- The 2011 Virginia Work Area Protection Manual is a living document, and will be updated over time. For the most recent version of the Work Area Protection Manual please visit http://www.virginia.gov/business/resources/wztc/Virginia_WAPM_2011_web.pdf.

CHAPTER	SECTION NUMBER	SECTION TITLE	NEW TABLE/FIGURE /PARAGRAPH NUMBER	TABLE / FIGURE TITLE	REVISION TOPIC	SIGN CODE	REVISION DESCRIPTION
6A	6A.03	Definitions of Words and Phrases in This Manual	Paragraph 01, Definition 24		Limited Access Highway		Changed "...easement or right of way, air, or access..." to: "... easement or right of light ¹ , air, or access..." to match the Virginia Supplement to the MUTCD.
			Paragraph 01, Definition 33		Portable Temporary Rumble Strips (PTRS)		Added definition for Portable Temporary Rumble Strips (PTRS). Renumbered remaining definitions.
	6A.04	Meanings of Acronyms and Abbreviations in this Manual	Paragraph 01, Acronym/Abbreviation 26		Portable Temporary Rumble Strips (PTRS)		Added Acronym/abbreviation for Portable Temporary Rumble Strips (PTRS). Renumbered remaining Acronym/abbreviation.
6B	6B.01	Fundamental Principles of Temporary Traffic Control	Paragraph 15		Removal of Traffic Control Devices		Clarified the statement by removing "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: "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, covered, or turned away 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. ¹ "

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6C	6C.03	Components of Temporary Traffic Control Zones	Figure 6C-1	Component Parts of a Temporary Traffic Control Zone	Shoulder Taper		Added shoulder taper dimension to the illustration.	
					Maximum Length of a Work Space		Added note.	
	6C.06	Buffer Space	Table 6C-2	Length of the Longitudinal Buffer Space	Buffer Space Distance for 25 mph		Replace 25 mph buffer space distance from "155-160" to "155-165 ¹ " to match Tables in 2012 Guidelines for Temporary Traffic Control ("pocket guide").	
	6C.07	Activity Area	Paragraph 05		Reference		Added reference to see Figure 6C-1	
	6C.08	Termination Area	Paragraph 02					Upgraded the existing Option statement: "An END ROAD WORK sign, a Speed Limit sign, or other signs may be used to inform road users that they can resume normal operations", to a Guidance statement: "An END ROAD WORK sign should be used to inform road users that they can resume normal operations as determined by engineering judgment. ¹ "
			Paragraph 04			Signs at the Termination Area		Added the standard statement: " 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)" to clarify the application of the required signs.

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6C	6C.09	Tapers	Paragraph 11		Shoulder Tapers		Deleted Support statement: "A shoulder taper may be beneficial on a high-speed roadway where shoulders are part of the activity area and are closed, or when improved (paved) shoulders or parking lane might be mistaken as a driving lane. In these instances, the same type, but abbreviated, closure procedures used on a normal (travel) portion of the roadway can be used. " and replaced with Standard statement: " 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 "
			Figure 6C-2	Examples of Types of Tapers and Buffer Spaces	Activity Area		Replaced "Work Zone" with "Activity Area" ¹ to match description in Section 6C.07. Revised the note to: L= 4 X Speed Limit in Feet.
			Table 6C-4	Taper Length Chart	Taper Length for 10 and 11 Foot Offset Widths at 40 mph		Replace 40 mph Taper Length for 10 and 11 Foot Offset Width distances from "267 and 294" to "270 ¹ and 295 ¹ " respectively.
			Figure 6C-3	Examples of a One-Lane, Two-Way Traffic Taper	Activity Area		Replaced "Work Zone" with "Activity Area" ¹ to match description in Section 6C.07.

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6D	Section 6D.03	Worker Safety Considerations	Paragraph 04		Safety Apparel		<p>In the first sentence replace "Until" with "Since¹". Replaced "Performance Class 2 or 3 requirements of the ANSI/ISEA 107–2004 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 107-2004 standard performance for Class 2 or 3", with: "...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 3¹..."</p>

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6D	Section 6D.03	Worker Safety Considerations	Paragraph 05		Safety Apparel Head Protection		Deleted "Beginning July 1, 2012, all workers, including emergency responders, media, towing and recovery personnel and others within the right-of-way who are either exposed to traffic or to 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 risk exposure, except as provided in Paragraph 7". Added "VDOT employees shall display four – 4" x 1" strips for a total of 16 square inches of retro-reflective material on their head protection. The retro-reflective shall be placed with three strips on the head wear as to be visible for 360° and one strip on the top of the head wear. Non-VDOT personnel are recommended to display a minimum of 10 square inches of retro-reflective material placed on the head wear as to be visible for 360° and visible on the top of the headwear.", for compliance with VDOT Health and Safety Division memorandum.
			Paragraph 06		Safety Apparel		In the first sentence replace "Until" with "Since ¹ ".

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6D	Section 6D.03	Worker Safety Considerations	Paragraph 07		Safety Apparel		Added the Support statement: " Class E trousers are defined as waistband trousers, bib overalls, and shorts that all minimum requirements of the ANSI/ISEA 107-2010 publication." Renumbered the remaining paragraphs.
			Paragraph 12		Safety Apparel		Added the Standard statement: "All apparel shall be securely fastened such that the retroreflectivity is visible for360° around the wearer." Renumbered the remaining paragraphs.
6E	6E.01	Qualifications for Flaggers	Paragraph 03		Recertification		Edited the existing statement: "A flagger shall be recertified every two years if the flagger is certified by the VDOT Flagger Certification Program or every three years if the flagger is certified by the ATSSA Flagger Certification Program.", to" Recertification is required every four years if the flagger is certified by the VDOT Basic and Intermediate Work Zone Traffic Control Training course or by the ATSSA Flagger Certification Program. ¹ "
	6E.02	High-Visibility Safety Apparel	Paragraph 03		Safety Apparel		In the first sentence replace "Until" with "Since ¹ ". Replaced "Performance Class 2 or 3 requirements of the ANSI/ISEA 107–2004 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 107-2004 standard performance for Class 2 or 3", with: "...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 ..."

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6E	6E.02	High-Visibility Safety Apparel	Paragraph 04		Safety Apparel Head Protection		Deleted "Beginning July 1, 2012, all workers, including emergency responders, media, towing and recovery personnel and others within the right-of-way who are either exposed to traffic or to 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 risk exposure, except as provided in Paragraph 7". Added "VDOT employees shall display four – 4" x 1" strips for a total of 16 square inches of retro-reflective material on their head protection. The retro-reflective shall be placed with three strips on the head wear as to be visible for 360° and one strip on the top of the head wear. Non-VDOT personnel are recommended to display a minimum of 10 square inches of retro-reflective material placed on the head wear as to be visible for 360° and visible on the top of the headwear.", for compliance with VDOT Health and Safety Division memorandum.
			Paragraph 05		Safety Apparel		In the first sentence replace "Until" with "Since ¹ ".
			Paragraph 06		Safety Apparel		Added the Support statement: " Class E trousers are defined as waistband trousers, bib overalls, and shorts that all minimum requirements of the ANSI/ISEA 107-2010 publication." Renumbered the remaining paragraphs."

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6E	6E.03	Hand Signaling Devices	Paragraphs 10		Flags		Revised Paragraph 10 by adding: " 24 x 24 ¹ inches" and "...is 1 to 1¼ inches in diameter and ¹ approximately..."
			Paragraph 12				Revised Paragraph 12 by adding "...nighttime, both sides of the ¹ flags shall be retroreflectORIZED orange/red in color ¹ ."
	6E.04	Automated Flagger Assistance Devices	Paragraph 13		AFAD Methods		Defined Methods 1 and 2 from an AFAD at both ends and an AFAD and flagger at each end respectively to: "A. An AFAD at each end of the TTC zone using Stop/Slow signs (Method 1). B. An AFAD at each end of the TTC zone using Red/Yellow Lens (Method 2)."
			Paragraph 14		AFAD Methods		Replaced the Standard: "Except as provided in Paragraph 15, two flaggers shall be used when using either Method 1 or Method 2" with: "Two AFADs shall be used to control one-lane, two-way traffic as illustrated in Figures 6E-1 and 6E-2 ¹ " to correspond with the requirements in the revised Paragraph 13.
			Paragraph 15		AFAD Methods		Deleted the Option statement: "A single flagger may simultaneously operate two AFADs (Method 1) or may operate a single AFAD on one end of the TTC zone while being the flagger at the opposite end of the TTC zone (Method 2) if both of the following conditions are present: A. The flagger has an unobstructed view of the AFAD(s), and B. The flagger has an unobstructed view of approaching traffic in both directions" to the Standard statement: "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 ¹ " to correspond with the requirements in the revised Paragraphs 13 and 14.

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6E			Figure 6E-1	Example of Use of a Stop/Slow Automated Flagger Assistance Device	Stop/Slow Automated Flagger Assistance Devices		Deleted all references to the required number of AFAD units and added certified flagger information to the Note. Revised the channelizing device note to: L= 4 X Speed Limit in Feet.
			Figure 6E-2	Example of Use of a Red/Yellow Lens Automated Flagger Assistance Device	Red/Yellow Lens Automated Flagger Assistance Devices		Deleted all references to the use of one AFAD unit and one flagger and added certified flagger information to the Note. Removed the flagger symbol and replaced with a Red/Yellow Lens AFAD symbol. Revised the channelizing device note to: L= 4 X Speed Limit in Feet.
			Figure 6E-4	Flagger Requirements Sheet 2 of 2	Flagger Station Sight Distances		Replaced the table listing specific distances for each posted speed with a table listing a range of distances for each posted speed.
	6E.08	Buffer Space	Table 6E-1	Length of the Longitudinal Buffer Space	Buffer Space Distance for 25 mph		Replace 25 mph buffer space distance from "155-160" to "155-165 ¹ " to match Tables in 2012 Guidelines for Temporary Traffic Control ("pocket guide").
6F	6F.02	General Characteristics of Signs	Table 6F-1	Temporary Traffic Control Zone Sign and Plaque Sizes Sheet 1 of 6	Traffic Control Signs	R1-V1 R2-V1	Added PROCEED WHEN WAY IS CLEAR (R1-V1) sign. Revised R2-V1, WORK ZONE \$500 MAX. FINE FOR EXCEEDING SPEED LIMIT WHEN FLASHING, sign to comply with §46.2-878.1 of the Code of Virginia.
				Temporary Traffic Control Zone Sign and Plaque Sizes Sheet 2 of 6	Traffic Control Signs	R10-15 W0-V1	Added TURNING VEHICLES YIELD TO PEDESTRIANS add CRASH AREA KEEP CLEAR signs.
				Temporary Traffic Control Zone Sign and Plaque Sizes Sheet 4 of 6	Traffic Control Signs	W20-V14 W20-V15 W20-V16 W20-V26 W20-V27	Added GROOVED PAVEMENT AHEAD, MEDIAN CROSSOVER CLOSED AHEAD, MEDIAN CROSSOVER CLOSED, RUMBLE STRIPS AHEAD, and EMERGENCY WORK AHEAD signs

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6F	6F.02	General Characteristics of Signs	Table 6F-1	Temporary Traffic Control Zone Sign and Plaque Sizes Sheet 5 of 6	Traffic Control Signs	W21-V18 W21-V19 E5-V3 E5-V4 G20-V1a G20-5aP(V)	Added ROAD PATCHING AHEAD, ROAD PATCHING X MILES, LEFT/RIGHT TURN LANE OPEN, AND LEFT/RIGHT TURN LANE CLOSED, WORK VEHICLE FREQUENT TURNS signs. Deleted the Virginia specific G20-5aP(V) WORK ZONE plaque.
				Height and Lateral Location of Signs – Typical Post-Mounted Installations	Ground-mounted Signs		For Typical A, added the 2' Max extension of the post above the top of the sign. For Typical C, deleted 9 foot minimum dimension. For Typical C and D, changed the 7 foot minimum dimension to 8 foot maximum. For Typical D, changed the location measurement for the bore hole from the edge of pavement projected to the finish grade below the holes. Changed the location measurement to and between the bore holes from the bottom/top of the holes to the centerline of the holes. Edited note by remove "STP-1" and adding "OR TEMPORARY SIGNS."
							Changed from: "...as provided in Paragraph 17..." to "...as provided in Paragraph 18 ¹ ..."
			Paragraph 20				Added "...fully extended and ¹ flush as possible to the ground or roadway surface for stability. " and the sentence "If the legs cannot be fully extended then they should be weighted per Paragraph 26. ¹ "
			Paragraph 21				Changed from: "...as provided in Paragraph 17..." to: "...as provided in Paragraph 18 ¹ ..." Replaced " ...a sand bag weighting approximately 25 pounds with "two (2) drum collar weights".
		Paragraph 26				Replaced " ...a sand bag weighting approximately 25 pounds with "two (2) drum collar weights".	

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6F	6F.04	Sign Maintenance	Paragraph 03		Covering Ground-mounted Signs		Clarified the standard by changed first sentence from: "Plywood shall be used on ground-mounted TTC signs only." to: "When used, plywood shall only be attached to ground-mounted TTC signs ¹ ."
			Figure 6F-2	Regulatory Signs and Plaques in Temporary Traffic Control (Sheet 1 of 2)	Traffic Control Signs	R1-V1 R2-V1 R3-20	Added R1-V1 sign. Revised R2-V1 sign, "Work Zone \$500 Max. Fine For Exceeding Speed Limit When Flashing." Added R3-20 sign
	6F.13	Work Zone \$500 Max. Fine For Exceeding Speed Limit When Flashing Sign	Paragraph 01		Traffic Control Sign for Exceeding the Speed Limit	R2-V1	Revised the title of this section from: "Notice Fines Up To \$500 for Exceeding Speed In Work Zone" to: "Work Zone \$500 Max. Fine For Exceeding Speed Limit When Flashing ¹ ." Added "Section §46.2-878.1 of the Code of Virginia 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".
			Paragraph 02				Revised the sign name from Notice Fines Up To \$500 for Exceeding Speed In Work Zone" to: "Work Zone \$500 Max. Fine For Exceeding Speed Limit When Flashing ¹ ."
			Paragraph 03				Replaced the word "NOTICE" with "WORK ZONE ¹ "
			Paragraph 06				Added paragraph "The flashing lights shall be remotely operated and activated only when workers are present in the work zone."
	6F.17	Special regulatory Signs	Paragraph 08				Added paragraph.

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6F	6F.18	Warning Sign Function, Design, and Application	Paragraph 14		Application of Warning Signs		Added standard statement: 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
	6F.21	Road (Street) Work Ahead Sign (W20-1), Road Work Next 2 Miles Sign (W21-V2), and Emergency Work Ahead Sign (W20-V27)	Paragraphs 12 through 16		Traffic Control Signs		Revised the title of this section by adding "Emergency Work Ahead (W20-V27) Sign. " Added Paragraphs 12 through 16 to define the application of the Emergency Work Ahead sign.
	6F.26	Lane(s) Closed Signs (W20-5, W20-5a) and Turn Lane(s) Closed Signs (W20-V13)	Paragraphs 04 ,05 and 06		Traffic Control Signs	W20-5, W20-5a, W9-3	Deleted Paragraphs 04 and 05. Deleted the optional signs and changed the required date of "December 31, 2012" to: "Required, July 1, 2014". Renumbered remaining paragraph.
	6F.28	Center (Left/Right) Lane Closed Ahead Sign (W9-3)	Paragraphs 02 and 03		Traffic Control Signs	W9-3	Deleted Paragraph 02. Deleted the optional sign and changed the required date of "December 31, 2012" to: "Required, July 1, 2014". Renumbered remaining paragraph.
			Figure 6F-3	Warning Signs and Plaques in Temporary Traffic Control (Sheet 1 of 5)	Traffic Control Signs	W0-V1	Added CRASH AREA KEEP CLEAR sign.
				Warning Signs and Plaques in Temporary Traffic Control (Sheet 3 of 5)		W20-V26 W20-V27	Added, RUMBLE STRIPS AHEAD, and EMERGENCY WORK AHEAD signs

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6F			Figure 6F-3	Warning Signs and Plaques in Temporary Traffic Control (Sheet 5 of 5)		G20-1(V) G20-2(V) G20-V2 G20-V3	Added Sheet 5 of and moved signs from Sheet 4.
	6F.38	Flagger Signs (W20-7a, W20-7), XX Feet Plaque (W16-VP3), and Slow Sign (W21-V10)	Paragraph 07		Traffic Control Signs	W20-7a, W20-7, W16-VP3, W21-V10	Deleted Paragraph 07. Deleted the optional sign and changed the required date of "December 31, 2012" to: "Required, July 1, 2014". Renumbered remaining paragraphs.
	6F.40	Motorized Traffic Signs - Truck Crossing Symbol (W11-10), Truck Crossing Sign (W8-6), Watch for Turning Vehicles Sign (W11-V3) Trucks Entering Highway Sign (W11-V4), and Construction Entrance Sign (W11-V2)	Paragraphs 05 and 06		Traffic Control Signs		Deleted the Option statement, Paragraph 06: " <u>The LOG TRUCKS ENTERING HIGHWAY sign may be used in lieu of the TRUCKS ENTERING HIGHWAY sign until December 31, 2012.</u> " Renumbered remaining paragraphs. LOG TRUCKS ENTERING HIGHWAY sign is not allowed for use. ¹ was added to Paragraph 05'
	6F.44	Survey Crew Ahead Sign (W21-V8)	Paragraph 03		Traffic Control Signs	W21-V8	Deleted Paragraph 03. Deleted the optional sign and changed the required date of "December 31, 2012" to: "Required, July 1, 2014".

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6F	6F.50	Soft Shoulder Sign (W8-4), Low Shoulder Sign (W8-9), Shoulder Drop Off Sign (W8-V5), and Shoulder Drop Off Plaque (W8-17P)	Paragraph 05		Traffic Control Signs	W8-V5, W8-17P	Deleted Paragraph 05. Deleted the optional sign and changed the required date of "December 31, 2012" to: "Required, July 1, 2014".
	6F.53	No Center Line Sign (W8-12) and Unmarked Pavement Ahead Sign (W8-V4)	Paragraph 04		Traffic Control Signs	W8-12	Deleted Paragraph 04. Deleted the optional sign and changed the required date of "December 31, 2012" to: "Required, July 1, 2014".
	6F.58	Advisory Speed Plaque (W13-1P)	Paragraph 05		Traffic Control Signs	W13-1	Deleted Paragraph 05. Deleted the optional sign and changed the required date of "December 31, 2012" to: "Required, July 1, 2014".
	6F.59	Supplementary Distance Plaque (W16-VP1)	Paragraph 06		Traffic Control Signs	W7-3p, W16-VP1	Changed the optional and required date of "December 31, 2012" to: "Optional until June 30, 2014" and "Optional but required, July 1, 2014".
	6F.64	Work Vehicle Frequent turns (G20-V1a) and Work Vehicle Do Not Follow Sign (G20-V1) - (Vehicle-Mounted)	Paragraphs 01 and 02		Traffic Control Signs	G20-V1a G20-V1	Added WORK VEHICLE FREQUENT TURNS sign to title. Added WORK VEHICLE FREQUENT TURNS (G20-V1a) sign to Paragraph 1. Added Paragraph 2 ".The WORK VEHICLE DO NOT FOLLOW (G20-V1) vehicle-mounted sign shall be hidden from view by motorists at the conclusion of the vehicle's daily work activities. This shall be accomplished by covering, folding, or removing the sign."

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6F	6F.64	Work Vehicle Frequent turns (G20-V1a) and Work Vehicle Do Not Follow Sign (G20-V1) - (Vehicle-Mounted)	Paragraphs 03, 04, 05, and 06		Traffic Control Signs	G20-V1	Added Option statements "The WORK VEHICLE FREQUENT TURNS (G20-V1a) vehicle-mounted sign may be displayed at all times. ¹ " (Paragraph 03) and The WORK VEHICLE FREQUENT TURNS and WORK VEHICLE DO NOT FOLLOW signs is not required on one-way, two-lane operations since flaggers normally control the ingress and egress of work vehicles, however it may be used as an option. The sign may be covered or removed from view during normal operations other than those listed above. ¹ " (Paragraph 04) ¹ Added Standard statement "The WORK VEHICLE DO NOT FOLLOW (G20-V1) vehicle-mounted sign shall be replaced with the WORK VEHICLE FREQUENT TURNS (G20-V1a) vehicle-mounted sign by July 1, 2017. ¹ "(Paragraph 05) Added Support statement: "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 " (Paragraph 06).
			Figure 6F-4	Vehicle Mounted Signs for Temporary Traffic Control		G20-V1a	Added WORK VEHICLE FREQUENT TURNS sign.

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6F			Figure 6F-5	Exit, Pull Off Area, Exit Open, and Detour Signs for Temporary Traffic Control		Long – Term Stationary Detour Assembly	Changed the US Route detour assembly from Cardinal directional Marker-WEST above the US Route sign then the detour sign with arrow to detour sign above US Route sign then the arrow sign per TA-8 in the 2009 MUTCD. Changed the background color on the Interstate Cardinal directional plaque..
	6F.68	Portable Changeable Message Signs	Paragraph 33		Non-Crashworthy Trailer-Mounted Devices		Added "...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, AFAD units, light towers, etc. ¹ ..." to the first sentence.
			Figure 6F-6	Channelizing Devices for PCMS and Other Trailer Mounted Traffic Control Devices			Clarified by adding "... and Other Trailer Mounted Traffic Control Devices" to the title. Also added "...PCMS or other unmanned trailer mounted devices..." and replaced "Drums" with "Channelizing Devices" for Arrow Boards.
			Figure 6F-7	Advance Warning Arrow Board Display Specification			Added missing bulb to "Move/Merge Right" Arrow Board illustration.
	6F.73	Tubular Markers	Paragraph 01				Added "...shall be constructed of lightweight, deformable material..." to second sentence.
			Paragraph 02				Added "...white fluorescent prismatic (high observation angle) lens ¹ stripes ..." to last sentence.

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6F	6F.75	Drums	Paragraph 01		Retroreflective Sheeting		Replaced "...retroreflective..." with "...fluorescent prismatic (high observation angle) lens ¹ ." Replaced last sentence with "Drums with retroreflective sheeting conforming to Section 247 purchased prior to July 1, 2012 can continue to be used on projects until July 1, 2016, in which time they shall be replaced with drums meeting retroreflective sheeting conforming to Section 247. It is preferred that like retroreflective sheeting be grouped together and not scattered randomly throughout the work zone."
			Paragraph 02		Retroreflective Sheeting		Added Guidance statement: "Until July 1, 2016, drums with like retroreflective sheeting should be grouped together and not scattered randomly throughout the work zone or project." Renumbered the remaining paragraphs.
			Paragraph 09 (old Paragraph 08)		Non-Crashworthy Trailer-Mounted Devices		Added "... 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 "
			Paragraph 10		Channelizing Devices		Added Option statement.
	6F.76	Type 3 Barricades	Paragraph 04		Barricade Rail Width		Added "...approximately 8 inches to..." to second sentence.
			Figure 6F-9	Channelizing Devices			Clarified traffic flow for Type 3 Barricades. Revised 8 or 12 inches rail dimension to 8 to ¹ 12 inches.

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6F	6F.83	Temporary Raised Islands	Paragraph 07		Reference for Temporary Asphalt Median Detail		Revised last sentence from: "See L&D special design drawing for Temporary Asphalt Median for details", to: "See Figure 6 in Appendix A of this manual or IIM-LD-93 for specific details on ¹ Temporary Asphalt Medians."
	6F.90	Floodlights	Paragraph 06		Illumination		Added "...or anti-glare shields" to sentence.
	6F.92	Vehicle Warning Lights	Paragraph 02, Table 6F-3	Vehicle Warning Light Intensity Requirements	Flash Rates		Bullet point 1, deleted reference to strobe lights, change flash rate from "80-100" to "75-135 ¹ ". Revised bullet points 1, 2, and 3 by deleting day and night condition values. Deleted reference to strobe lights in bullet point 3. Added bullet point 4 and Warning Light intensity Table 6F-3.
			Paragraph 06		Vehicle Warning Lights		Added "During day and ¹ night operations..." to comply with 2009 MUTCD.
	6F.94	Temporary Traffic Barriers	Paragraph 06		Temporary Traffic Barriers		Revised paragraph by adding "and selected from VDOT's Approved Products list ¹ ".
	6F.95	Crash Cushions	Paragraph 04		Non-redirective Crash Cushions		Added the sentence "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. "
			Paragraph 07		Chevron Stripes on the Rear Panel of a TMA		Added "...or yellow and black..." to the first sentence. Added "...orange or yellow retroreflective sheeting shall..." to the last sentence
	6F.95	Crash Cushions	Paragraph 20		Operation of a Shadow Vehicle with a TMA		Changed the last sentence from: "All material and/or equipment on the shadow vehicle TMA shall be properly secured to prevent spillage if struck by an errant vehicle ", to: "All other ¹ material and/or equipment on the shadow vehicle TMA shall be properly secured to prevent spillage if struck by an errant vehicle."

CHAPTER	SECTION NUMBER	SECTION TITLE	NEW TABLE/FIGURE /PARAGRAPH NUMBER	TABLE / FIGURE TITLE	REVISION TOPIC	SIGN CODE	REVISION DESCRIPTION
6F	6F.96	Rumble Strips	Paragraphs 3 through 16		Portable Temporary Rumble Strips (PTRS)		Added Support, Standard, Option and Guidance statements related to the design and application of Portable Temporary Rumble Strips (PTRS). Renumbered paragraphs.
6G	6G.02	Work Duration	Paragraph 02		Mobile Work Duration		Added "... (1-15 minutes)..."to bullet E, mobile work.
			Paragraphs 11, 13, 21, 23, and 25		Vehicle Warning Lights		Deleted reference to strobe lights.
	6G.06	Work Outside of the Shoulder	Paragraph 03		Vehicle Warning Lights		Deleted reference to strobe lights.
	6G.11	Work Within the Traveled Way of an Urban Street	Paragraph 14		Vehicle Warning Lights		Deleted reference to strobe lights.
	6G.24	Slow Roll Temporary Traffic Control Operations	Paragraph 02		Approval of Slow Roll Operation		Added "or their designee" .
	6G.25	Installing/Removing Temporary Traffic Control	Paragraph 01		Installing/Removing Temporary Traffic Control		Deleted the sentences: A shadow vehicle or shadow vehicle with a TMA should be used to protect workers installing and removing TTC devices from a work vehicle such as signs, arrow boards, and channelizing devices.

CHAPTER	SECTION NUMBER	SECTION TITLE	NEW TABLE/FIGURE /PARAGRAPH NUMBER	TABLE / FIGURE TITLE	REVISION TOPIC	SIGN CODE	REVISION DESCRIPTION
6G	6G.25	Installing/Removing Temporary Traffic Control	Paragraph 02		Installing/Removing Temporary Traffic Control		Deleted the Standard statement: "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." And replaced with the Guidance statement: "Installing and removing TTC on a two-lane roadway begins as a non-stationary flagging operation should use a Traffic Spotter, a shadow vehicle and a work operations vehicle. ¹ "
			Paragraph 03		Shadow Vehicle		Added Option statement. Renumbered remaining paragraphs
			Paragraph 04 (previously Paragraph 03)		Shadow Vehicle		Added the use of red-orange ¹ flags and Traffic Spotter ¹ to Guidance statement.
			Paragraph 05 (previously Paragraph 04)		Shadow Vehicle		Deleted Guidance statement "On a multi-lane roadway a pick-up truck with a trailer-mounted arrow board should be placed on the shoulder to direct traffic out of the closed lane. A shadow vehicle with an arrow board or amber light closes the lane while TTC devices are being installed or removed. The shadow vehicle should be 80' to 120' in advance of the work operation vehicle" with the Option statement "The STOP/SLOW paddle may be used as a supplement to enhance the flay used by the Traffic Spotter and TTC Spotter. ¹ "

CHAPTER	SECTION NUMBER	SECTION TITLE	NEW TABLE/FIGURE /PARAGRAPH NUMBER	TABLE / FIGURE TITLE	REVISION TOPIC	SIGN CODE	REVISION DESCRIPTION
6G	6G.25	Installing/Removing Temporary Traffic Control	Paragraph 06 (previously Paragraph 05)		Traffic Spotter		Replaced Standard statement "A shadow vehicle with a TMA shall be used to protect the workers and their work vehicle installing and removing TTC devices on multi-lane roadway with a posted speed of 45 mph or greater." With Standard statement "The Traffic Spotter shall be positioned after the Road Work Ahead sign and must remain highly visible to oncoming traffic at all times."
			Paragraph 07 through Paragraph 10		Shadow Vehicles		Added Guidance, Option and Standard statements.
			Paragraph 11 (previously Paragraph 05)		Shadow Vehicles		Standard statement rewritten for clarity. Deleted Option statement "A TTC Spotter may be used in this operation." (old Paragraph 11).
			Paragraph 16 (previously Paragraph 10)		Relocating Advance Warning Signs		Renumbered Paragraph.
			Paragraph 17		TMA Requirements		Added Support statement.
	6G.26	Temporary Traffic Control During Nighttime Hours	Paragraph 10		PCMS Use		Added Option statement allowing the use of a PCMS. Renumbered remaining paragraphs.
	6G.27	Work Area Ingress/Egress Considerations	Paragraph 05 and 06		Work Area Ingress/Egress Guidance	G20-V1	Added paragraphs. Renumbered the remaining paragraphs.
Paragraphs 08, 09, 10				Added the Guidance and Option statements on work area ingress/egress.			
6H	6H.01	Typical Applications	Table 6H-1	Index to Typical Temporary Traffic Control Figures and Notes	Figure TTC-64		Added Typical Traffic Control application End of Day Signing for Surface Treatment, Slurry Seal and Latex Emulsion Treatment Operations, Figure TTC-64.
			Table 6H-3	Buffer Space/Flagger Distance from Work Area	Buffer Space Distance for 25 mph		Replace 25 mph buffer space distance from "155-160" to "155-165 ¹ " to match Tables in 2012 Guidelines for Temporary Traffic Control ("pocket guide").

CHAPTER	SECTION NUMBER	SECTION TITLE	NEW TABLE/FIGURE /PARAGRAPH NUMBER	TABLE / FIGURE TITLE	REVISION TOPIC	SIGN CODE	REVISION DESCRIPTION
6H	6H.01	Typical Applications	Figure 6H-1	Symbols Used In Typical Temporary Traffic Control Figures Application	Temporary Barrier		Replaced "Temporary Concrete Barrier" with "Temporary Traffic ¹ Barrier"
			TTC-1 Note 5	Work Beyond the Shoulder Operation	Vehicle Warning Lights		Deleted reference to strobe lights from Note 5.
			TTC-3 Notes 3, 4, 8, 9, and 10 TTC Figure	Mobile or Short Duration Shoulder Operations	Vehicle Warning Lights and Work Duration Requirements		Deleted reference to strobe lights from Notes 3 and 4. Replaced the Note 8 Option statement: "The shadow vehicle may be used with a truck-mounted attenuator (TMA) on Limited Access highways" with the Standard statement: "A truck-mounted attenuator (TMA) shall be used on the shadow vehicle on Limited Access highways and multi-lane roadways with posted speed limit equal to or greater than 45 mph for operations with a duration greater than 60 minutes. ¹ " Added references to Standard (Note 5), Option statement (Note 9), and Guidance statement (Note 10) to figure. Added Option Note 11. Added channelizing devices to Figure..
			TTC-4 Note 5	Stationary Operation on a Shoulder	Vehicle Warning Lights		Deleted reference to strobe lights from Note 5.
			TTC-5 Notes 1, 5, and 6	Shoulder Operation with Minor Encroachment	Sign Requirements and Vehicle Warning Lights		Added "See Note 1, TTC-4 for additional sign information" to Note 1. Deleted reference to strobe lights from Notes 5 and 6.
			TTC-6 Note 4	Shoulder Closure with Barrier Operation	Shoulder Taper		Replaced minimum distance for a shoulder taper from "300' " to "360 ¹ "in Note 4.
			TTC-9 Notes 1, 8, 9, 10, 11, 12, 13, and 14	Mowing Operation with Encroachment on Non-Limited Access Roadways	Vehicle Warning Lights and Sign Requirements		Replaced strobe with flashing ¹ in Note 1. Corrected TTC reference in Note 8. Added Notes 9 through 14.

CHAPTER	SECTION NUMBER	SECTION TITLE	NEW TABLE/FIGURE /PARAGRAPH NUMBER	TABLE / FIGURE TITLE	REVISION TOPIC	SIGN CODE	REVISION DESCRIPTION
6H	6H.01	Typical Applications	TTC-10 Notes 1, 13, 14, 15, 16, and 17	Non-Licensed Vehicle Operation with Encroachment on Limited Access Roadways	Vehicle Warning Lights and Sign Requirements		Replaced strobe with flashing ¹ in Note 1. Added Notes 13 through 17.
			TTC-11 Note 1	Moving/Mobile Operations on Limited Access Highways (Single Lane Closure)	Vehicle Warning Lights		Replaced strobe with flashing ¹ in Note 1.
			TTC-12 Notes 1, 2, and 5. TTC Figure	Moving/Mobile Operations on Limited Access Highways (Multiple Lane Closure)	Vehicle Warning Lights, Shadow vehicle 5		Replaced strobe with flashing ¹ in Notes 1 and 2. Added sentence For non-limited access highways, Shadow Vehicle 1 shall have the option of using a Type C arrow board in place of the PCMS. ¹ Added Shadow vehicle 5 with arrow board and vehicle sign W20-V2a.
			TTC-13 Note 1	Moving/Mobile Operations on a Multi-Lane Roadway	Vehicle Warning Lights		Replaced strobe with flashing ¹ in Note 1.
			TTC-14 Note 1	Moving/Mobile Operations on a Two-Lane Roadway	Vehicle Warning Lights		Replaced strobe with flashing ¹ in Note 1.
			TTC-15 Note 2 TTC Figure	Short Duration Operation on a Multi-Lane Roadway	Vehicle Warning Lights		Replaced strobe with flashing ¹ in Note 2. Added Option Note 9. Added channelizing devices to Figure..
			TTC-16 Notes 8 and 9	Outside Lane Closure Operation on a Four-Lane Roadway	Vehicle Warning Lights		Replaced strobe with flashing ¹ in Note 8. Deleted reference to strobe lights from Note 9.
			TTC-17 Notes 8 and 9	Inside Lane Closure Operation on a Four-Lane Roadway	Vehicle Warning Lights		Replaced strobe with flashing ¹ in Note 8. Deleted reference to strobe lights from Note 9.

CHAPTER	SECTION NUMBER	SECTION TITLE	NEW TABLE/FIGURE /PARAGRAPH NUMBER	TABLE / FIGURE TITLE	REVISION TOPIC	SIGN CODE	REVISION DESCRIPTION
6H	6H.01	Typical Applications	TTC-18 Notes 8 and 9	Multi-Lane Closure Operation	Vehicle Warning Lights		Replaced strobe with flashing ¹ in Note 8. Deleted reference to strobe lights from Note 9.
			TTC-19 Notes 5, 8, and 9	Lane Closure with Lane Weave	Taper Length and Vehicle Warning Lights		In the Note 5 Taper Length Table, replaced the second 9 foot lane width notation with 11 ¹ foot lane width. Replaced strobe with flashing ¹ in Note 8. Deleted reference to strobe lights from Note 9.
			TTC-21 Note 6	Center Turn Lane Closure Operation	Vehicle Warning Lights		Replaced strobe with flashing or oscillating ¹ in Note 6.
			TTC-22 Notes 5, 7, and 10 TTC Figure	Right Lane Closure Operation on a Three-Lane Roadway	Vehicle Warning Lights and Channelizing Devices		In the Note 5 Taper Length Table, replaced the second 9 foot lane width notation with 11 ¹ foot lane width. Replaced strobe with flashing or oscillating ¹ in Note 7. Added Guidance statement, Note 10. In the illustration, added 4 additional drums to be extended the guidance and revised the note to: "L= 4 Times Speed Limit ¹ ".
			TTC-23 Notes 6, 7 and 14 TTC Figure	Lane Closure Operation on a Two-Lane Roadway Using Flaggers	Vehicle Warning Lights and Portable Temporary Rumble Strips	W20-V26	Revised Note 6 by deleting cone spacing table and referring to Table 6H-4, Page 6H-6. Replaced strobe with flashing ¹ in Note 7. Added Standard Note 14, Portable Temporary Rumble Strips. In the illustration, added Portable Temporary Rumble Strips and W20-V26 signs.
			TTC-24 Note 10	Non-Stationary Operation on a Two-Lane Roadway Using Flaggers	Vehicle Warning Lights		Replaced strobe with flashing ¹ in Note 10.
			TTC-25 Note 13 TTC Figure	Lane Closure Operation on a Two-Lane Roadway Using Traffic Control Signals	Rumble Strips		Changed Note 13 from "... Temporary rumble strips..." to "...Long-term ¹ rumble strips..." Revised the rumble strip note in the Figure.

CHAPTER	SECTION NUMBER	SECTION TITLE	NEW TABLE/FIGURE /PARAGRAPH NUMBER	TABLE / FIGURE TITLE	REVISION TOPIC	SIGN CODE	REVISION DESCRIPTION
6H	6H.01	Typical Applications	TTC-26 Note 6	Lane Closure Operation – Near Side of an Intersection	Vehicle Warning Lights		Replaced strobe with flashing or oscillating ¹ in Note 6. Added Note 8. Added R3-20 sign to illustration.
			TTC-27 Notes 5 and 6 TTC Figure	Lane Closure Operation – Far Side of an Intersection	Vehicle Warning Lights and Sign Requirements	R3-20	Added amber and flashing in Note 4. Replaced strobe with flashing or oscillating ¹ in Note 6. Added Note 8. Added R3-20 sign to illustration.
			TTC-28 Notes 4, 6, and 8 TTC Figure	Lane Closure Operation in an Intersection	TMA Requirements and Vehicle Warning Lights		Deleted Note 5 from on the use of a TMA. Renumbered remaining notes. Replaced strobe with flashing or oscillating ¹ in new Note 5.
			TTC-29 Note 7	Turn Lane Closure Operation	Buffer Space		Changed the distance values in the table from a specific distance with plus/minus to a range of distances.
			TTC-31 Notes 7 and 8	Flagging Operation on a Single Lane Roundabout	Vehicle Warning Lights		Added amber and flashing ¹ in Note 7. Replaced and with or ¹ in Note 8.
			TTC-32 Notes 3, 4 and 7	Inside Lane Closure on a Multi-Lane Roundabout	Vehicle Warning Lights and Taper Length		Added amber and flashing ¹ in Note 3. In the Note 4 Taper Length Table, replaced the second 9 foot lane width notation with 11 ¹ foot lane width. Replaced and with or ¹ in Note 7.
			TTC-33 Notes 8 and 9	Outside Lane Closure on a Multi-Lane Roundabout	Vehicle Warning Lights		Added flashing ¹ in Note 8. Replaced and with or ¹ in Note 9.
			TTC-34 Note 11 TTC Figure	Street Closure Operation with Detour	Optional Signs		Deleted R3-1 sign to and replaced with a street name plaque and R11-4 sign Figure.
			TTC-36	Crosswalk Closure and Pedestrian Detour Operation	Crosswalk Markings and Signs		Replaced Stop Bars with Yield Lines. Moved W11-2 sign and W16-7pL plaque to crosswalk.
			TTC-37 Note 7 TTC Figure	Work Operation in the Vicinity of an Exit Ramp	Vehicle Warning Lights, "L" Dimension, Sign Placement	E5-2 E5-V1R	Added amber ¹ and flashing ¹ in Note 7. Revised "L" dimension at gore area to match 2009 MUTCD. Deleted arrow marking on ramp, left illustration.. Added PCMS to figure.
TTC-38 Note 4	Partial Exit Ramp Closure Operation	Vehicle Warning Lights		Added amber ¹ and replaced strobe with flashing ¹ in Note 4.			

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6H	6H.01	Typical Applications	TTC-39 Note 8	Work Operation in the Vicinity of an Entrance Ramp	Vehicle Warning Lights		Replaced and strobe with or flashing¹ in Note 8.
			TTC-40 Note 9	Multi-Lane Shift Operation	Vehicle Warning Lights		Replaced strobe with flashing¹ in Note 9.
			TTC-41 Note 7	Half Road Closure Operation on a Multi-Lane Roadway	Vehicle Warning Lights		Replaced strobe with flashing¹ in Note 7.
			TTC-42 Note 6	Interior Lane Closure Operation on a Multi-Lane Roadway	Vehicle Warning Lights		Replaced strobe with flashing¹ in Note 6.
			TTC-43 TTC Figure	Road Closure Operation with a Diversion	Temporary Pavement Markings		Added temporary pavement markings and sign layout for opposing traffic to the illustration. Deleted "Optional" designation from W1-6 sign.
			TTC-45 TTC Figure	Total Limited Access Highway Closure Operation	Group 2 Devices		Added 4 Group 2 devices (Drums) in advance of the PCMS to the illustration to match Figure 6F-6.
			TTC-46 TTC Figure	Limited Access Highway Closure Operation with a Short Term Detour	Type 3 Barricade		Replaced road closed Type 3 Barricade symbol with a right lane closed (pass to left) Type 3 Barricade symbol.
			TTC-47 TTC Figure	Limited Access Highway Closure Operation with a Long Term Detour	Type 3 Barricade		Replaced road closed Type 3 Barricade symbol with a right lane closed (pass to left) Type 3 Barricade symbol. Changed the background of the Cardinal signs directional plaques to orange.
			TTC-48 TTC Figure	Limited Access Highway Closure Operation with a Short Term Detour	Type 3 Barricade	R11-V2	Replaced road closed Type 3 Barricade symbols with a lane closed (pass to left or right) Type 3 Barricade symbol. Replaced US Route 50 North sign with US Route 50 West sign. Corrected sign designations from R11-3a to R11-V2¹ . Changed M4-V1 sign spacing from 50-200 feet to ±50 feet.
			TTC-49 Notes 3 and 4	Surveying Operation	Vehicle Warning Lights		Replaced strobe with flashing¹ in Note 3. Replaced and with or¹ in Note 4.

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6H	6H.01	Typical Applications	TTC-51 TTC Figure	Haul Road Crossing Operation	Methods		Revised the titles to the two methods to match the description on the notes page.
			TTC-52 Note 5 TTC Figure	Signing for Speed Limit and Fine Signs in Work Zones	Signs	R2-V1 R2-12	Revised the sign and Note 5 from: "Notice Fines Up To \$500 for Exceeding Speed In Work Zone" to: "Work Zone \$500 Max. Fine For Exceeding Speed Limit When Flashing ¹ ." Revised Note 5 by adding: "The Type B warning lights shall be controlled remotely and only be activated (flashing) when workers are present in the work zone." ¹ Added new sign to the TTC figure. Added "See Note 7" to sign designation for clarity. Deleted reference to See Note 8 from R4-V7R and W9-3 Signs. Added reference to see notes 8 and 9 to W3-9 sign.
			TTC-55 Notes 4 and 8	Eradication of Pavement Markings in a Work Zone	Signs		In Note 4 replaced "...skip lines..." with "...pavement markings ¹ ..." Replaced the Option statement (Note 8): "Additional markings may require removal based on the roadway geometrics and night review of the site" with the Guidance statement: "Removal of additional pavement markings and pavement markers should be removed based on the roadway geometrics and specific site conditions so that traffic will be guided safely if additional traffic control devices such as drums become displaced." ¹
			TTC-56 Notes 10 and 11	Work in the Vicinity of a Highway-Rail Crossing	Vehicle Warning Lights		Replaced strobe with flashing ¹ in Note 10. Replaced and with or ¹ and added "but can be used as a supplement ¹ " in Note 11.

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6H	6H.01	Typical Applications	TTC-59 Notes 8 and 12	End of Day Signing for Paving Operations on a Two-Lane Roadway	Signs	W8-7 W8-12	Deleted Note 8, "LOOSE GRAVEL (W8-7) signs should be installed on surface treated roadways and should be removed when the roadway has been swept or loose gravels have been removed from the roadway": deleted Note 12, "Either the NO CENTER LINE or NO CENTER STRIPE sign may be used until December 31, 2012, in which time only the NO CENTER LINE (W8-12) sign will be allowed". Renumbered remaining notes.
			TTC-60 TTC Figure	Temporary Pavement Marking and Marker Guidelines	Construction Pavement Marking Widths		Added "... or 6"..." to notes in Figure TTC-60.
			TTC-61 Note 1	Pre-Storm Treatment Operation	Vehicle Warning Lights		Replaced strobe with flashing¹ in Note 1.
			TTC-62 Note 1	Litter Pick-Up on Limited Access Highways	Vehicle Warning Lights		Replaced strobe with flashing¹ in Note 1.
			TTC-63 Note 4	Logging Operations	Signs	W11-V4	Added new Note 4. Renumbered remaining notes.
			TTC-64 Notes and TTC Figure	End of Day Signing for Surface Treatment, Slurry Seal and Latex Emulsion Treatment Operations	End of Day Signing for Paving Operations		Added Figure TTC-64.0.
			TTC-65 Notes and TTC Figure	Short Duration Road Patching Operation on a Low Volume Two-Lane Roadway	Short Duration Road Patching Operations		Added Figure TTC-65.0.
			TTC-66 Notes and TTC Figure	Slow-Roll Operation on a Multi-Lane Roadway	Slow-Roll Operations		Added Figure TTC-66.0.

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6H	6H.01	Typical Applications	TTC-67 Notes and TTC Figure	Lane Closure Operation through an Intersection	Temporary Traffic Control		Added Figure TTC-67.0.
6I	6I.13	Traffic Incident Management Control Applications	TMIC-1 Note 5	Incident on Shoulder with minor Encroachment	Buffer Space Distance for 25 mph		Replace 25 mph buffer space distance from "155-160" to "155-165 ¹ " to match Tables in 2012 Guidelines for Temporary Traffic Control ("pocket guide").
			TMIC-2 Note 5	Incident in Outside Lane on Four-Lane Roadway	Buffer Space Distance for 25 mph		Replace 25 mph buffer space distance from "155-160" to "155-165 ¹ " to match Tables in 2012 Guidelines for Temporary Traffic Control ("pocket guide").
			TMIC-3 Note 5	Incident in Inside Lane on Four-Lane Roadway	Buffer Space Distance for 25 mph		Replace 25 mph buffer space distance from "155-160" to "155-165 ¹ " to match Tables in 2012 Guidelines for Temporary Traffic Control ("pocket guide").
			TMIC-4 Note 5	Incident in Multiple Lanes on a Multi-Lane Highway	Buffer Space Distance for 25 mph		Replace 25 mph buffer space distance from "155-160" to "155-165 ¹ " to match Tables in 2012 Guidelines for Temporary Traffic Control ("pocket guide").
			TMIC-7 Note 6	Incident Closing a Highway	Detour Signing		Revised Note 6 from: "...detour route, a DETOUR with directional arrow sign should be placed..."to: "... detour route (see Figures TTC-46 or TTC-47), a DETOUR sign with directional arrow or Detour with a Route Assembly sign ¹ should be placed...".
			TMIC-8 TTC Figure	Highway Closure Incident with a Temporary Detour,	Type 3 Barricade		Replaced road closed Type 3 Barricade symbol with a right lane closed (pass to left) Type 3 Barricade symbol.
Appendix A	Section 1	Channelizing Device/barrier Selection Process			Channelizing/Barrier Selection Process Example		Example 3, Step 2, revised from: "...used but Figure 3b, ROR Frequency Factor Chart for All Other Highways, shall be..." To: "...used but Figure 3a ¹ , ROR Frequency Factor Chart for Limited Access ¹ Highways, shall be...".
			Figure 3a	ROR Frequency Factor Chart for Limited Access Highways	Application of ADT		Added note for clarification on the application of ADT when using chart.

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Appendix A	Section 1	Channelizing Device/barrier Selection Process			Example for Night or Day Work Zones		Revised example from: "...select a channelizing device from Figure 4 " To: "...select a channelizing device from Table 1 ¹ . "
			Figure 3b	ROR Frequency Factor Chart for All Other Highways	Application of ADT		Added note for clarification on the application of ADT when using chart.
	Section 3	Barrier Design Considerations	Table 3	Acceptable Longitudinal Steel Barriers	Longitudinal Steel Barriers		Added new section on Longitudinal Steel Barriers and Table 3, Acceptable Longitudinal Steel Barriers
			Table 4	Acceptable Longitudinal Channelizing Devices	Longitudinal Channelizing Devices (Portable Water-Filled Devices)		Renumbered Table 3 to Table 4.
Appendix D	Introduction	Portable Changeable Message Sign (PCMS) Displays			Reference to additional PCMS guidance		Added the following sentence to the third paragraph: "The current VDOT Operations and Security Division guidance on Changeable Message Signs (CMS) usage can be accessed at: http://www.virginiadot.org/business/resources/LocDes/OD_IIM-13-03.pdf . "