FLAGGER UPDATES

• Control All Road Users
  • Vehicles
  • Pedestrians
  • Bicycles

• Coordinate Traffic Movement On Mainline And Intersecting Roadways.

• Require Radio Communication Between All Flaggers And Pilot Vehicle Operators.
FLAGGER UPDATES

• Removing Flag Transfer Method (Also No Longer In Video).

• One Flagger May Control Traffic On Low Volume Roadway (500 vpd) & Good Visibility To Each End Of Work Zone. Otherwise Two Flaggers Required.

• Flaggers Stand On Shoulder Or Close As Possible, Never Enter Travel Lane Used By Stopped Or Moving Traffic.
FLAGGER UPDATES

• Flagger Speaks To Motorist From Passenger Side And DO NOT Touch Vehicle.

• Flagger Shall Not Use Cell Phones Or Other Similar Devices.

• Flagger Control Movements At Intersections With Reference To TTC-30 & TTC-67.
FLAGGER UPDATES

Guidance Statements Added:

• Stoppage Timeframes
  • 8 Minutes For High Volume Roadways (500 Vehicles Or > Per Day)
  • 12 Minutes For < 500 Vehicles Per Day

• PCMS Recommended With Stoppage Greater Than 12 Minutes

Option Statements:

• Flagger May Need To Control Access To Private Entrances/Driveways As Directed By The Engineer With Advance Notification To The Property Owner.
AUTOMATED FLAGGING ASSISTANCE DEVICE (AFAD)

- Delineated With 4 Cone Taper.

- If Unmanned, 4 Drum Taper.

- AFAD Figures Added To 6H
HIGH-VISIBILITY APPAREL

• Prohibits Use Of Leg Gaiters Or Chaps In Lieu Of Type E Trousers For Workers Installing, Maintaining, Or Removing TTC Devices

• Workers May Wear Leg Gaiters as an Option

• Allow Utility Flaggers To Wear Fire-retardant Leg Gaiters Or Chaps

• Lights Internal To The High Visibility Apparel Shall Be Steady Burn Yellow, White, Or Yellow-green
PEDESTRIAN & BICYCLE

- Table 6F-1 Added Pedestrian And Bicycle Signs, Corrected/Added Section References And Sizes.
- New Section For TTC Regulatory Signs For Pedestrian & Bicycle.
- Added Bike Lane Closed And Path Closed Signs.
- New Section For TTC Warning Signs For Pedestrian & Bicycle.
- Figure 6F-3 Regulatory Signs And Plaques.
- Figure 6F-4 Warning Signs And Plaques.
- Figure 6F-5 Detours.
CHAPTER 6F

Specification Language Removed

• Removed Listing Of Sign Substrates And Rigid Sign Materials, This Is Covered In Specifications.

• Removed PTRS Details, This Is Covered In Specifications.
CHAPTER 6F

Portable Sign Stands – 7’ To Bottom Of Sign

• Stop & Yield;
• Left/Right Turn Lane Open & Left/Right Turn Lane Closed;
• Turn Lane With Arrow;
• Exit Open & Exit Closed;
• Exit w/Arrow - Arrow Must Match Permanent Exit ARROW
CHAPTER 6F

Construction Entrance (W11-V2)

- Sign Should Be Used To Identify Ingress Points For Deliveries.

Trucks Entering Highway (W11-V4)

- Sign Should Be Used To Identify Egress Point For Trucks Entering Roadways On Large Scale Projects.
CHAPTER 6F

Work Vehicle Frequent Turns

- Mount As High As Possible
- Modified To Fit Indentions Of The Truck Tailgate
  - Letters Cannot Be Modified
  - Allow For Sign To Be Cut In Two
  - Eliminate Border If Necessary
Detour Signs

- Sizes May Be Reduced With DTE Approval.

Programmable Changeable Message Sign (PCMS)

- Optional On Shadow Vehicles - 10" Letters.

- 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.
CHAPTER 6F

Channelizing Devices

- Wherever 4 X Speed Was Noted In TTC’s Is Now Changed To Normal Spacing Of Channelizing Devices.
- Cones Used To Delineate AFADS.
- All Drums Must Meet Section 247 Of The Spec Book (Date Referenced Removed.
- Drums Required For Exit Ramp Tapers.
- Type 3 Barricades Should Extend Fully Across Sidewalks And Bicycle Lanes Or Paths.
CHAPTER 6F

Vehicle Warning Lights

• No Flashing White Lights Of Any Kind (Violates Vehicle Code Of VA)
• Required On Equipment With Rollers Or Wheels (Warning For Workers On Foot)
• DAY & Night Shall Have 360° visibility

Temporary Signal

• Field Adjustment Must Comply With Section 512 Of The Spec Book
• Portable Temporary Signal Must Be Delineated With 4 Drum Taper
CHAPTER 6F

Shadow Vehicle With Truck Mounted Attenuator

- On Shoulders Of Multilane Roadways With A Posted Speed Of 45 Mph Or Greater For Operations With A Duration Greater Than 60 Minutes To Resolve Conflict Between TTC-3 – TTC-5.

- Snooper Truck Operations Regardless Of The Posted Speed Limit.
CHAPTER 6F

Portable Temporary Rumble Strips (PTRS)

- Work operation occurs on a two-lane stationary and non-stationary daytime flagging operations.

- Work duration in a location is greater than 3 hours but less than three consecutive days (72 consecutive hours); and

- Existing posted or regulatory speed limit is 35 mph or greater and centerline markings (indicates a minimum of 500 vehicles a day) exist.
During short-duration work, it often takes longer to set up and remove the TTC zone than to perform the work. Workers face hazards in setting up and taking down the TTC zone. Also, since the work time is short, delays affecting road users are significantly increased when additional devices are installed and removed.

Considering these factors, simplified control procedures may be warranted for short-duration work. A reduction in the number of devices may be offset by the use of other more dominant devices such as high-intensity rotating, flashing, or oscillating lights on work vehicles.
Option:

Considering these factors, simplified control procedures may be warranted for short-duration work. A reduction in the number of devices may be offset by the use of other more dominant devices such as high-intensity rotating, flashing, or oscillating lights on work vehicles. These simplified control procedures are shown in TTC-3, Mobile or Short Duration Shoulder Operation, and TTC-15, Short Duration Operation on a Multi-Lane Roadway.

Standard:

Modifications to standard TTC figures for short-duration operations require approval from the District Traffic Engineer.
Center Lane Closure Added Due To Sunset Of Ted - 342

• 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).

• If the center lane closure must encroach on the remaining lanes, a minimum 11 foot travel lane(s) shall be maintained.

• 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.
Installing & Removing TTC’s

Flagger

• Changes “TTC Spotter” To “Flagger”.

• Uses Stop/Slow Paddle.

• Controls Traffic While Installing Signs And Assumes Flagger (#1) Station For That Direction And Maintains Flagger Station

• Flagger (#2) Controls Traffic During Opposite Signs Installation Then Maintains Flagger Station.
CHAPTER 6G
Installing & Removing TTC’s Shadow Vehicles

• Work Vehicle May Be Equipped With A TMA; However It Must Also Be Protected By A Shadow Vehicle With A TMA, Added Reference To TTC-13
Installing & Removing TTC’s

TTC Devices Should Be Removed With Flow Of Traffic

• Remove Or Deactivate The Arrow Board. If The Arrow Board Is Not Removed It Must Be Delineated With Four Channelizing Devices.

• 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.

• Remove The Advanced Warning Signs.

• Remove The Arrow Board And Its Delineation If Necessary.
<table>
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<tr>
<th>Posted Speed (mph)</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
<th>45</th>
<th>50</th>
<th>55</th>
<th>60</th>
<th>65</th>
<th>70</th>
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<tbody>
<tr>
<td>2 Lane Major Road</td>
<td>225</td>
<td>280</td>
<td>335</td>
<td>390</td>
<td>445</td>
<td>500</td>
<td>555</td>
<td>610</td>
<td>665</td>
<td>720</td>
<td>775</td>
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<td>Left Turn, 3-4 Lane Road (Undivided)</td>
<td>250</td>
<td>315</td>
<td>375</td>
<td>440</td>
<td>500</td>
<td>565</td>
<td>625</td>
<td>690</td>
<td>750</td>
<td>815</td>
<td>875</td>
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<tr>
<td>Right Turn, 3-4 Lane Road (Undivided)</td>
<td>240</td>
<td>295</td>
<td>355</td>
<td>415</td>
<td>475</td>
<td>530</td>
<td>590</td>
<td>650</td>
<td>710</td>
<td>765</td>
<td>825</td>
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<tr>
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<td>275</td>
<td>340</td>
<td>410</td>
<td>480</td>
<td>545</td>
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<td>590</td>
<td>650</td>
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<td>765</td>
<td>825</td>
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<td>Left Turn, 5 Lane Road (2-Way Turn Lane)</td>
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<td>400</td>
<td>465</td>
<td>530</td>
<td>600</td>
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<td>860</td>
<td>930</td>
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<tr>
<td>Right Turn, 5 Lane Road (2-Way Turn Lane)</td>
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<td>315</td>
<td>375</td>
<td>440</td>
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<td>625</td>
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<td>875</td>
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<td>Left Turn, 6 Lane Road (Divided-18' Median)</td>
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<td>360</td>
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<td>505</td>
<td>575</td>
<td>645</td>
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<td>790</td>
<td>860</td>
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<td>1005</td>
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<tr>
<td>Right Turn, 6 Lane Road (Divided-18' Median)</td>
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<td>375</td>
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<td>500</td>
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<td>625</td>
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<td>875</td>
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<td>Right Turn, (No Left Turns Allowed or Physically Restricted)</td>
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<td>415</td>
<td>465</td>
<td>515</td>
<td>570</td>
<td>620</td>
<td>670</td>
<td>725</td>
</tr>
</tbody>
</table>
CHAPTER 6H

TTC-11 – TTC-13

• Shadow Vehicle 2 In First Lane Is Moved To Straddle The Edge Line.
CHAPTER 6H

TTC-14 - Moving/Mobile Operation On A Two-lane Roadway
• Each Vehicle Shall Have Radio Communications

TTC-15 - Short Duration Operation On A Multi-lane Roadway
• PCMS Should Be Used When Signs Cannot Be Dual Indicated
• Added A Note For The Use Of A TMA

TTC-22 - Right Lane Closure Operation On A Three-lane Roadway
• Posted Speed Limit 45 Or Greater Requires TMA
CHAPTER 6H

TTC-36 - Crosswalk Closure And Pedestrian Detour Operation

- All Pedestrian And Plaques Changed To Yellow-green
- Added YIELD HERE TO PEDESTRIAN Signs
- Added State Law Yield To Pedestrian Sign In The Center Of The Roadway
CHAPTER 6H

TTC-37 - Work Operation In The Vicinity Of An Exit Ramp

• Added Note Requiring Drums On Both Edge Lines For The Exit Taper
CHAPTER 6H

TTC-50 - Disruption Operation On A Multi-lane Roadway

• Change Stoppage Time To 15 Minutes In Lieu Of 20 Minutes.

• Lane Closure Required If Flaggers Are Controlling Traffic – Flagger Controls Only One-lane.

• Lane Closure And Center Lane Turn Lane Must Be Closed If Using Flaggers Or If Performing A Slow Roll.
TTC-64 - End Of Day Signing For Surface Treatment, Slurry Seal And Latex Emulsion Treatment Operations

- Added Note For The UNMARKED PAVEMENT AHEAD (W8-4)

- Sign Shall Be Erected In Advance Of Resurfaced Roadway Sections 500 Feet Or More In Length Where The Center Line And Edge Lines Have Been Removed Until Pavement Marking Are Applied.
CHAPTER 6H

New TTC-68 - Lane Closure Operation For Flagging Operations On An Intersecting Roadway
CHAPTER 6H

New TTC-69 - Lane Closure On A Two-lane Roadway Using Stop/Slow Or Red/Yellow Lens Automated Flagger Assistance Device (AFAD)
When responding to incidents located on the shoulder, safety service patrol personnel may display either the four-corner caution mode or the flashing diamond mode display.