

VIRGINIA DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING DIVISION

MEMORANDUM

GENERAL SUBJECT: Work Zone Safety		NUMBER: TE-359
SPECIFIC SUBJECT: Mowing Operations on Limited Access Highways		DATE: November 25, 2008
		SUPERSEDES:
DIRECTED TO: District Administrators/ District Maintenance Engineers	SIGNATURE: R. J. Khoury, P.E. /Original Signed State Traffic Engineer	

The 2005 Virginia Work Area Protection manual contains a typical traffic control layout titled "Mowing Operation with Encroachment" TTC 7.0 for use on primary and secondary roadways.

We have recently learned that this layout was misinterpreted and used on limited access highways.

The MUTCD requires the use of a truck mounted attenuator vehicle(s) for mobile operations on limited access highways.

To provide clarification we developed Typical Traffic Control (TTC) Figure 42.0 (Attachment 1) which shall be used on limited access highways or ramps. It is in effect beginning this date.

We have also revised the existing TTC-7.0 and is attached as TTC-7.1. It is to be applied to non-limited access primary and secondary routes mowing operations. (Attachment 2).

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TYPICAL TRAFFIC CONTROL
Mobile Mowing Operation with Encroachment on Limited Access Highway
(Figure TTC-42.0)

NOTES

Standard:

1. Mobile mowing operations shall be used when the mowing tractor or any portion of the mowing equipment is encroaching into the travel lane or on either edge line.
2. Each vehicle and mowing tractor involved in the moving/mobile operation shall be equipped with at least one high-intensity amber rotating, oscillating, or strobe light. Illuminated flashing arrows on the shadow vehicles shall be a Type C (96" x 48"). Vehicle hazard warning signals shall not be used instead of rotating lights or strobe lights, but as a supplement.
3. Four-corner caution mode shall be displayed on the shadow vehicles when there is no equipment encroachment.

Option:

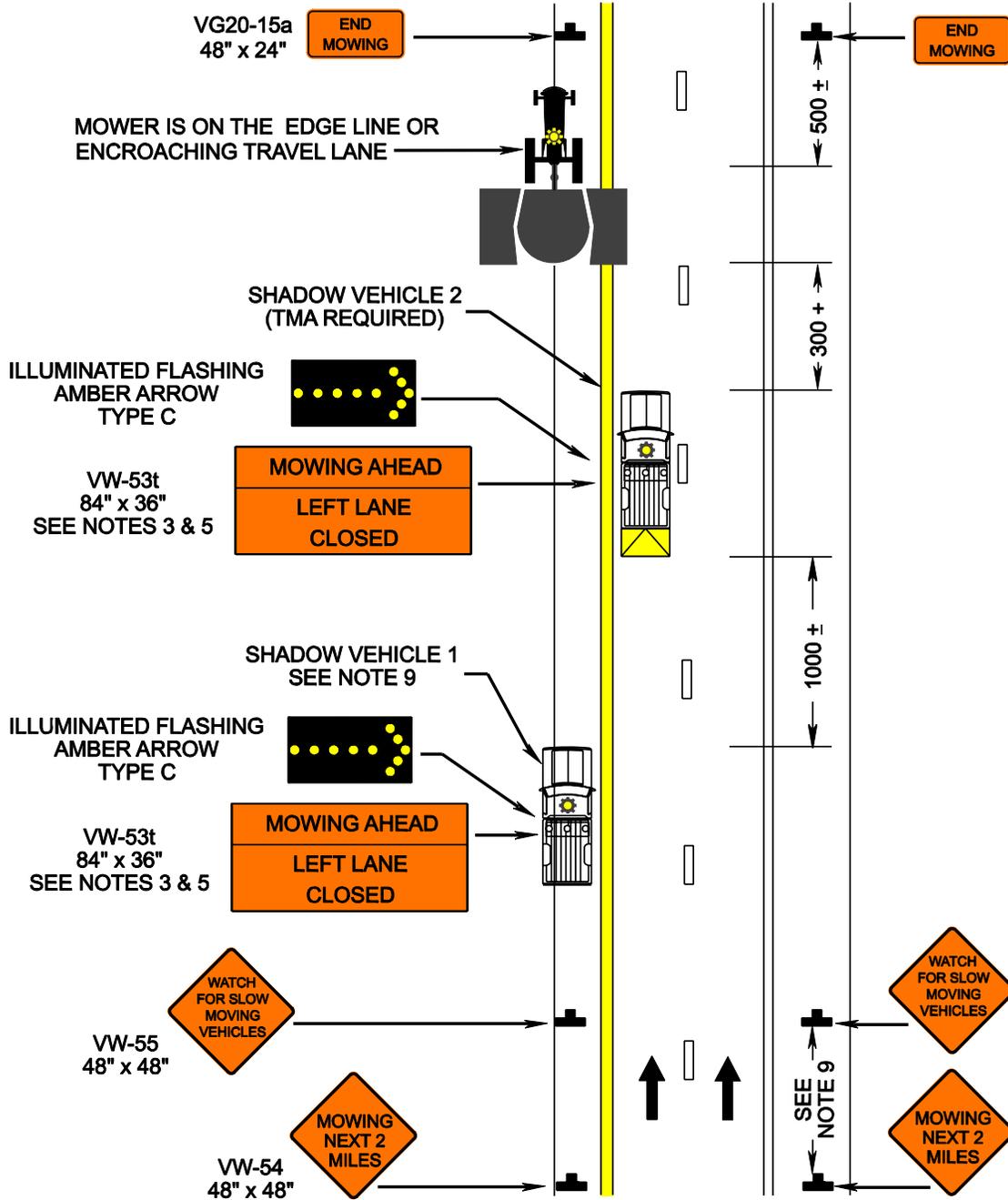
4. The static warning sign on the advanced warning vehicles and arrow panels may be replaced with a vehicle mounted CMS with a minimum of 10" height characters.
5. The top line MOWING AHEAD message on the advanced warning vehicle signs may be replaced with ROAD WORK AHEAD.
6. Arrow direction and designation may change as needed.

Guidance:

7. *Spacing between vehicles may vary, depending on the speed, sight distance, and type of moving operation. Whenever adequate stopping sight distance exists to the rear, the shadow vehicle should maintain the minimum distance and proceed at the same speed as the mowing tractor. The shadow vehicle should slow down in advance of vertical or horizontal curves that restrict sight distance.*
8. *When using a CMS to replace the static sign and arrow panel on the vehicle, each word message phase should be followed by the Type C arrow display.*
9. *Sign spacing distance should be 1300'-1500' for limited access highways.*
10. *No more than 2 complete setups (2 miles each) should be exposed to motorists at any one time.*

Standard:

11. Ramps entering into the work area shall be signed with VW-54 (MOWING NEXT 2 MILES) and VW-55 (WATCH FOR SLOW MOVING VEHICLES) signs.
12. When the mowing tractor is stationary in the travel lane or on the edge line, the shadow vehicle following the mowing tractor shall be in a position 50'-100' in advance of the mowing tractor to provide protection. When the mowing tractor is moving, the shadow vehicle following the mower shall follow at a minimum distance of 300'.
13. The first shadow vehicle shall run completely on the shoulder. If the shadow vehicle encroaches into the travel lane, it shall be equipped with a truck mounted attenuator (TMA).
14. Each shadow vehicle involved in the moving mowing operation shall have radio communication between vehicles.



**Mobile Mowing Operation with Lane Encroachment on Limited Access Highway
(Figure TTC-42.0)**

Typical Traffic Control
Mowing Operation with Encroachment
(Figure TTC 7.1)

NOTES

Standard:

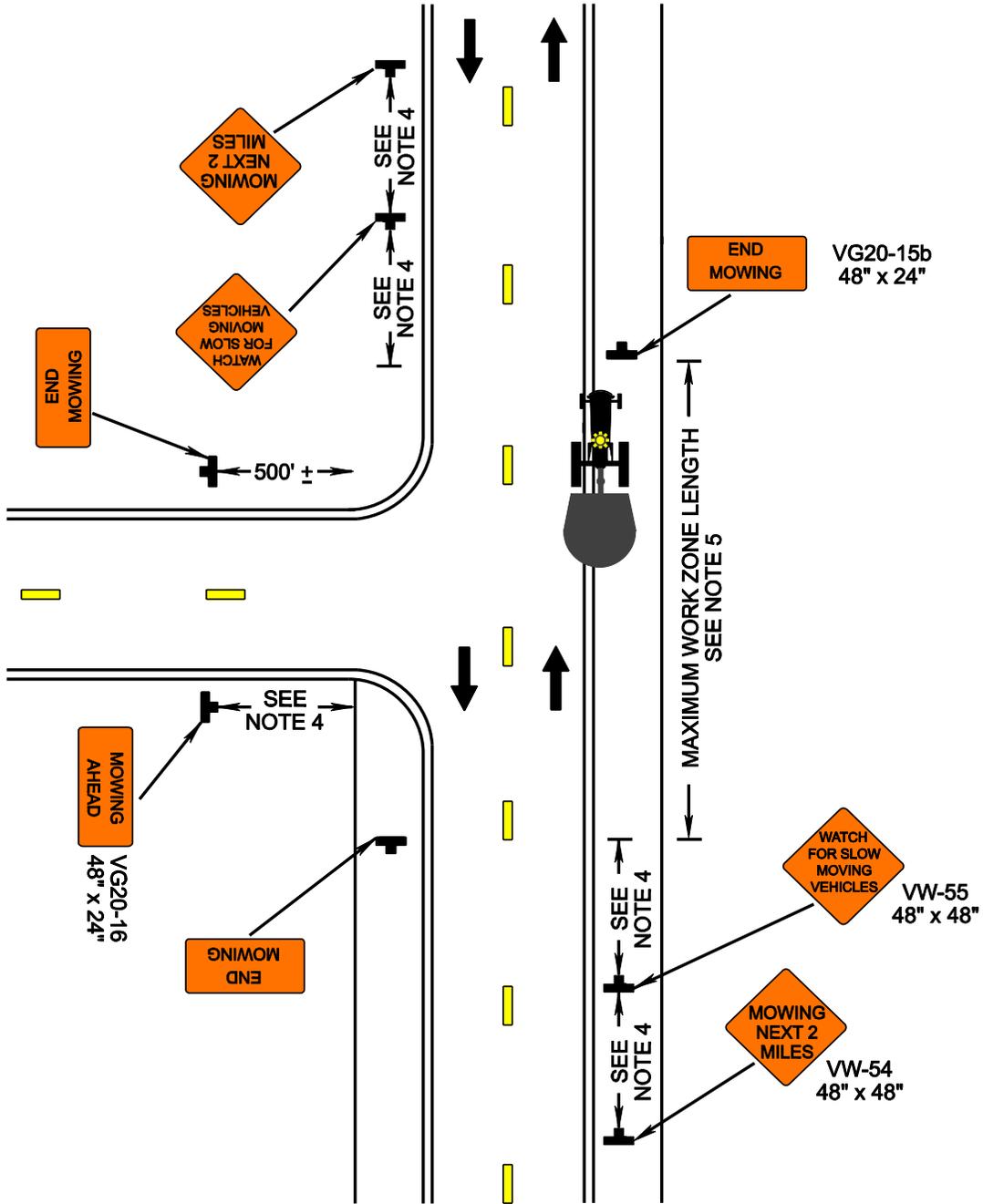
1. Each vehicle involved in the operation shall be equipped with at least one rotating amber light or high intensity amber strobe or oscillating light visible from 360°.
2. on divided highways having a median wider than 8 ', left and right sign assemblies shall be required.
3. Connecting roads entering into the work area shall be signed as shown.

Guidance:

4. Sign spacing distance should be 500'-800' where the posted speed limit is greater than 45 mph, and 350'-500' where the posted speed limit is 45 mph or less.
5. No more than 2 complete setups (2 miles each) should be exposed to motorist at any one time.
6. To prevent multiple lane changing by motorists and constriction of traffic flow, mowing operations should be limited to one side of the roadway at a time, or separated by a minimum of 1000 feet between right and left side operations.

Option:

7. If the operation is completely off the travelway, the 'WATCH FOR SLOW MOVING VEHICLES' sign may be omitted.



Mowing Operation with Encroachment
(Figure TTC-7.1)