

**VIRGINIA DEPARTMENT OF TRANSPORTATION**  
**TRAFFIC ENGINEERING DIVISION**  
**MEMORANDUM**

<b>GENERAL SUBJECT:</b> Signs		<b>NUMBER:</b> TE-337.1
		<b>SUPERSEDES:</b> TE-337.0
<b>SPECIFIC SUBJECT:</b> Clearview Highway Font Lettering for Guide Signs		<b>DATE:</b> December 19, 2014
		<b>SUNSET DATE:</b> None
<b>DIRECTED TO:</b> District Administrators District Location & Design Engineers District Transportation & Land Use Engineers Regional Operations Directors Regional Traffic Engineers Regional Operations Maintenance Managers	<b>APPROVAL:</b>  /original signed by/ Raymond J. Khoury, P.E. State Traffic Engineer Richmond, VA Approved December 19, 2014	

**SUMMARY OF REVISIONS TO MEMORANDUM**

- Revised to prohibit the use of Clearview for ALL UPPER-CASE lettering, as per the Virginia Supplement to the Manual on Uniform Traffic Control Devices (MUTCD) and as per the Federal Highway Administration's (FHWA's) policy on the use of Clearview lettering.
- Better clarify that Clearview shall not be used for negative contrast (black text on white or colored background) signs or sign panels.
- State that Clearview 1-W, 2-W, 3-W, or 4-W fonts should not be used without prior approval.
- Specify that Clearview 5-W font should be used for the mixed-case portion of guide signs and destination signs.
- Add guidance on addressing conditions where the use of Clearview 5-W lettering would result in sign panel sizes that cannot be reasonably accommodated because of engineering constraints.
- Add guidance on the inter-line spacing between lines of Clearview text.
- Reorganized to provide clarity.
- New figure which illustrates proper use of Clearview and FHWA Standard Highway Alphabet lettering.

**EFFECTIVE DATE**

Future contracts: These standards should be implemented on all projects for which the sign fabrication layout details have not yet been completed. Projects issued for advertisement on or after July 15, 2015 shall be in full compliance.

Existing signs: Sign panels installed prior to this memo's issuance date that contain ALL UPPER-CASE messages in Clearview may remain through the end of their useful service life, unless the Region determines that legibility has been adversely affected.

Signs that have already been fabricated: Signs fabricated prior to this memo's issuance date that contain ALL UPPER-CASE messages in Clearview lettering, may be installed if they were fabricated as per the design documents and if they otherwise comply with the Virginia Supplement to the MUTCD Revision 1.

Maintenance activities: For maintenance replacement activities, the following provisions are effective immediately when feasible.

## **PURPOSE AND NEED**

In conformance with FHWA directives regarding Clearview lettering, including their [Design and Policy Use for Clearview Alphabet](#) document, this memorandum clarifies VDOT's policy on when to use Clearview lettering and when to use FHWA Standard Alphabet (Highway Gothic) series lettering on guide signs.

## **BACKGROUND**

Clearview lettering was developed to provide increased visibility and reduced halation (over-glow around letters) on highway guide signs, as compared to the FHWA Standard Alphabet series lettering. The research showed that Clearview lettering improves legibility for older drivers as compared to Standard Alphabet lettering *when used appropriately*.

The Federal Highway Administration (FHWA) issued [Interim Approval IA-5](#) in September 2004 for the optional use of this lettering on guide signs with positive contrast legends (white text on green, blue or brown sign background). VDOT subsequently requested and received a conditional usage statement that allows VDOT, localities, and other agencies that maintain roads in Virginia to use Clearview lettering in accordance with the Interim Approval and associated guidelines.

In September 2013 VDOT released Revision #1 to the Virginia Supplement to the MUTCD which further clarified VDOT's Clearview lettering policy. Under Revision #1 to the Supplement, Clearview should only be used for Mixed-Case (one upper-case letter followed by subsequent lower-case letters) destination legends on positive contrast guide signs.

## **STANDARDS**

### **Section 1 - When to Use Clearview Lettering**

Clearview lettering 5-W should be used instead of FHWA Standard Highway Alphabet series E-Modified lettering for the mixed-case portion of guide signs and destination signs. This includes ground-mounted or overhead guide signs, post-mounted street name signs, and overhead street name signs at traffic signals.

### **Section 2 - When Not To Use Clearview Lettering**

Clearview lettering shall not be used under any of the following circumstances:

- Regulatory or warning signs.
- ALL UPPER-CASE lettering on guide signs. Examples include: NEXT RIGHT, MILE, EAST, or an EXIT number.
  - Legends that are required to be ALL UPPER-CASE in the MUTCD (e.g. cardinal directions, distance messages, legends on standard regulatory and warning signs) shall not be converted to Mixed Case lettering.
- Negative-contrast signs or sign elements (black lettering on white or colored background).
- Numerals or fractions, except when a part of a destination name (e.g. “91st Ave”).
- Overlay panels if other destinations on the same sign are in Standard Alphabet series lettering.

Clearview lettering 1-W, 2-W, 3-W, and 4-W should not be used without prior approval, as research has not shown a benefit as compared to their Standard Alphabet equivalents.

See the example in Figure 1 for further clarification on when to use Clearview lettering versus Standard Alphabet series lettering.

### Section 3 - Sign Panel Layout when using Clearview

Signs that use Clearview shall use the [spacing and letter tables](#) developed by FHWA in conjunction with their Clearview font Interim Approval, except where that guidance conflicts with the correct designs developed by the inventors of Clearview font (which are reflected in sign designs developed using GuidSign software).

In accordance with the MUTCD, the inter-line spacing between two lines of legend should be approximately equivalent to the nominal loop height of the lower-case letters for the larger of the two legends. The loop heights of FHWA Standard Alphabet lower-case letters are approximately 75% of the height of upper-case letters. Clearview lower-case letters use a larger loop height than their Standard Alphabet counterparts, so inter-line spacing between a Clearview legend and another legend should be set by the Clearview font’s design (which is reflected in sign designs developed using GuidSign software).

Regardless of the type of lettering used, the guide sign layout (including letter height, interline spacing, placement and size of arrows and shields, etc.) shall be in accordance with the MUTCD, the Virginia Supplement to the MUTCD, and the font design. Signs must have proper letter height and be properly designed for sufficient legibility.

### Section 4 - Effects of Clearview on Sign Width

The proper use of Clearview 5-W lettering for mixed-case destination legends may cause the overall sign width to be greater than if the same sign were designed with Standard Alphabet series E-Modified. Clearview 5-W font should be used for such mixed-case destination legends unless that resulting wider sign will result in significant cost/engineering impacts. Examples include:

- When placing a new sign on an existing sign structure, if a narrower sign is necessary to avoid exceeding the structural capacity of the structure, or
- When placing an overlay panel on an existing sign, if a narrower overlay panel is necessary to fit on the existing sign, or

- If the use of a wider sign panel would require a cantilever sign structure longer than the maximum span length allowed by the latest version of TE Memorandum TE-375.

If the resulting sign width with Clearview lettering must be reduced because of significant cost/engineering impacts, the following steps should be considered:

- 1) Use Clearview 5-W-R font in lieu of Clearview 5-W font. 5-W-R is similar to Clearview 5-W, but with reduced spacing between letters (kerning) to reduce overall width.
- 2) If Clearview 5-W-R font will still result in a sign width that results in significant cost/engineering impacts, then Standard Alphabet Series E-Modified font should be used.

The spacing (kerning) between Clearview 5-W or 5-W-R letters should not be reduced from each respective font's default spacing.

### Section 5 - Other Lettering

FHWA and other states are currently conducting research into "Enhanced E-Modified" lettering. This research is focusing on ways to keep the same basic shape of Standard Alphabet series lettering, but with narrower strokes and other slight modifications to enhance visibility. However to date this lettering has not been approved for use by FHWA or VDOT and shall not be used on any signs in Virginia without prior approval.

Lettering other than Clearview or FHWA Standard Alphabet series shall not be used on traffic control devices in Virginia, except for Community Wayfinding signs as per Section 2D.50 of the MUTCD or other VDOT-approved signs that explicitly allow for the use of other lettering.

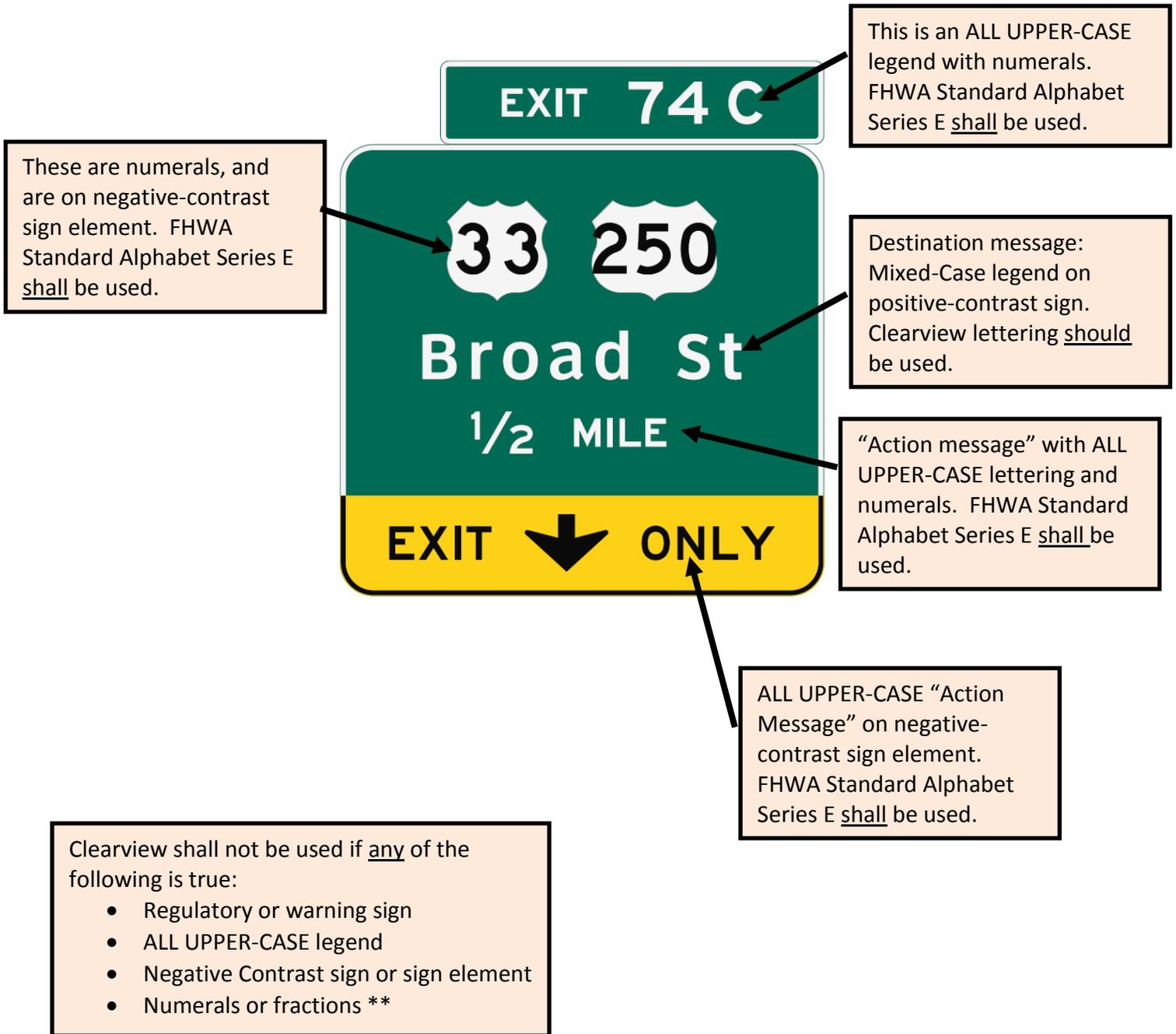
### REFERENCE

- [2009 MUTCD](#)
- [2011 Virginia Supplement to the MUTCD with Revisions](#)
- FHWA Design and policy use for Clearview alphabet: <http://mutcd.fhwa.dot.gov/resources/clearviewdesignfaqs/index.htm>
- Clearview spacing charts: <http://mutcd.fhwa.dot.gov/pdfs/clearviewspacingia5.pdf>

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**Figure 1 – Sample Sign Panel Layout**



*\*\*except when the numerals are a part of a destination name, e.g. “91st Ave”*