

# **VDOT'S CHANGEABLE MESSAGE SIGNS: CREATING DIALOGUE + DRIVING BEHAVIORAL CHANGE**

Commonwealth Transportation Board

 VDOT Chief Deputy Commissioner Rob Cary, P.E. L.S.

July 2021

# Changeable Message Signs (CMS)

- Messaging on our roadways is seen by thousands of drivers daily across the Commonwealth.
- Messaging is focused on communicating traffic impacts and driver safety messages.
- “Themed” messaging began as a pilot in April 2017 during National Work Zone Awareness Week



# Target Behaviors

- **Messaging is focused on driver behaviors and crash types identified in the five-year Strategic Highway Safety Plan and trending crash factors identified in the Virginia Department of Motor Vehicles Traffic Records Electronic Data System.**

“ We feel like with the creative messages people tend to take note of this. Anything that we can do to tie into popular culture or what people can relate to is certainly a way to get those safety messages out there and hopefully change driver behavior. ”

Jason Bond  
VDOT Salem District Communications Manager

“ We absolutely do what we do based on scientific research and trying to connect with drivers in various age groups and change their behaviors. ”

Rob Cary  
VDOT Chief Deputy Commissioner

# Changeable Message Sign (CMS) Overview

The CMS team is comprised of representatives from

- VDOT Operations
- VDOT Traffic Engineering
- VDOT Communications
- Transportation safety partners from Virginia State Police, DMV and the Governor's Executive Leadership Team on Highway Safety



# Science Behind the Signs

- Virginia Tech Cognitive Research Team compiled 1,200 unique messages ranging from rhymes, holiday themes and pop culture references,
- They then gathered 300 drivers in four regions of Virginia (Christiansburg, Norfolk, Fairfax and Winchester) to participate in their study



# Science Behind the Signs

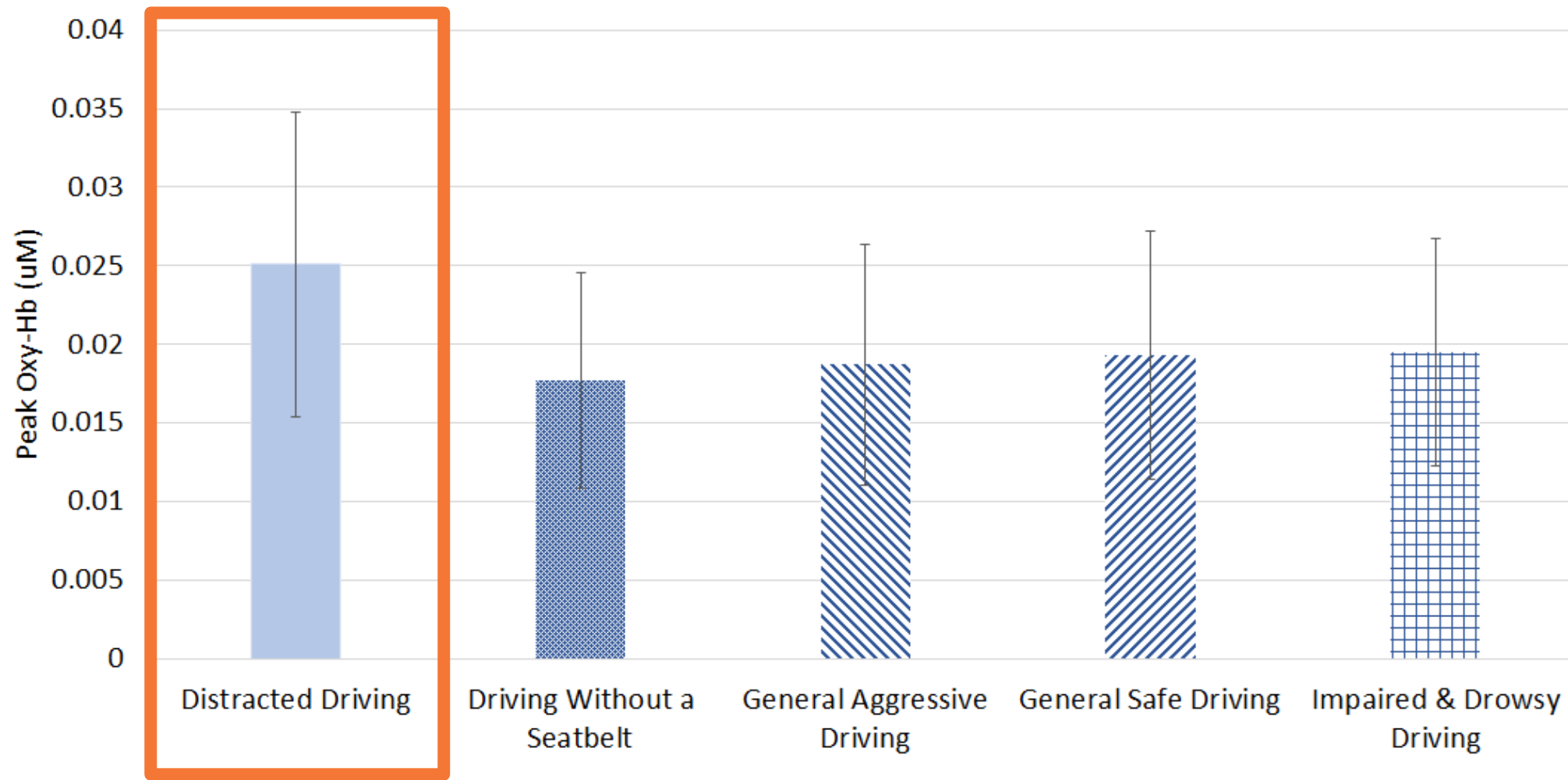
- Participants saw 16 blocks of five similar messages while wearing the fNIRS instrument
- This instrument measures the increase in oxygenated blood in the prefrontal cortex as a proxy for increased attention



# Science Behind the Signs: Results

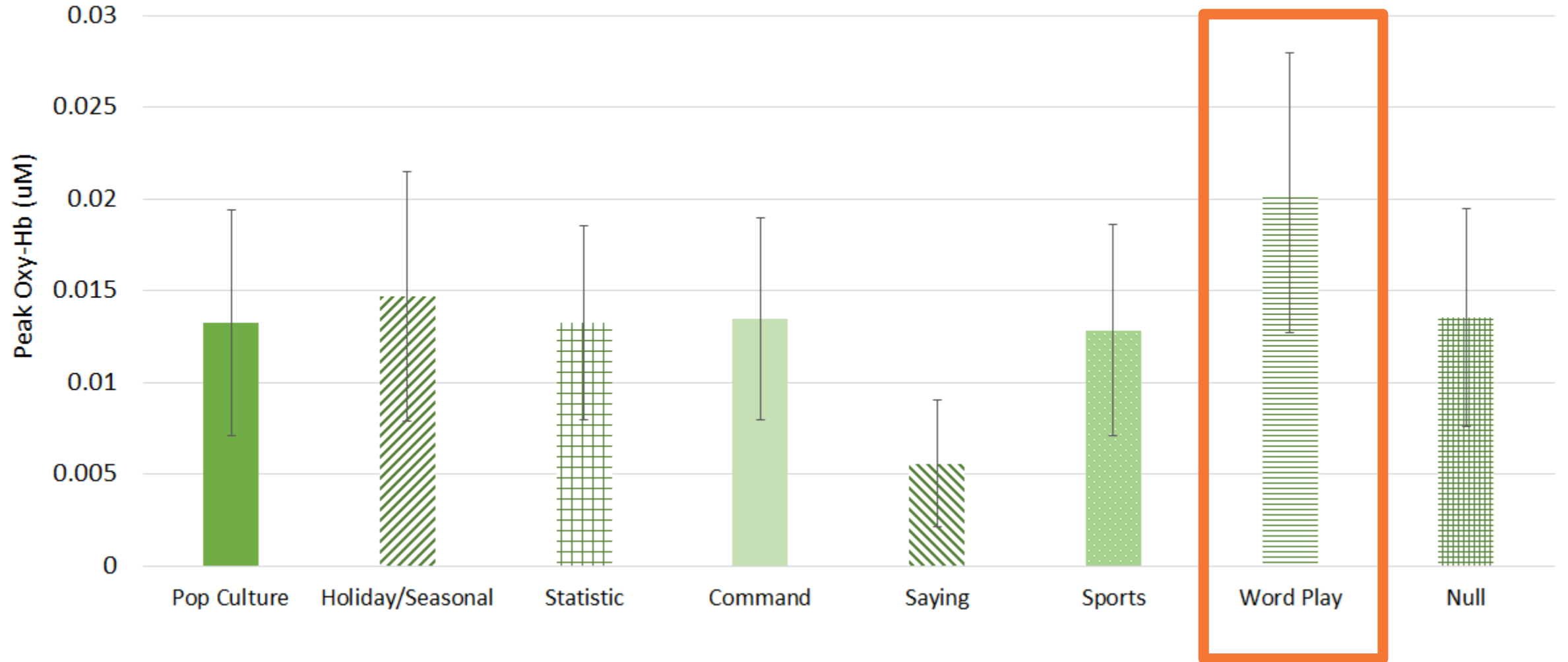
- **Most memorable safety messages themes:**
  - Distracted Driving**
  - Driving + Drinking**
- **Over 90% of drivers in Virginia who participated in the study did not perceive a single message as inappropriate**
- **Messages should focus on holiday timing and themes to produce the best outcome**

# Science Behind the Signs: Results





# Science Behind the Signs: Results



# DMV Crash Data Highlights

According to the Virginia Department of Motor Vehicles, in 2020 there were:

- 406 speed-related deaths in Virginia, an increase of 16.9%
- 182 speed-related fatalities on urban roadways, a 46.8% increase
- 141 speed-related deaths during the summer

*Additional issues:*

*Drowsy driving, distracted driving, driving impaired, texting while driving and driving unbuckled*



***Speed-related fatalities increased in 2020, even with reduced traffic volumes during the pandemic.***

# UNRESTRAINED DRIVING

343 fatalities in 2020

12.83% increase

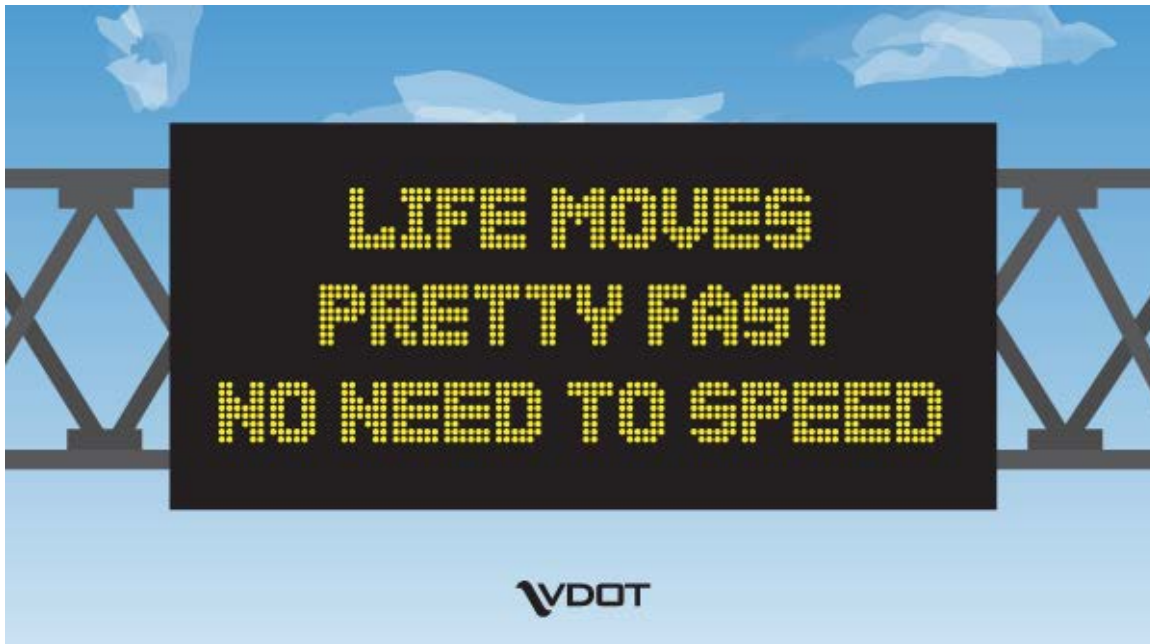


August 20 – 22, 2020  
Seat Belt Campaign

# SPEEDING

## 406 fatalities in 2020

### 16.3% increase



May 28 – 30, 2021  
Speeding Campaign

# ALCOHOL IMPAIRED DRIVING

272 fatalities in 2020

3% increase



February 5 – 7, 2021  
Super Bowl Campaign

# DISTRACTED DRIVING

## 121 fatalities in 2020



July 16 – 18, 2021

Distracted Driving Campaign

# TEXTING AND DRIVING (included with distracted driving numbers)



July 16 – 18, 2021

Distracted Driving Campaign

# Viral Post On Social Media

**CMS “Driving Fast And Furious? That’s Ludacris!” ran across boards in Virginia between June 25 – 27, 2021 written by VDOT’S own, Dan Taylor.**



**David A. Graham** @GrahamDavidA · Jun 25  
Good job, @VaDOT



6 31 150



**muva reese** @ReeseTrece · Jun 26  
aight now Virginia, that's enough.



449 19.3K 133.8K





**ludacris** ✓



**ludacris** ✓ Virginia I Love You Back! Can't Believe this is real. Should this be on every highway? 🤔 #f9 #nowthatsludicrous

1w



**jordanabrewster** ✓ Epic



1w 503 likes Reply

— View replies (6)



**djwhookid** ✓ 🤔🤔🤔



1w 118 likes Reply

— View replies (2)



**eudoxie** ✓ 🤔🤔



Liked by amtrakprod and 441,771 others

JUNE 26



Add a comment...

Post

# CMS Gone Viral On Social Media

Ludacris' post gained over 445,000 likes. Other viral posts of the same photo gained over 17,000 retweets.

VDOT's social media stats from June 25-30 compared to the week of June 18-24:



Facebook: 33,000+ impressions

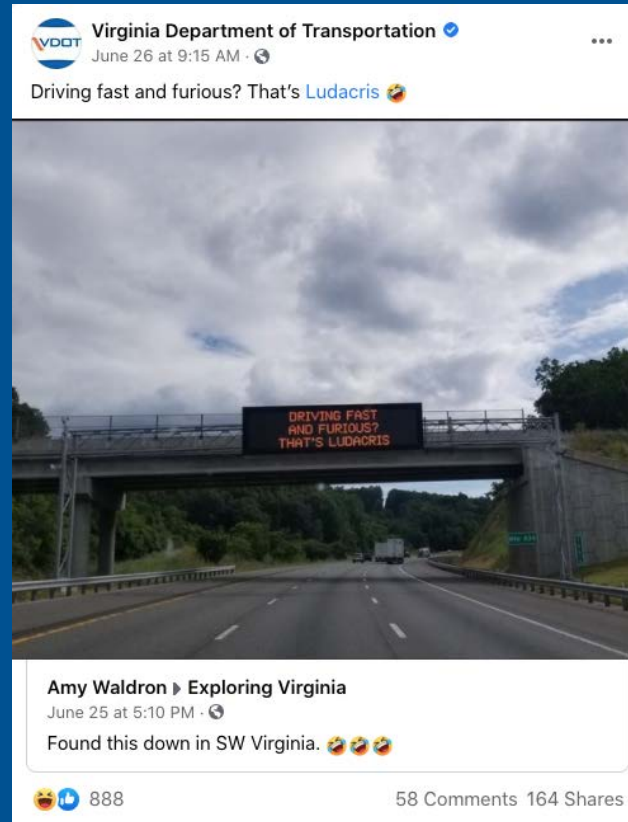


Twitter: Retweets up 336%, gained 100+ new followers



Instagram: 330+ new followers (up 708%), 35K+ impressions, up 3000% in profile views

# VDOT's Response On Social Media



Twitter

92K+ impressions

694 likes



Facebook

35K+ impressions

888 likes



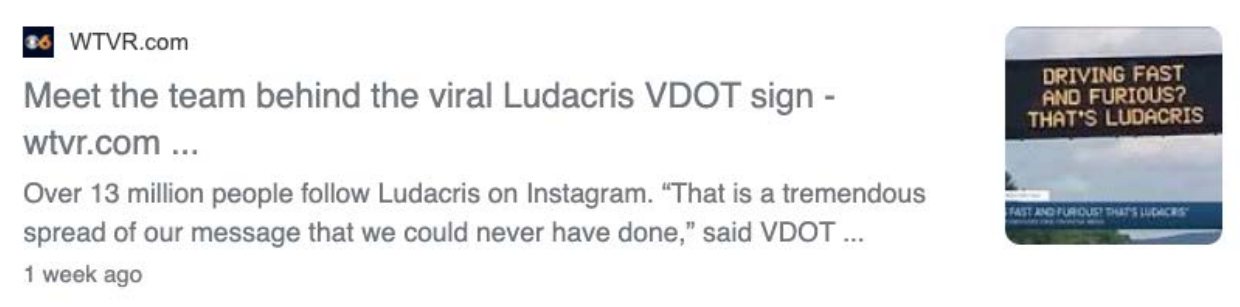
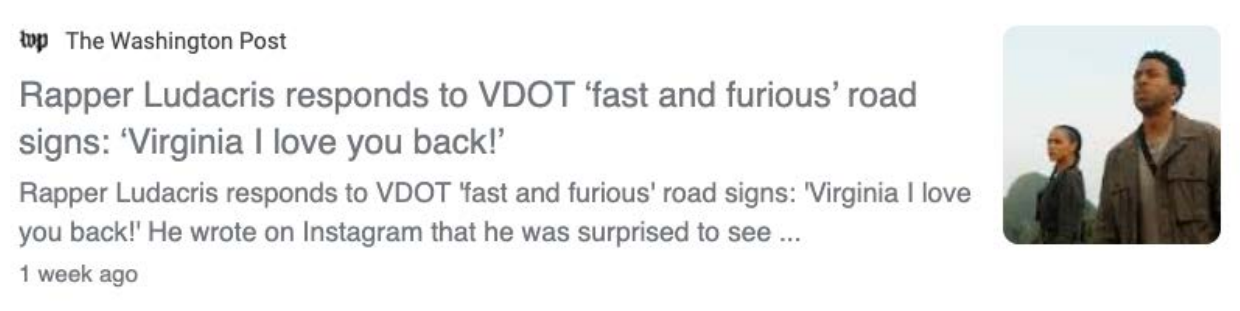
Instagram

7,500 impressions

967 likes

# Media Attention

The story was picked up by The Washington Post, Southern Living, Wall Street Journal, NPR, Richmond Times-Dispatch (and other local + national news outlets from Rochester to San Diego), Jimmy Kimmel Live! (guest host Wanda Sykes), and online tabloids such as People.com & EntertainmentWeekly.com



# Media Attention

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NEW AT 11:00

**LUDA SHOWS LOVE TO VIRGINIA**

RAPPER & ACTOR REACTS TO VDOT SIGNS REFERENCING HIMSELF

0:12 / 1:02

Up Next: Pineapple Teriyaki Glazed Baby Back Ribs >

iHeartRADIO Upgrade For You Your Library Live Radio Podcasts Artist Radio Plus

## Ludacris Approves Virginia's 'Fast And Furious' Highway Sign

By Jason Hall  
June 29, 2021

Grillock

## Rapper Ludacris responds to VDOT 'fast and furious' road signs: 'Virginia I love you back!'

He wrote on Instagram that he was surprised to see the sign and asked if the message should be on every highway.

By Denis Hodgeth  
June 29, 2021 at 1:20 p.m. EDT

# Viral CMS Signs From the Past



## Wakanda Driver are you? Safety is King.

The Wakanda signs received coverage by local media, including NBC, CBS and Fox affiliates.

But the jewel in the coverage crown, so to speak, was a post by the Shade Room, a national celebrity site. Based in Los Angeles, the site has over 2.2 million Instagram followers and is known as the “TMZ of the internet.” Over time, their Instagram post about VDOT’s Wakanda message alone generated **over 224,000 likes**.




# The signs have started a conversation about safety – in Virginia, and nationally.

**Blaquegirl** @TheLadyBugAzul [VIEW PROFILE](#) 6 months ago  
@VaDOT who authorized this sign? "Wakanda driver are you? Safety is king" I'm not mad. Kinda made our day. Just wondering though. @VaDOTFRED #WakandaForever




**Gregory Sheldon** @gregorysheldon [VIEW PROFILE](#)  
Dad jokes from your friends @VaDOTRVA.



**BD.** @badxoxo\_ [Follow](#)  
They changed the sign on the interstate to 'somebody loves you buckle up' .... I literally cried & put my seatbelt on.  
6:49 AM - 14 Feb 2019

**Virginia Smith** @VaSmith12 [VIEW PROFILE](#)  
@VaDOT Captain Obvious highway sign is fantastic. lol/ Just saw it on I-64 West going into RVA. ✓

Virginia Department of Transportation



**Michael Paul Williams**  
mwilliams@TimesDispatch.com

The Marvel superhero film "Black Panther" was still packing them in when a digital sign — inspired by the film's fictional African kingdom — caused me to do a double take as I commuted on Interstate 95. "WAKANDA DRIVER ARE YOU? SAFETY IS KING," the sign read.

Amused and a bit taken aback by the Virginia Department of Transportation's comedic turn, I wondered: **Wakanda pun is this?**

So apparently did the Wall Street Journal. It featured that message in a story describing nationwide efforts to make driver-safety messaging more fun and effective. Or as that newspaper's headline put it, "The Best One-Liners in America Are on the Highway."

The signs have been featured in stories by the Wall Street Journal and the Richmond Times-Dispatch, on celebrity sites like The Shade Room and even social media influencers (with names that aren't appropriate to share in full here). They've also been shared far and wide by those who see them on the road.

**Amanda Grimsley** @AmandaCGrimsley [Follow](#)  
Today's happy Halloween wisdom brought to you by signs on my 495 commute this morning. Pumpkins get smashed, drivers don't! 🎃🎃🎃 Thanks @VaDOT.  
5:54 AM - 31 Oct 2018  
1 Like

**Jacob Mleziva** @Jmlez [Follow](#)  
Today on my way home from work I saw a sign that said "pumpkins get smashed drivers don't" and that's the best PSA against drunk driving I've ever seen  
2:23 PM - 29 Oct 2018  
8 Likes

**NEWS**  
The Wall Street Journal  
"You're not a firework. Don't drive lit." State transportation officials are finding new ways to get out safety messages.



**kjerry**

Liked by jessejamesjr76 and 579,153 others  
kjerry Happy 4th. Stay safe homies. (@pizzaslime)  
View all 6,989 comments



# VDOT Northern Virginia on Twitter

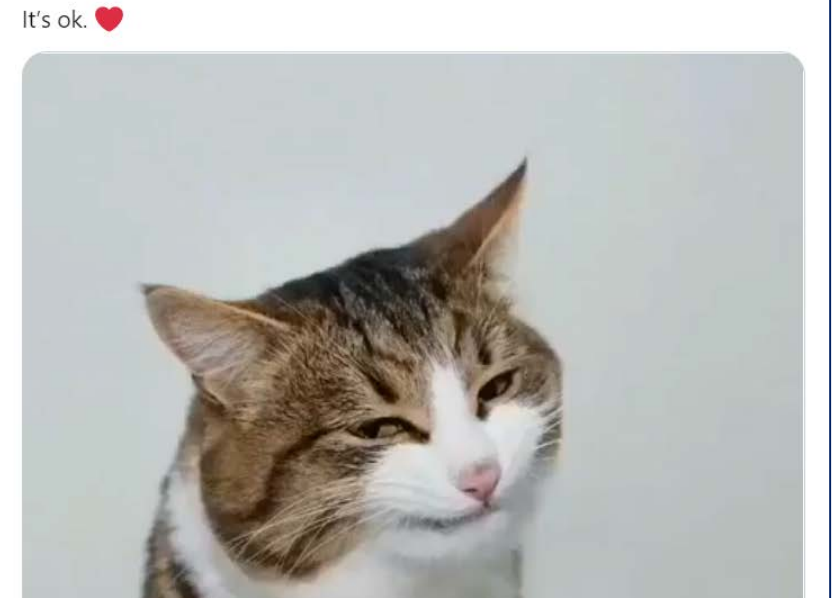
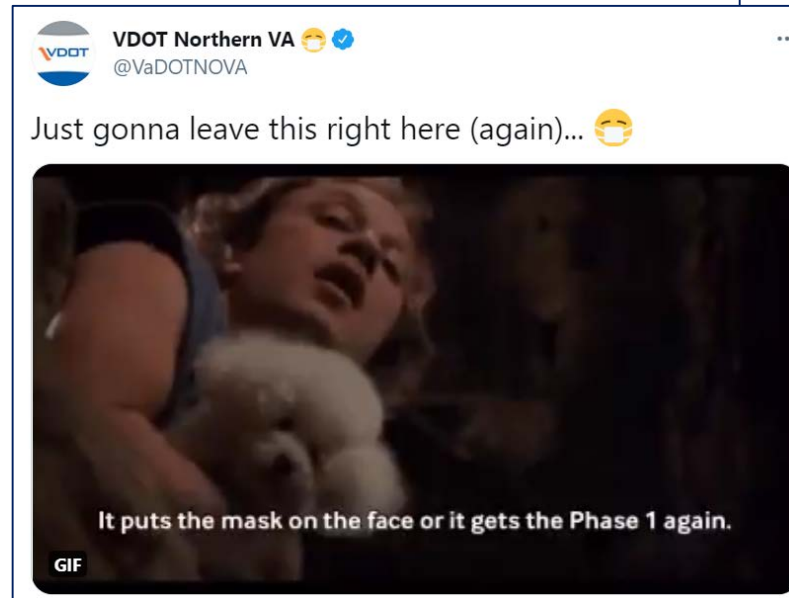
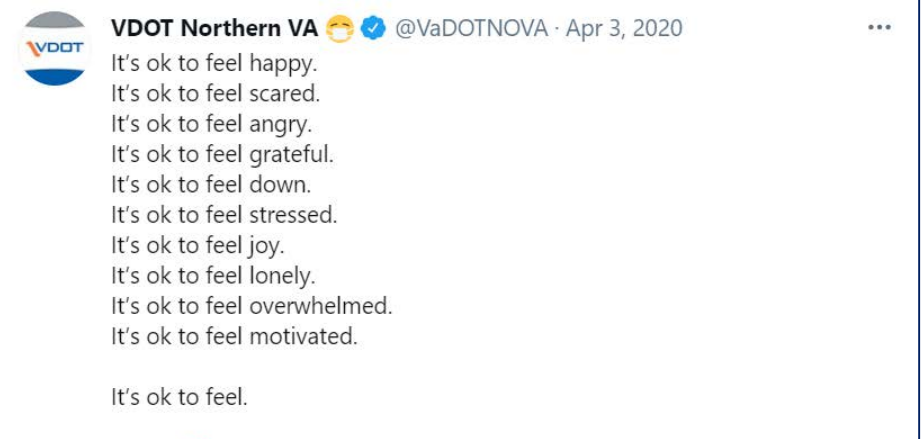
- **Reputation: bold, kind, creative, inclusive, helpful, funny, original, gifs and compelling imagery**
- **Engages in daily two-way dialogue, after-hours replies, frequent live-tweeting of weather emergencies, interstate incidents**
- **Expectation set/met of “always being there”**
- **Based in crisis comms: People need to know that you care before they care what you know**
- **Creative tactics yield demonstrated increase in positive agency sentiment due to impression as a trusted friend on Twitter, Reddit, Nextdoor**



**Impressions on single tweet: 801,115**

# VDOT Northern Virginia during COVID

- Millions of people shifted to telework and traffic volumes dropped. Traffic tweets seen as tone deaf during onset of pandemic.
- MeeMaw persona and “MeeMaw Nag” feature used to communicate non-transportation topics important to the emotional health of the community.



# Results

- @vadotnova 2020 average engagement rate 87 times higher than national benchmark
- 488% follower increase since 2015
- 2020 Impressions: 18.8 million; 2021 Impressions to-date: 13.2 million
- The MeeMaw persona, including daily “MeeMaw Nag” feature generated pieces in Washingtonian Magazine, WTOP, New York Times, WJLA
- Twitter community spontaneously developed its own hashtag: #welovemeemaw

What If a VDOT Twitter Account Is the Thing That Gets Us Through This Crisis?

Would that really be so bad?

WRITTEN BY ANDREW BEAUJON | PUBLISHED ON APRIL 6, 2020

unexpected civic treasure

