



TRAFFIC MANAGEMENT CENTER *NEWSLETTER*

July– 2012

I. I-264 Diversion Route Deployment Test, July 17 -18, 2012

Over the past year, Staff has been working with Albeck Gerken, Inc (AGI), in developing diversion route timing plans. These timing plans are designed to be implemented should an incident occur on the interstate (I-64 or I-264) that would require diversions of traffic on to city streets.

We wanted to test the plans in real-time conditions to get familiar with the speed and accuracy of a deployment of an “all green corridor”.

After many planning iterations, involving traffic volumes/interstate accident history/ most likely route selection, a two (2) mile stretch of I-264 was selected as the diversion zone. A fourteen intersection corridor on Virginia Beach Boulevard, Lynnhaven Parkway, and First Colonial Road were incorporated into a diversion route.

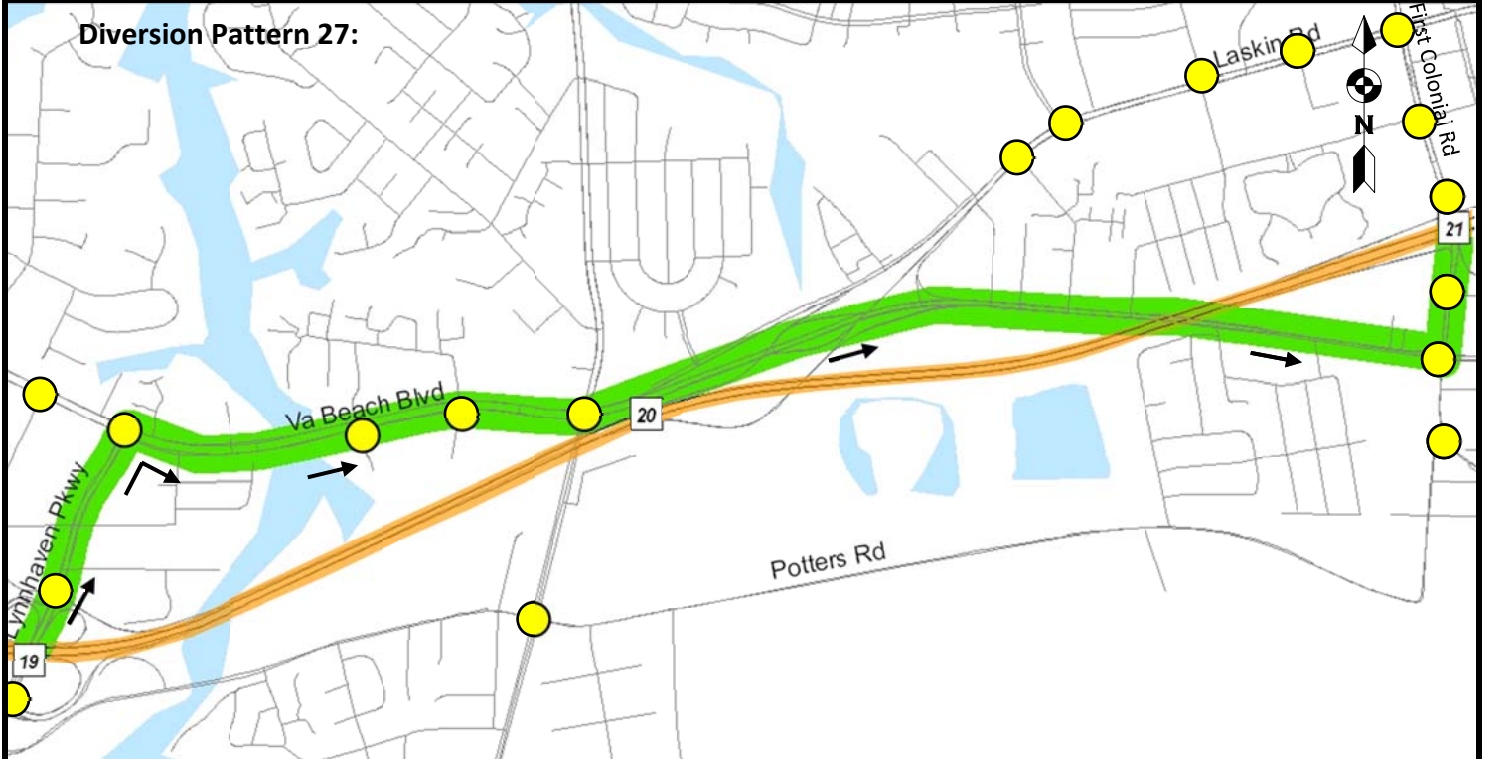
All operations commenced at midnight on July 17; City staff gathered at the Traffic Management Center and AGI gathered on-site.

Once all preliminary test mode checks were completed, the test plans were deployed in the field for 30 minutes. The corridors were driven to verify it was operating well. A note of concern was the amount of time required to gain synchronization through the corridors, requiring up to 10 minutes.

All testing was completed by 0600 on July 18, 2012. The overall benefit of the deployment test was substantial. It provided use of an instantaneous pre-emption feature in our traffic control software that we seldom use and revealed detection and controller issues at 4 intersections thought to have been working fine.

A drawing of the intersections tested and fundamental assumptions used are listed below.

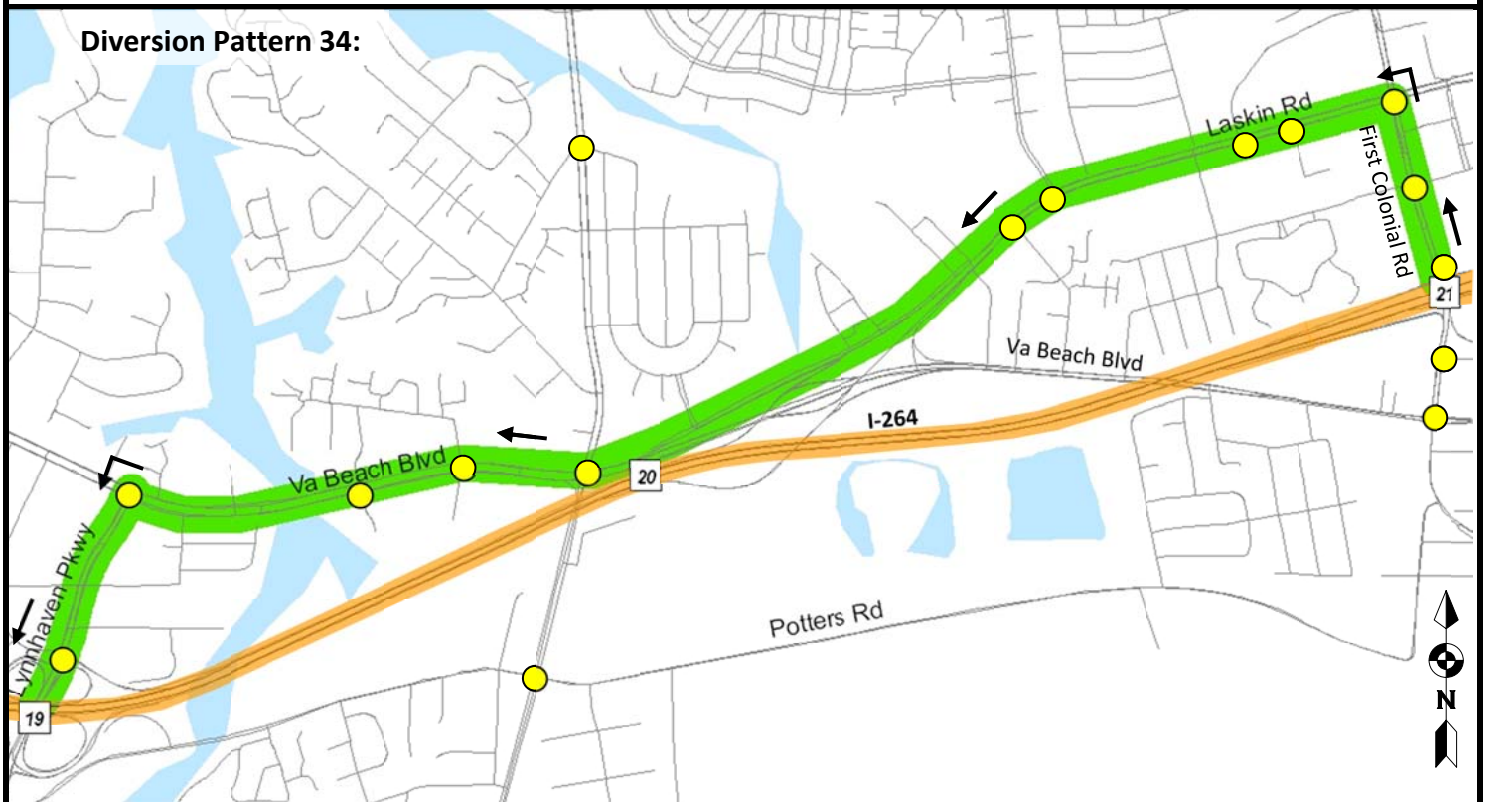
Diversion Pattern Number: 27
Interstate Diverted: I-264 EB
Route Extents: Interchange 19 to 21



General Assumptions:

- Full diversion route signage is assumed to be able to alert drivers of the intended route for which there is a special timing plan. For this route, it is assumed that the majority of drivers will exit I-264 at Lynnhaven Pkwy, travel north to Virginia Beach Blvd, then east to First Colonial Rd, then north on First Colonial Rd and reenter the interstate at Wisconsin Ave. Instead of reentering the interstate at First Colonial Rd, a large portion of the traffic may continue eastbound on Virginia Beach Blvd.
- There will be a certain amount of vehicles that choose not to follow the intended diversion route when coming off of I-264 EB regardless of full signage or their knowledge of a special timing plan.
- The additional volumes added through this route will have far reaching impacts on many intersections not included in the route itself. For modeling purposes, only those most greatly affected were included in the analysis of this route.
- For modeling purposes, all intersections involved are assumed to be operating their PM peak timing plans. This is to assume the worst case scenario as the PM peak typically has the highest volumes of any plan throughout the week for the intersections involved.
- According to VDOT's 2010 Annual Average Daily Traffic Volume Estimates for Virginia Beach, the AAWDT for I-264 EB between First Colonial Rd & Virginia Beach Blvd is 60,000 vehicles per day. Under the assumption that 10% of the volume is present in the PM and all of that traffic will be using this diversion route, it could be assumed that 6,000 vehicles would be added through the system. However, less than 2,000 additional vehicles per hour will be able to exit and travel through this diversion route because of capacity restrictions.
- To account for the worst case scenario, it is assumed that the entire 2,000 vehicles that were previously assumed to be the maximum I-264 EB traffic in the PM that could be accommodated will exit the interstate at Lynnhaven Pkwy.

Diversion Pattern Number: 34
Interstate Diverted: I-264 WB
Route Extents: Interchange 21 to 19



General Assumptions:

- Full diversion route signage is assumed to be able to alert drivers of the intended route for which there is a special timing plan. For this route, it is assumed that the majority of drivers will exit I-264 at First Colonial Rd, travel north to Laskin Rd, then west to Virginia Beach Blvd and continue west to Lynnhaven Rd, turn south on Lynnhaven Rd and reenter I-264 westbound.
- There will be a certain amount of vehicles that choose not to follow the intended diversion route when coming off of I-264 WB regardless of full signage or their knowledge of a special timing plan.
- The additional volumes added through this route will have far reaching impacts on many intersections not included in the route itself. For modeling purposes, only those most greatly affected were included in the analysis of this route.
- For modeling purposes, all intersections involved are assumed to be operating their PM peak timing plans. This is to assume the worst case scenario as the PM peak typically has the highest volumes of any plan throughout the week for the intersections involved.
- According to VDOT's 2010 Annual Average Daily Traffic Volume Estimates for Virginia Beach, the AAWDT for I-264 WB between First Colonial Rd & Virginia Beach Blvd is 40,000 vehicles per day. Under the assumption that 10% of the volume is present in the PM and all of that traffic will be using this diversion route, it could be assumed that 4,000 vehicles would be added through the system. However, less than 1,000 additional vehicles per hour will be able to exit and travel through this diversion route because of capacity restrictions.
- To account for the worst case scenario, it is assumed that the entire 1,000 vehicles that were previously assumed to be the maximum I-264 WB traffic in the PM that could be accommodated will exit the interstate at First Colonial Rd.

II. Traffic Management Operations Division Response Information

Some of the vital statistics we address each month

- 1. *Number of Traffic Counts Scheduled/Completed – 29/29***
- 2. *Completed vehicle turn movement counts at 2 intersections***
- 3. *Number of Hits on the Traffic Data Database (at www.VBgov.com/TCDS)***
 - *187 hits for the month of July 2012*
 - *6853 hits since program inception (July 2009)*
- 4. *Number of Utility Locate Tickets (Miss Utility) Received/Checked/Marked – 1888/188/135***
- 5. *Number of Traffic Signal Preventive Maintenance Actions completed –53***
- 6. *Number of Traffic Signal Work Orders Received – 109***
- 7. *Number of Traffic Sign Work Orders Completed – 402***
- 8. *Linear feet of Thermoplastic Applied to Roadway – 33,346***