

New technology clears the way for Palm Beach County emergency vehicles

By: Angel Streeter, SunSentinel

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Emergency responders rushing to save a life often get stuck at traffic-clogged intersections, delaying response times when seconds matter.

That's about to change as Palm Beach County deploys a new system that clears out traffic at intersections before fire-rescue vehicles come racing through them.

"Traffic is difficult down here in South Florida," said Evan Bestland, division chief with Palm Beach County Fire Rescue. "It's absolutely a problem (at intersections) for us."

Years in the making, the new system gives traffic signal priority to fire engines and rescue vehicles dispatched by the county — but it's vastly different from preemptive systems used in other places that allow emergency vehicles to turn traffic lights green as they approach an intersection.

Instead, Palm Beach County's system automatically extends the length of time for green lights as emergency vehicles on the way to calls. The extra green light time occurs before emergency vehicles get to intersections, effectively clearing out the lines of vehicles waiting at red lights. That prevents first responders from getting stuck behind stacks of gridlocked cars.

"We call it the flushing stage," Bestland said. "Before we get to intersections, hopefully it will move all that traffic out of the way."

In addition to using longer green lights to clear out traffic beforehand, the new system estimates when an emergency vehicle will get to an intersection and adjusts the timing of the lights to make sure first responders get the greens.

With limited backups to deal with, response times should improve, Bestland said.

Beside increasing response times, the new system is expected to solve other problems both for emergency responders and motorists, said Dan Weisberg, the county's traffic engineer.

For one, it should improve the safety of firefighters, paramedics and motorists at intersections.

Sometimes motorists stuck at red lights have nowhere to go when an emergency vehicle is behind them. So they may maneuver awkwardly into the intersection in the path of oncoming traffic.

Or emergency responders trying to get past a long stack of cars may just go onto the other side of the road and travel in the opposite direction of traffic.

And the system could eliminate drivers' confusion when they hear sirens.

"Sometimes you don't know which direction it's coming from," Weisberg said.

The system is already functioning on Jog Road and Atlantic Avenue west of Delray Beach and on Indiantown Road in Jupiter, where county engineers and Palm Beach County Fire Rescue have been testing it out for the last four years.

Now, after working out the kinks, officials plan to roll out the system on roads throughout Palm Beach County — a process that could take up to two years. County engineering recently installed the needed software at some 15 intersections on Clint Moore Road. Next, it will tackle intersections in Jupiter and then west of Boca Raton.

The system only will work at intersections where county-maintained traffic signals are online. By the end of this year, 75 percent of the county's traffic signals will be online. And it will only work in cities that use the county's dispatch system. So fire-rescue departments in Delray Beach, Boynton Beach and Boca Raton won't be able to use the traffic signal priority system.

The traffic signal priority systems works by having the county's computerized dispatch system "talk" to the county's intelligent transportation center computers.

Plus, all fire-rescue vehicles are equipped with vehicle location devices so the computers constantly know where they are.

When a call comes in, the dispatch computer provides the responding vehicle with a route to its destination. It also sends the route to the traffic engineering department's computer system, which starts alerting traffic signals along the route to make the green lights last longer.

Green lights that typically last 30 seconds can stretch to 45 seconds or a minute to accommodate emergency responders.

Once the emergency vehicles get through, the traffic signals start to go into recovery mode to return to their original cycling times.