



## Memorandum

**Memorandum No: 17-083**

**Date:** May 12, 2017

**To:** Honorable Mayor and Commissioners

**From:** Lee R. Feldman, ICMA-CM, City Manager

**Re:** Recommended Improvements for Sunrise Boulevard between the Searstown and Gateway Shopping Plazas

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The Florida Department of Transportation, District 4, Planning and Environmental Management Office (FDOT) recently completed a planning study focused on improving traffic operations and safety along SR 838/Sunrise Boulevard between SR-5/US-1 at Searstown Shopping Plaza and the Gateway Shopping Plaza.

Under existing conditions, the corridor is operating at capacity with heavy vehicular congestion and queues throughout the day. This condition is related to the US 1 traffic that traverses this segment on Sunrise Boulevard by adding 44% of the vehicles of the total 59,000 vehicles per day (vpd).

By year 2040, traffic volumes are expected to increase up to 66,500 vpd. The major intersections along this corridor are expected to operate below the standard level of service (LOS D) during the peak hours. In general, existing intersection delays can be expected to double and vehicular queues are expected to increase up to 34% at the critical left-turn movements. More notable, the existing triple eastbound left-turn lane at US 1/Gateway will exceed its capacity and significant delay and queues are expected.

Vehicular queues on the westbound direction at the intersection with US 1 at Searstown were observed to reach back to NE 10<sup>th</sup> Avenue. A similar condition was observed at the intersection of NE 15<sup>th</sup> Avenue in the eastbound direction with the left turn movement queue encroaching into the inside through lane impeding traffic flow. The main issue at the intersection of US 1 at Gateway is the eastbound to northbound left turn movement, with observed queues spilling back to NE 17<sup>th</sup> Way.

FDOT recommends the following improvements to address existing and expected conditions:

- Corridor wide Improvements: Includes upgrades to crosswalk ramps and sidewalks within the project limits to comply with ADA requirements, and signage modifications and additional pavement marking at specific locations.

- Sunrise Boulevard at US 1/Searstown: Improving the operations of the intersection by constructing an additional westbound left-turning lane (provides queue reduction of 28%) and installing a queue detection system on the eastbound direction. The queue detection system will be designed to relieve eastbound stopped traffic if queues reach a point close to the rail-road tracks.
- Sunrise Boulevard at NE 15<sup>th</sup> Avenue: Install a dynamic lane system for the eastbound direction. It consists of the use of the inside through lane to be converted to a shared through/left by using a dynamic display signal creating an effective dual left-turn lane which will operate during peak hours only. It includes widening in the north approach to receive the dual lanes.
- Sunrise Boulevard at US 1/Gateway: Convert the existing signalized intersection to a multilane roundabout with an eastbound to northbound grade separated movement. This proposed 'flyover' ramp (Exhibit 1) carries traffic destined to US 1 northbound relieving the at-grade movements. The combined improvements are expected to reduce delays by up 58% during the peak hours. In addition, the roundabout conversion is expected to reduce the total intersection crashes by 44% based on nationwide studies and creates fewer pedestrian conflicts with less crossing distance. Bicyclists were considered in the roundabout concept for the Sunrise Boulevard intersection at Gateway. Bicycles are accommodated in the proposed design by providing a bike ramp from the roadway to a multiuse path around the circle.

A Project Development and Environment (PD&E) Study for the improvements recommended above is proposed as an addition to the 2018/2019 Multimodal Surface Transportation Priorities List which will enable the programming of future available funds through the Broward Metropolitan Planning Organization's 5-Year Transportation Improvement Program (TIP) as well as the Florida Department of Transportation's Draft Tentative Work Plan. The PD&E will further evaluate the recommendations listed above to determine the associated social, economic, natural and physical environmental impacts in order to develop the best solution for the multimodal, operational and congestion management challenges in this area.

Attachment: Rendering of US 1 Sunrise Intersection Improvements

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