



City of Miami Beach, 1700 Convention Center Drive, Miami Beach, Florida 33139, www.miamibeachfl.gov

Project Name: Intelligent Transportation System (ITS) and Smart Parking System (SPS)

Project Summary: In highly urbanized and congested areas with constrained rights-of-way where roadway expansion/widening is not cost-effective or feasible, the use of state-of-the-art technology is the most viable alternative to improve the efficiency of the roadway network and vehicular throughput. While the Transportation Department has been actively monitoring and managing traffic during special events and peak periods associated with the City's high impact period (December through May) for a couple of years, in an effort to address traffic congestion and improve mobility throughout the City, the Transportation Department is currently pursuing a state-of-the-art Intelligent Transportation System (ITS) and Smart Parking System (SPS) Project on a permanent basis. The project consists of the use of CCTV cameras at critical intersections, wi-fi/Bluetooth detectors along arterials and collectors to measure travel time, digital message signs at strategic locations along thoroughfares, and an adaptive traffic signal control system which adjusts to real-time traffic demand in order to maximize throughput. The SPS component of the project will include parking detectors and digital message signs at garages and parking lots. The project will also include a Transportation Management Center ideally located within the City to monitor traffic conditions throughout the City, compile data, and disseminate real-time traffic and parking information to the traveling public.

With this state-of-the-art technology, the City will have the ability to view real-time images of roadway conditions, obtain real-time travel time along principal corridors, and provide real-time information to drivers regarding traffic conditions, travel time, and incidents affecting traffic flow. In addition, digital message signs located at parking garages and parking lots will provide real-time parking availability. One of the innovative components of the ITS project is the implementation of Adaptive Traffic Signal Control (ATSC), or smart signals. ATSC allows traffic signals to detect and adjust to real-time vehicular and pedestrian demand and assign appropriate green time to the more congested movement to maximize vehicular throughput.

The City has recently entered into a contract with Kimley-Horn and Associates (KHA) for Program Management Services. As part of this contract, KHA will develop a Project Plan and Concept of Operations and assist the City in drafting the specifications and procurement documents for a Design, Build, Operate, and Maintenance (DBOM) contract for the ITS and SPS Project. The implementation of this project will provide the City with the capabilities to improve signal operations along principal corridors to more effectively and efficiently mitigate traffic congestion created by special events, incidents, and increased demand. In addition, providing information on parking availability to the traveling public will improve the efficiency of the City's parking lots and garages and further contribute to reducing congestion and driver frustration.

KHA is currently working in identifying the appropriate devices and locations to be included in the solicitation. As part of the project, a Technical Steering Committee has been formed with members of the Florida Department of Transportation, Miami-Dade County, Florida International University Professors, and City of Miami Beach Staff to assist with guiding the project and improving delivery methods.

The project is anticipated to take 24 months for implementation.

Estimated Cost: \$16 Million (including Program Management Services)