

# MASSTR

## MEADOWLANDS ADAPTIVE SIGNAL SYSTEM FOR TRAFFIC REDUCTION



The system construction includes five phases and is currently operational at 101 locations. All phases are anticipated to be completed in 2017.

The agency was awarded a highly competitive \$10 Million Tiger 2 grant from the U.S. Department of Transportation to install the system on 128 traffic signals in the Meadowlands region. The Meadowlands District Transportation Planning District fund is providing the remaining \$2.5 million in matching funds. The NJDOT expanded the system by 16 signals in Jersey City and Kearny to reduce traffic delays on local roads during the reconstruction of the Pulaski Skyway.

The NJSEA MASSTR Project reduces roadway congestion, delays, travel time, fuel consumption, and airborne emissions in the New Jersey Meadowlands through advanced, proven, and cost-effective technologies without sprawl-inducing roadway widening, significant infrastructure spending, or adding additional right-of-way.

The project incorporates 144 traffic signals into a self-adaptive network. A reduction in congestion is accomplished by adjusting the signal timings based upon the flow of traffic rather than utilizing fixed or

actuated timings. Signals along multi-jurisdictional boundaries are continuously coordinated for optimal operation. Traffic conditions and signal operations are monitored and controlled in real-time at the NJSEA Traffic Management Center.

The MASSTR project is an ideal opportunity to update existing outdated traffic control mechanisms and integrate them into an advanced intelligent transportation system that provides for sustainable transportation improvements and significant regional benefits within a complex region. Area businesses and residents will

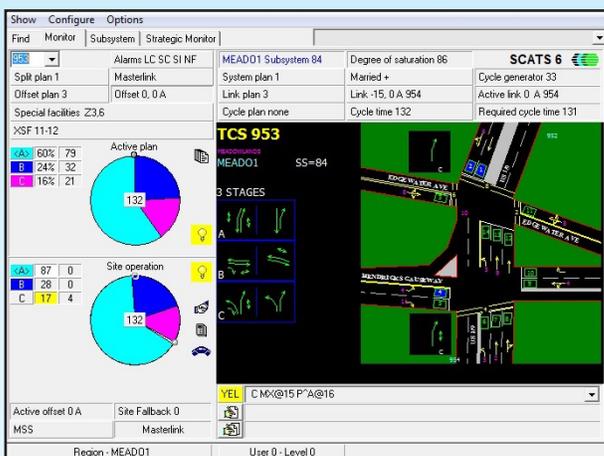
continuously benefit from a reduction in signal delays, travel time, fuel consumption, and airborne emissions.

All project systems utilize advanced components including adaptive traffic signal control software, wireless and fiber-optic communications, and vehicle detection devices.

Installation of the system predominantly consists of adding advanced traffic signal control components to existing signal cabinets; mounting vehicle detection cameras, radios, and antennas on traffic signal poles; and installation of various wiring.

The Meadowlands District Transportation Planning District fund is providing the remaining \$2.5 million in matching funds. The completed intelligent transportation system will serve more than 3 million vehicles each day. The project is estimated to reduce vehicle delays by more than 1.2 million hours per year, gasoline consumption by more than 1.2 million gallons per year and greenhouse gas emission by more than 11,000 tons per year.

For additional information, please contact the NJSEA Chief of Transportation at (201)460-4616 or nadereh.moini@njmeadowlands.gov.



Monitoring sites through SCATS – Adaptive traffic signal control system



Video-based vehicle detection system



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**TIGER 2**