

South Carolina Department of Transportation

Engineering Directive

Directive Number: ED-82 **Effective:** January 25, 2024

Subject: Transportation Systems Management and Operations Program

Reference: Public Law 117-58, Infrastructure Investment and Jobs Act

Primary Department: Traffic Engineering

The South Carolina Department of Transportation (SCDOT) is allocating funds to initiate SCDOT's Transportation Systems Management and Operations (TSMO) Program. The goal of the TSMO Program is to enhance mobility, reduce congestion, and improve safety throughout the SC road network. Funding will be used to target congestion through emphasis on four primary program strategies.

1. Statewide Interstate Intelligent Transportation Systems (ITS): Deploy ITS on the entire interstate system to effectively monitor and manage system performance in urban and rural areas. This will be accomplished by the following:
 - a. Completing deployment of statewide fiber and camera systems along interstate corridors.
 - b. Systematically replacing aging overhead dynamic message signs (DMS) and strategically advancing new DMS.
 - c. Replacing portable DMS acting as permanent DMS with fixed DMS.
2. Traffic Management Center (TMC) Modernization: Provide modern facilities for all TMCs with adequate space for current and planned operations. Facility and technology advancements will be explored to support increased systems management and potential operational expansion. Improvements will conform to the Comprehensive Permanent Improvement Plan process.
3. Statewide Transportation Systems ITS: Expand the ITS network and technology on the statewide roadway system to effectively monitor and manage system performance. Specific attention will focus on evacuation routes and completing integration of state-maintained and locally-maintained signal systems so that centralized management of signal systems can be achieved across South Carolina.
 - a. Ensure SCDOT signals maintained by municipalities are networked via SCDOT's standard CoLo architecture to ensure both municipal and SCDOT offices have access as well as to ensure corridors spanning multiple jurisdictions can be operated cohesively.

- b. Expand deployment of statewide fiber and wireless connections, cameras, DMS, and other ITS devices throughout the road network.
 - c. Upgrade ITS network devices that have reached their manufacturer's end of support in order to ensure network security risks are minimized.
4. Corridor Performance Improvements: Improve the performance of key transportation system corridors by optimizing existing capacity and operations. Projects will be selected based on corridors demonstrating the highest levels of delay and congestion in urban and rural settings.
- a. Signal Operations: Funding will be allocated for ongoing traffic signal operational improvements. Improvements include signal retiming, updating signal plans, signal analyses, and operational adjustments with the goal of improving traffic flow while reducing congestion.
 - b. Corridor Performance Improvement Projects: Funding will be allocated to urban areas based on allocations determined by Metropolitan Planning Organization (MPO) boundaries. Funding for rural projects will be allocated equally to each SCDOT district focused on small urbanized areas between 5,000 to 50,000 people. Project scope will reduce right-of-way and utility coordination requirements to the maximum extent possible in order to ensure projects are completed efficiently.
 - i. MPO areas will involve coordination with the respective MPO throughout the process of identifying candidate project locations. MPOs may elect to expand these projects through the addition of funds from other sources.
 - ii. All roads outside MPO boundaries are eligible for rural funding and District Traffic Engineers will identify candidate projects.

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