

Project Information

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Research Administration

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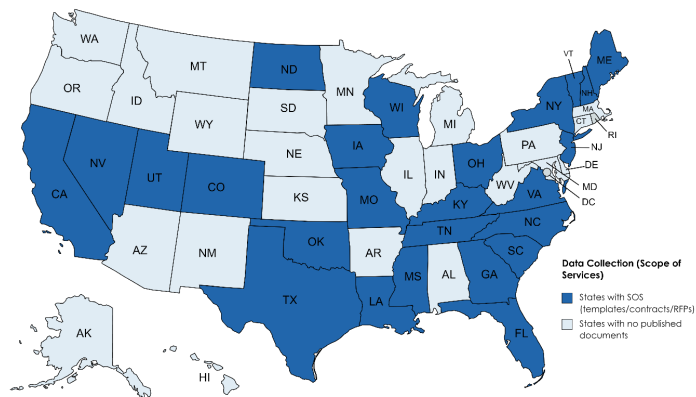
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SCDOT SCOPE OF SERVICES TEMPLATE RESEARCH

For projects that require consultant procurement, an initial step is preparing a draft of the Scope of Services (SOS). Currently, procuring a consultant can take between 4 and 12 months, which can be significantly reduced when the scoping phase is less than 50 days. This timeline is impeding SCDOT's ability to meet one of the agency's Strategic Plan objectives to "increase SCDOT's reliability of delivering projects on-time and on-budget". Hence, SCDOT has commissioned Clemson University to update and streamline the agency's SOS process, resulting in the development of a comprehensive SOS template with various variables that affect project scope.



State DOTs having Scope of Services (SOS)

Problem

Similar to most State Departments of Transportation (State DOTs), the South Carolina Department of Transportation (SCDOT) is responsible for owning, operating, and maintaining an extensive transportation system for the state. SCDOT is under growing pressure for efficient and effective transportation project delivery to address the need and continued expansion. The pressure is due to high demand, limited funding sources, stakeholders' concerns, federal and state policies, and intense public involvement. As a key strategic goal, SCDOT is taking the

initiatives to deliver projects as efficiently and expeditiously as possible. One of the efforts undertaken by SCDOT is streamlining its SOS process.

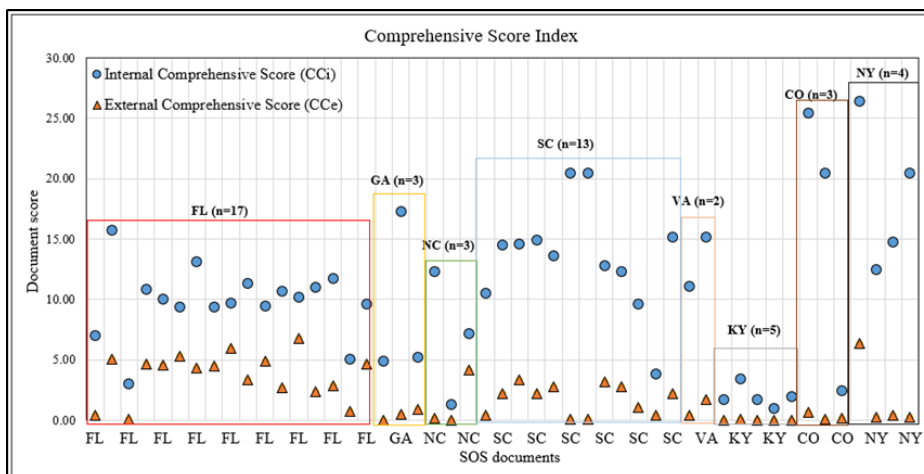
Research

An exploratory sequential mixed methods design was used to meet the research goals. The team identified, targeted, and collected data from *four major sources*. (a) Preliminary semi-structured interviews were conducted with SCDOT to identify the agency's current SOS practices and suggestions for improvement. (b) An administrative questionnaire was utilized to obtain input from SCDOT's delivery partners (i.e., consulting firms) to gain insight regarding SOS best practices. (c)

Follow-up interviews are conducted with the delivery partners. (d) Structured interviews with comparable state DOTs were conducted to probe SOS concepts, gain an in-depth understanding of SOS practices, and identify SOS best practices. In order to identify SOS best practices and assemble a comprehensive text, the research team analyzed these four data sources separately and collectively. As a result, ten (10) SOS Best Practices were obtained and organized into four categories. This work has three tangible products: (1) a comprehensive SOS text, (2) a list of critical project variables that can affect the scope of work, and (3) the algorithm that links the SOS text to project variables and produce a customized SOS document.

- BP 3. Use of comprehensive SOS as a starting point for scope negotiation and the initial development of contract fee.
- BP 4. Integrating the Decision Tree Variables with the comprehensive SOS text and developing a program to help generate project-specific SOS.
- BP 5. Developing a standard fee estimate tool and integration with the SOS for an efficient and effective negotiation process.
- BP 6. Creating a database for negotiated SOS and contract fees for better budget controls and tracking.
- BP 7. Increase the frequency of face-to-face/virtual meetings during negotiation process to discuss and resolve SOS issues.

- structure, and format of the SOS document
 - 2. It eschews possible omission and/or redundancy in the SOS document due to document retrieval from past projects.
 - 3. It creates a logic for deciding which components are relevant to the scope of a project based on its critical characteristics.
- This project's successful implementation will likely result in a significant reduction in the time and effort to procure consulting services and, ultimately, a more efficient and effective project delivery.



Comprehensive Score Indices of state DOTs

Results

This work has resulted in recommending 10 specific best practice (BP) items to streamline the SOS process.

- BP 1. Development of comprehensive baseline SOS templates for process standardization and to aid the procurement of professional services consultants.
- BP 2. Identifying a list of major project variables that affect the overall SOS and project deliverables.

- BP 8. Provide adequate training to the DOT personnel and professional services consultants on using the SOS template.
- BP 9. Hosting the integrated SOS checklist and program on the SCDOT intranet.
- BP 10. Identify a team of experts for regular maintenance and updating the scope of services.

Value & Benefit

This research effort will benefit SCDOT in three distinct manners:

- 1. It provides consistency across the agency regarding the language,

The Principal Investigator would like to thank the following for their contributions: *the Late Dr. Dennis Bausman for leading this project. Also special thanks to Ajay Jadhav, David Taylor, Brett Harrelson, and the Steering Committee chair and members.*