

Quality Improvement Council Stewardship and Oversight Agreement Update March 27, 2019

The Quality Improvement Council (QIC) is announcing the release of the slightly modified Stewardship and Oversight Agreement (SOA) between the Federal Highway Administration (FHWA), Colorado Division and the Colorado Department of Transportation (CDOT), which outlines responsibilities for administering the Federal-Aid Highway Program (FAHP). The SOA outlines the framework by which FHWA and CDOT will administer the FAHP to maintain Colorado's national highway network, optimize operations, improve safety, and provide for national security while protecting and preserving environmental resources. It outlines a risk-based approach to effectively and efficiently manage the public funds and to ensure the FAHP is delivered in accordance with applicable laws, regulations, policies, and consistent with good business practices. The key changes and highlights from the SOA and associated Annual Report are described below.

Highlights from the 2018 Stewardship and Oversight Agreement Annual Report

Applied Research and Innovation: 17 research reports were published in State FY2018 (<https://www.codot.gov/programs/research/pdfs>). This exceeded the target of 10 research projects.

Asset Management: Completed key deliverables such as the Transportation Asset Management Plan (TAMP) and national performance measure targets.

Civil Rights: Met the DBE goal. Had significant improvement in the “# of persons placed and employed (post services)” (SAP #461). The number increased from 68 in 2017 to 81 in 2018 (target is 50). This is related to getting contractors in place and is connected to the Work Now Program.

Contracting, Engineering Estimates and Other Projects: Met target. Projects affected by Award By Review (a newer State Award rule) were removed from the metric scores – SAP #241. CDOT will determine a separate process to track the ABR awards.

Hydraulics: No significant accomplishments or risks.

Environment:

- There was a slight downward trend for on-going NEPA work, due both to streamlining efforts and a decline in the number of Categorical Exclusion projects, partially due to RAMP completion.
- The priority-project template-EA/FONSI completed this year took 7 months; a traditional (non-template) EA/FONSI typically has taken 44 months.
- PEL projects were fewer and more focused this year: they typically take 18 months to complete, compared to traditional Tier 1 EISs (that does basically the same thing as a PEL) which have taken about 11 years to complete.
- Water quality performance improved this year where construction project findings were addressed within 48 hours 94.3% of the time, up 3% from last year. New specification changes were also added to improve compliance.

Pavement and Materials:

- The Materials Advisory Committee has led to significant improvements (see Quality/Results #3).
- CDOT participated in a week long FHWA Quality Assurance Stewardship Review in September 2018 and identified five opportunities for improvement. Several innovative low volume road and preventative maintenance type treatments will be constructed in 2019.
- CDOT has undertaken a process improvement initiative with respect to Buy America documentation requirements related to precast elements.

Planning:

- 2018 included efforts to ensure local, state and federal agencies are reporting data consistently both through CMAQ guidance and meetings. CDOT is in the process of determining how to select CMAQ projects.
- HPMS has been a major focus since it is the underpinning of the federal system. There was a significant improvement in data (SAP #630), despite challenges in early 2018.
- CPG grants were completed in time.
- It is important to monitor truck travel time reliability (#817) in order to determine where to allocate funding. Related, CDOT has built a healthy relationship with the Freight Advisory Council.

Design and Construction:

- Staff are sharing tools to integrate constructability reviews as part of the design phase (related to SAP #323).
- There is a need to do more QA/QC of plans within the regions.
- There is some transition due to CO SB18-167 Subsurface Utility Engineering.

Program Management:

- Launched a Preconstruction Project Management webpage complete with guidance, tools, and templates to improve consistency in project delivery across regions.
- Conducted Project Management training for nearly 500 CDOT Project Managers and Specialty staff.
- Led effort to gather requirements and award a contract to purchase a Project Management Information System. This system (called OnTrack) will provide a collaboration platform for project teams with process workflows and robust dashboards and reporting capabilities.
- Collaborated with DAF to successfully reconcile FY18-FY21 planning totals for major asset pools. This provides a basis for moving forward with new budget guidelines, as the RAMP program is nearing completion.

ROW: The post-Amerco process whereby the Transportation Commission must adopt a resolution that all proposed real property acquisitions and condemnations are in the public interest has been challenging. The state legislature is trying to make related changes to the statute.

Structures:

- Staff were focused on mapping to MAP-21 requirements, which involved working with local agencies to adopt requirements.
- CDOT is figuring out how to fund off-system bridges. The goal is to spend funding in 4 years, instead of the 10 years allowed by FHWA.
- *Risk:* There are more “fair” bridges than “good” bridges. A paradigm shift is needed to focus funding on maintaining “good” bridges before they deteriorate into “fair” condition. The costs to maintain the condition of “good” bridges are far less than those to maintain or improve the condition of “fair” and “poor” bridges.
- *Risk:* The “linear feet of state-owned bridge* expansion joints that are leaking” (SAP #237) almost doubled in 5 years. This is the first line of defense to keep bridges well maintained.
- *Risk:* The “number of state-owned load restricted bridges*” (SAP #468) increased substantially in the last year from 59 to 76, and the number is anticipated to increase. This impacts the ability of trucks to travel throughout the state. CDOT is exploring a grant opportunity to focus on this issue.

*The term “bridge” is used in place of “major structures”, which includes all bridge and culvert structures that span more than 20 feet along the centerline of the carried roadway

Financial Management: Achieved \$69 million in redistribution and decreased the days to close projects.

Highway Maintenance: Exceeded the Level of Service (LOS) target (target C+, actual B).

Traffic, Safety and Engineering:

- *Risk:* Traffic fatalities have increased. 2017 had the highest number of fatalities in 10 years (648) with a small reduction in 2018 (627 fatalities). At the same time, the number of serious injuries have decreased. Data shows

that the numbers are likely due to vulnerable users, such as pedestrians and motorcyclists, who are unlikely to survive a bad accident.

- A dedicated Implementation Manager is needed to lead the Strategic Highway Safety Plan to make progress.
- CDOT is working with the Dept. of Revenue and State Patrol to improve coordination on crash data. There have been some challenges associated with an update to the licensing data system.

Intelligent Transportation Systems (ITS)/ Technology Branch:

- Secured public-private partnerships worth over \$35 million for no-cost to CDOT, including Fiber Optic builds on I-70 from Glenwood to Grand Junction and I-76 from Hudson to Sterling to support the deployment of smart devices in rural corridors.
- Deployed traffic signal controller upgrade, a new central traffic signal system, and automated traffic signal performance measures to optimize the safety and efficiency of CDOT traffic signals.
- Launched and developed the CDOT Smart Mobility Plan, a five to seven year strategic plan of technology investments to improve safety and mobility Statewide.
- Developed a strategic plan for deployment of vehicle-to-everything (V2X) roadside unit radios Statewide called the “Internet of Roadways” (IoR). This resulted in a \$20 million BUILD Grant award from USDOT to build the first major phases of this strategic plan.
- Launched the Data Analytics Intelligence System (DAISy) project to integrate all CDOT safety and operations data into a cloud platform and develop advanced analytics and data visualization tools to support real-time operations and historic analysis.

Real-Time Operations Branch:

- Branch restructure and naming to promote consistency across the state, and to also integrate operations across multi-discipline multi-agency boundaries. Operation centers not only focused on public and/or traveler information, but also on communication/process protocols to streamline safety and mobility on the roadways.
 - First two Regional Operation Centers opened in Region 1 (Golden) and Region 2 (Pueblo). Pueblo is the first center in Colorado co-located with Colorado State Patrol.
 - All centers now dispatching CDOT maintenance.
- Focus in the field is to provide department personnel and first responders the guidance and training necessary to promote and continue implementing a “one mission, one culture, save lives” approach. Goal is to institutionalize Traffic Incident Management and quick clearance principles. Specific activities: CDOT founding member of Statewide First Responder Safety Committee; Colorado opened second TIM Track; Hosted 2nd Annual TIM Conference; Over 40% of Colorado First Responder’s TIM trained.

Risk Response Strategies Section: This section provides an overview of the QIC’s risk response identification and prioritization process. It describes the QIC’s 2 current risk response activities - Process for Locally-Owned (Non-CDOT) Off-System NHS Bridge/Pavement and CDOT Prompt Payment Process Development. It also describes the 4 risk response activities that were completed in 2018 and a status of recommendations in the implementation phase (many of which have been completed in 2018).

Additional Accomplishment Information: Information on key Every Day Counts efforts is provided, including data driven safety analysis, Econstruction, weather savvy roads, integrated mobile observation (IMO) technologies and ATSPM.

2018 Stewardship and Oversight Agreement Updates

A full review of the 2018 SOA will be completed in 2020. Minor updates were made in conjunction with the 2018 SOA Annual Report, including removing the following performance measures:

- Environment: SAP #424 - Environmental Protection Agency (EPA) EIS ratings. Measure suspended per [EPA October 2018 memo](#).
- Pavement and Materials #254 –Percent of NHS pavements within Colorado with an International Roughness Index (IRI) less than 95. This is no longer necessary as it is integrated within National Performance measures (#811-814).