



# TECHSUMMARY *November 2020*

State Project No. DOTLT1000224 / LTRC Project No. 18-6SS

## Assessment of Consultant Plan Development and Performance Rating Processes

### INTRODUCTION

DOTD has experienced issues with the quality of completed plans submitted by consultants, such as plans that are incomplete, contain errors in quantities, or do not follow DOTD-specific design guidelines. DOTD conducted this project with the basic objective of improving upon plan quality.

This report presents the results of DMG's assessment. Findings from each of the project tasks are summarized, and a set of recommendations for improving consultant plan quality and the Consultant Past Performance Rating System (CPPR) system are offered for DOTD's consideration.

### OBJECTIVE

DOTD initiated the assessment with the basic objective of identifying opportunities to improve consultant plan quality. DOTD's request for proposal (RFP) identified five specific project objectives:

1. Identify best practices among other state DOTs for the evaluation of consultant plan deliverables.
2. Conduct a thorough review and assessment of the DOTD consultant plan delivery process.
3. Identify best practices among other state DOTs for the evaluation of consultant rating systems.
4. Evaluate the effectiveness and subjectivity of DOTD's current consultant rating system.
5. Provide recommendations for objectives 2 and 4.

### SCOPE

The scope of the assessment involved two primary areas of work:

- The quality of consultant-developed construction plans and DOTD's QC/QA processes for plan development
- DOTD's CPPR processes

To assess plan quality, the researchers first attempted to quantify the extent of the problem using data from past performance rating scores and construction change orders. The assessment did not look at in-house developed plans. The researchers then conducted an assessment of DOTD's QC/QA processes including organizational responsibilities, policies and procedures, and tools.

To assess the CPPR system, the researchers compared DOTD's practices with other state DOTs, and looked at how effectively and consistently DOTD's existing policies and procedures were being applied in practice.

### METHODOLOGY

The methodology for completing the assessment is represented by four major tasks, which were built around the specific project objectives. The four tasks are:

### LTRC Report 629

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#### FUNDING:

SPR: TT-Fed/TT-Reg - 5

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- A **comprehensive literature search and review** to identify contemporary relevant literature on consultant plan quality and performance ratings systems
- Individual **interviews and focus groups** with internal and external stakeholders
- A **best practice review** of peer state DOTs to identify best practices that could be implementable in DOTD
- An **evaluation of DOTD's current practices** in relation to established policies, guides, and manuals

## CONCLUSIONS

### Plan Quality

The quality of construction plans is difficult to quantify in objective terms. While there is a general perception within DOTD that consultant plan quality is substandard, the analysis of consultant past performance scores indicate that consultant performance is generally good, with an overall average score of 3.9.

Ultimately, the construction plans prepared by or for DOTD are of high quality before they are advertised for bids. Staff assessments of quality may not lie in the actual quality of the final plans developed but rather in the amount of "hand holding" that many within DOTD feel is required. "Design by comment" was a common opinion expressed by many.

Objective measures are needed to truly assess the level of plan quality. Objective measures could be established for specified deliverables and be included as part of the consultant performance ratings.

### QC/QA Processes

DOTD's QC/QA program is in line with prevailing DOT practices. DOTD's QC/QA policies and standard procedures are well defined and documented, and responsibilities are clearly delineated.

While policies and procedures are well defined, they are not uniformly implemented across DOTD. To improve plan quality, DOTD will need to review and update some of its existing policies and procedures, implement some new business processes, train staff, and then compel compliance with established policies and procedures.

### Consultant Past Performance Rating System (CPPR)

Although each state generally has some unique evaluation criteria and rating scales, DOTD's CPPR system and processes are in line with other state practices. Inconsistencies among DOTD staff in interpreting performance scales is the major weakness in current practices. Simplifying the rating form and providing additional written instructions could help improve consistency.

## RECOMMENDATIONS

The recommendations presented below are numbered in order of general priority and are grouped by the two key work areas of plan quality and CPPR. More information on each recommendation can be found in the report.

### Plan Quality

1. Create a plan development Quality Assurance Manager position within the new Plan Checking Unit (PCU).
2. Review all DOTD manuals, directives, policy guides, and other documents dealing with QC/QA for consistency and needed updates.
3. Implement standard practices for plan review comments and responses.
4. Provide QC/QA training.
5. Require that consultants prepare formal QC/QA plans for all projects of a specified size.
6. Consider creating a constructability-biddability (C/B) review team to engage early in the project development phases.
7. Strengthen the post-construction review process.
8. Consider adding QC/QA line items within the consultant's fee proposal.
9. Conduct an annual design conference.

### Consultant Past Performance Rating System

1. Prepare a CPPR guide.
2. Provide CPPR training.
3. Reduce the number of ratings.
4. Reduce the number of rating criteria.
5. Develop objective measures of plan quality.
6. Identify performance expectations at the project kickoff meeting.
7. Require DOTD-consultant meeting after each performance rating.
8. Use a notification system.