



DOT Use of Lump Sum Contracts for Design Tasks

Prepared for
Bureau of Project Development

Prepared by
CTC & Associates LLC
WisDOT Research & Library Unit
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Request for Report

WisDOT was interested in learning from the practices and experiences of other state DOTs that have used lump sum consultant contracts for design tasks. In this survey, “lump sum” contracts call for the consultant to invoice and be paid according to the estimated percentage of work completed toward the total contract amount. This differs from “cost not to exceed” contracts that pay invoices based on actual costs submitted not to exceed the total contract amount.

Summary

This report is divided into two sections:

- Related Resources
- Survey Results

Related Resources

We have included guidance on lump sum contracting available online from the FHWA and two state DOTs—Alaska and Florida.

Survey Results

We distributed a survey to members of the AASHTO Research Advisory Committee for completion by appropriate staff at their agencies. The survey consisted of the following questions:

1. Does your agency use lump sum contracting for highway design work performed by consultants? (Yes/No)
2. If you answered no to question 1:
 - a. Please provide a brief explanation of your policy and, if possible, provide a copy of or link to your agency’s guidance documents where the policy is explained.
 - b. Please indicate if this contracting type is something your agency has considered and decided not to utilize. If possible, please provide the reasons or rationale for this decision.
3. If you answered yes to question 1:
 - a. Approximately what percentage of your total consultant design work is performed through lump sum contracting?
 - b. Please explain briefly what criteria or process your agency applies for determining when to use lump sum contracting. If possible, please provide a copy of or link to your agency’s guidance documents where the policy is explained.

4. Who in your agency may we contact with further questions? (Name, email address, phone number)

Staff at seven state DOTs responded to this survey. Five out of seven respondents use lump sum contracting, usually for a small percentage of low dollar value contracts where the scope is well-defined. See **Survey Results** beginning on page 3 of this report for the full text of these survey responses.

Related Resources

Alternative Payment and Progress Reporting Methods, Federal Highway Administration, 2005.

<http://www.fhwa.dot.gov/programadmin/contracts/etgpayment.cfm>

This white paper examines the use of alternative payment strategies for contracts, including lump sum contracting. The authors note that:

Certain projects lend themselves more readily to the use of lump sum contracting. Florida and Alaska DOT's Lump Sum Project Guidelines recommend that lump sum contracts are best applied to relatively simple projects with a well-defined scope, a low risk of unforeseen conditions, and not likely to change in scope or provide less than the required quantities. Some examples of projects that fit these criteria are bridge painting, fencing or guardrail installation, intersection improvements where utilities are known, landscaping, lighting, minor road widening, simple milling or resurfacing, signage, traffic signals, and sidewalks. Florida and Alaska DOTs also identify projects that will not make good candidates for lump sum contracts. These include urban construction, major rehabilitation or repair, subsurface earthwork, concrete pavement repairs, and similar projects where quantities are unknown or difficult to estimate, or may change significantly during construction.

The paper includes a table of 14 states that are using lump sum contracts for different types of projects (<http://www.fhwa.dot.gov/programadmin/contracts/etgpaytab.cfm#fig1>) as well as a list of best practices for lump sum contracting:

- Choose projects or items that have less likelihood for unknowns or variability, and that will benefit with greater contractor control over the performance of the work.
- Carefully define scope of work or performance criteria. Well-prepared lump sum documents should include items like sections and details for typical work and unique conditions, plans with accurate existing conditions, and notes to describe work that cannot be accurately depicted in plan form. The work should be identified as lump sum before the design of the project so that the bid documents can be prepared accordingly.
- Perform a preliminary estimate for the project (or the lump sum items in the project) and for the contingency fund. The DOT project engineer can accomplish this task using normal estimating techniques or by using historical data for similar projects.
- Conduct pre-bid meetings to answer contractors' questions and clear up any ambiguous documentation. The more informed the contractors are in preparing their bids, the more accurate the bids will be, and the more successful the use of lump sum payments will be.
- Develop guidelines for development and administration of lump sum projects.

Lump Sum Project Guidelines, Alaska Department of Transportation and Public Facilities, January 2003.

<http://www.dot.state.ak.us/stwddes/dcsmisc/assets/pdf/lumpsum/lumpsum0103.pdf>

This document includes guidance on when to use lump sum contracts:

Lump sum contracting should be used on fixed projects. "Fixed" refers to the work activity, not the project cost. Fixed projects are:

- Projects with well-defined scope, quantities, and limits of work, and a low probability of change
- Projects with low risk of unforeseen conditions (for example, projects that do not involve such things as significant underground utilities, earthwork variations, underground drainage pipes, or permafrost under pavement in urban areas)
- Projects with low possibility for change (for example, limited possibilities for added driveways, median modifications due to developments)
- Projects with limited opportunity for contractors to provide less than the required quantities, such as asphalt thickness, steepened slopes, and culvert lengths

Also included are examples of projects that are good or bad lump sum candidates (pages 1-2) and recommendations on design documents for lump sum contracts.

Lump Sum Project Guidelines, Florida Department of Transportation, October 2005.

<http://www.dot.state.fl.us/rddesign/updates/files/ls010402.pdf>

This document gives criteria for choosing when to use lump sum contracting, including guidance on project selection:

Lump Sum contracting should be used on simple projects. “Simple” is defined by the work activity, not by the project cost. “Simple” projects are:

- Projects with a well-defined scope for all parties (Design and Construction)
- Projects with low risk of unforeseen conditions (i.e., projects that do not involve such things as significant underground utilities, earthwork variations, underground drainage pipes, bricks under pavement in urban areas, etc.)
- Projects with low possibility for change during all phases of work – Design and Construction (i.e., limited possibilities for added driveways, median modifications due to developments, changes due to political involvement, etc.)

Survey Results

The full text of each survey response is provided below. For reference, we have included an abbreviated version of each question before the response; for the full question text, please see the **Summary** on page 1 of this report.

Arkansas

Contact: Jennifer Williams, Consultant Coordinator, Arkansas State Highway and Transportation Department, (501) 569-2029, Jennifer.Williams@ahtd.ar.gov.

1. Agency use: No.

2a. Policy and guidance: N/A.

2b. Consider using? We feel that cost plus fee method is the better option for design services because the consultant bills for exactly what they’ve worked.

3a. Percentage of use: N/A.

3b. Criteria for use: N/A.

Iowa

Contact: Ron Meyer, Consultant Coordinator, Iowa Department of Transportation, (515) 239-1737, ronald.meyer@dot.iowa.gov.

1. Agency use: Yes.

2a. Policy and guidance: N/A.

2b. Consider using? N/A.

3a. Percentage of use: We utilize lump sum agreements eight percent of the time in the Offices of Design, Bridges & Structures, and Location and Environment, but if [the] Office of Local Systems and all other Departments’ agreements are included, this rises to 16 percent. Of the 16 percent figure, 69 percent are for agreements under \$50,000.

3b. Criteria for use: Lump sum contracting is typically employed when the scope is well defined, the costs (and hence the associated risk) [are] not deemed significant, and the contract period covers 18 months or less. Some guidance is provided in Appendix B of the Department’s Policy and Procedure Manual Number 300.12: http://www.prof-tech-consultant.dot.state.ia.us/uploads/300_12.pdf.

Maine

Contact: Bradford Foley, Highway Program Manager, Maine Department of Transportation, (207) 624-3539, brad.foley@maine.gov.

1. **Agency use:** No.
- 2a. **Policy and guidance:** None. I don't believe we have a policy but do know that we had tried it quite a while ago and we were not comfortable with the approach—primarily because of the need for a very solid scope of work and deliverables.
- 2b. **Consider using?** No response.
- 3a. **Percentage of use:** N/A.
- 3b. **Criteria for using:** N/A.

Minnesota

Contact: Brad Hamilton, Consultant Liaison, Minnesota Department of Transportation, (651) 366-4626, brad.hamilton@state.mn.us.

1. **Agency use:** Yes, but very rarely.
- 2a. **Policy and guidance:** It is not policy, but it is the general practice of MnDOT to utilize a cost plus fixed fee structure for the vast majority of engineering-related P/T service contracts. MnDOT's Audit Section feels that this is the most effective method for engineering-related P/T contracts.
- 2b. **Consider using?** N/A.
- 3a. **Percentage of use:** One percent.
- 3b. **Criteria for using:** MnDOT would consider (albeit rarely) lump sum payment basis for design contracts that have a straightforward scope and little chance for amendments and change orders.

New Jersey

Contact: Martin Miller, Project Engineer, Bureau of Professional Services, New Jersey Department of Transportation, (609) 530-8341, martin.miller@dot.state.nj.us.

1. **Agency use:** Yes.
- 2a. **Policy and guidance:** N/A.
- 2b. **Consider using?** N/A.
- 3a. **Percentage of use:** The NJDOT uses predominately Cost Plus Fixed Fee agreements for design work.
- 3b. **Criteria for using:** On smaller specific scopes of work we use Fixed Price project specific agreements. I have included the department's Web page with links to all of our agreement models: <http://www.state.nj.us/transportation/business/procurement/ProfServ/agreements.shtm>.

South Carolina

Contact: Mitchell Metts, Director, Preconstruction, South Carolina Department of Transportation, (803) 737-1518, mettsmd@scdot.org.

1. **Agency use:** Yes.
- 2a. **Policy and guidance:** N/A.
- 2b. **Consider using?** N/A.
- 3a. **Percentage of use:** Small amount—less than three percent.
- 3b. **Criteria for using:** We have no policy per se on lump sum contracting versus cost plus fixed fee. We are exploring lump sum contracts currently with respect to mitigation and obtaining mitigation credits to satisfy U.S. Army Corps requirements. Lump sum is attractive in situations where we want the consultant to share or take on risk for work items we may not have a great deal of expertise in (for example, uplift for a wetlands site).

Texas

Contact: Camille Thomason, Director, Design Division–Consultant Contract Office, Texas Department of Transportation, (512) 416-2263, camille.thomason@txdot.gov.

1. **Agency use:** Yes.
- 2a. **Policy and guidance:** N/A.
- 2b. **Consider using?** N/A.
- 3a. **Percentage of use:** 25 percent.
- 3b. **Criteria for using:** Decision is based on how well the scope of work can and is defined.