Thank you for making time to complete this survey, which we are conducting to study the relationship between the practices of state departments of transportation, contractors, and the cost of infrastructure procurement. Through it, we hope to learn more about one of the crucial issues in transportation today: what drives up infrastructure construction costs.

You are receiving this survey because you are a contractor with experience working with the state or local DOT. We are asking these questions to contractors across all states.

Please answer as many questions as you can, and omit those that do not apply to you. Note that we may follow up with you using the contact information you provide.

If you are comfortable, please forward the survey to others who you think would be able to answer the questions you are unable to answer.

Your information will be kept strictly confidential, identified only as being about a particular state.

This research project is being conducted by Zach Liscow (zachary.liscow@yale.edu) of Yale University, and William Nober (w.nober@columbia.edu) and Cailin Slattery (cailin.slattery@columbia.edu) of Columbia University. Please address any questions about the survey or the associated research project to Zach Liscow (zachary.liscow@yale.edu).

This research project is being supported by the US Department of Transportation through a research grant to the National Bureau of Economic Research. Thanks again for sharing your expertise here.

By completing this survey, you are consenting to participate in this study.
## Contributor Information

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<td>Secondary State(s) (if applicable):</td>
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<td>Number of contracts with state and local DOTs in a typical year:</td>
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<td>Opt in to receive results</td>
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<td>□ Yes, please email me analysis of results after data have been compiled</td>
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1. Case Study Assumptions

We developed a case study that describes a standard project. Many of the following questions will be asking about your experience with a past project comparable to it, in order to establish consistency. Please familiarize yourself with the details of the case study:

<table>
<thead>
<tr>
<th>Contractor</th>
<th>The contractor is a road construction contractor that has met all the requirements to bid on contracts from the state DOT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract</td>
<td>The contractor has recently bid on and won a federal-aid contract from the state DOT, referred to from here on as “the agency.” The project entails resurfacing 5 mi of a flat two-lane road that is part of the National Highway System (but is not an Interstate), extending from the outskirts of a medium-sized (approximately 100,000-person) city into the surrounding rural area, with an asphalt overlay of 1 inch. The estimated value of the contract is between $1-5 million.</td>
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<tr>
<td>Procurement Process</td>
<td>The competitive bidding was awarded using the traditional Design-Bid-Build (low-bid) process. The project is not design-build.</td>
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2. **Survey**

Please answer all questions to the best of your knowledge, based on your experience bidding on and completing contracts in your current primary state of operation.

<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
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| 1. What do you think are the main aspects of the procurement and administrative process of highway construction that increase construction costs? | □ Severely understaffed  
□ Moderately understaffed  
□ Appropriately staffed  
□ Moderately overstaffed  
□ Severely overstaffed  
□ I don’t know |
| 2. Which of the following most accurately describes the state department of transportation? | □ Same day  
□ Within 48 hours  
□ Within a week  
□ Over a week  
□ I don’t know |
| 3. How quickly do employees at the state department of transportation get back to you when you contact them? | □ Same day  
□ Within 48 hours  
□ Within a week  
□ Over a week  
□ I don’t know |
| 4. To the best of your knowledge, when the agency prepares to advertise a new procurement opportunity for a contract like the one described in the case study, which of the following does the agency use to estimate the contract value and projected schedule? Select all that apply. | □ Market analysis  
□ Standardized unit cost or deterministic cost estimation  
□ Project-specific technical drawings  
□ Feasibility study  
□ Similar projects from previous years  
□ Probabilistic risk-based estimating  
□ Other, please explain:  
□ I don’t know |
| (a) To the best of your knowledge, how often does the agency use consultants to draw up project plans? | □ Very rarely (less than 10% of projects)  
□ Rarely (10-25%)  
□ Occasionally (26-50%)  
□ Often (51-90%)  
□ Very often (over 90%)  
□ I don’t know |
| 5. What information does the agency publish before bids are due? Select all that apply. | □ Estimated contract value  
□ Estimated/standard unit costs  
□ Bid bond  
□ Number of bidders  
□ Identity of bidders  
□ Project plans  
□ Other, please describe:  
□ I don’t know |
| 6. How many firms would you expect to bid on a project like the one described in the case study? | □ 0-1  
□ 2-3  
□ 4-5  
□ More than 5  
□ I don’t know |
7. Which of the following best describes your experience regarding other companies' bidding?

- I can usually predict exactly which firms will bid on a project
- I know all of the firms that are capable of bidding, but not which ones actually will bid
- I know many of the firms that might bid, but sometimes there are surprise bidders
- There are often firms bidding that I do not know/expect
- Other, please describe: ________________

8. To the best of your knowledge, what are some common reasons for disqualification in the prequalification stage? Select all that apply.

- There is no prequalification process
- Insufficient bid bond
- Past performance
- Technical error
- Firm has wrong specialty
- Other, please explain: ________________

9. To the best of your knowledge, how often does the agency do outreach to increase the bidder pool for highway construction projects?

- Never
- Very rarely (1-10% of bids)
- Rarely (10-25%)
- Occasionally (26-50%)
- Often (51-90%)
- Very often (over 90%)
- I don’t know

10. Are you ever concerned about your bids being declared mathematically unbalanced?

   *Note: a mathematically unbalanced bid is one containing unit bid items which do not reflect reasonable actual costs plus a reasonable proportionate share of the bidder’s anticipated profit, overhead costs, and other indirect costs.*

- No, because we set our unit bids close to our actual costs.
- No, because the agency rarely declares bids mathematically unbalanced.
- Yes, on some bids.
- Yes, on most bids.
- Other, please specify
- I don’t know

11. When a bidder is excluded before the contract is awarded, does the state DOT provide an explanation of the reasons for the exclusion in writing?

- Yes, always
- Yes, but only upon request of the bidder
- No, the excluded bidder will be notified directly in the contract award
- Other (please explain)
- I don’t know

12. For a contract like the one described in the case study, how many days would pass on average **between public notice of award and contract signing**? Please include the time for the winner to submit relevant documents and the time to sign the contract.

- Number of days: ________________
- I don’t know

13. Does the contractor need to obtain work permits or other administrative authorizations **between public notice of award and contract signing**? Please include environmental permits, occupancy permits, activity permits, etc. as applicable.

- Yes, please list them:
- No
- I don’t know
### 14. When you win a bid, typically what is it about your firm that allows you to have the lowest bid?

- [ ] I don’t know

### 15. Do you engage in research-and-development to lower your costs of producing infrastructure?

- [ ] Yes, please describe what you do:
- [ ] No
- [ ] I don’t know

### 16. In your experience, how many change orders would a contract like the one described in the case study typically have?

- [ ] I don’t know

### 17. If the contract was for a design-build project, how many change orders would it typically have?

- [ ] I don’t know

### 18. Are the results of change orders made publicly available?

- [ ] Yes, within a month
- [ ] Yes, in longer than a month
- [ ] No
- [ ] I don’t know

### 19. How many days would typically pass from the moment one of the parties requests/initiates a change order until a new contract amendment is signed?

- [ ] I don’t know

### 20. How often is the construction project delivered by the original deadline?

- [ ] Very rarely (less than 10% of projects)
- [ ] Rarely (10-25%)
- [ ] Occasionally (26-50%)
- [ ] Often (51-90%)
- [ ] Very often (over 90%)
- [ ] I don’t know

### 21. If a project is delayed, what are usually the main reasons?

*Select all that apply.*

- [ ] Weather shocks (natural disasters, flooding, etc.)
- [ ] Burdensome administrative processes within the agency
- [ ] Capacity of the agency (staff/skills/budgetary constraints)
- [ ] Capacity of the contractor (technical/managerial constraints)
- [ ] Financial constraints of the contractor
- [ ] Planning on the agency side (incomplete project specifications, etc.)
- [ ] Change of project scope
- [ ] Legal challenges by citizens’ groups
- [ ] Third party delays related to utilities or railroad coordination
- [ ] Covid-related supply shortages
- [ ] Other, please explain:
- [ ] I don’t know

### 22. How often are construction projects that are comparable to the case study delivered within the awarded amount?

- [ ] Very rarely (less than 10% of projects)
- [ ] Rarely (10-25%)
23. If a project has a cost overrun, what are usually the main reasons? *Select all that apply.*

- Market conditions (changes in input prices, fluctuations in exchange rate, etc.)
- Weather shocks (natural disasters, flooding, etc.)
- Burdensome administrative processes within the agency
- Capacity of the agency (staff/skills/budgetary constraints)
- Capacity of the contractor (technical/managerial constraints)
- Financial constraints of the contractor
- Planning on the agency side (incomplete project specifications, etc.)
- Change of project scope
- Legal challenges by citizens’ groups
- Third party delays related to utilities or railroad coordination
- Covid-related supply shortages
- Other, please explain:
  - I don’t know

24. For a contract like the one described in the case study, how many days would pass on average **between contract signing and receipt of a notice to proceed with construction**?

- Number of days:
  - I don’t know

25. Does the contractor need to obtain work permits or other administrative authorizations **between contract signing and receipt of a notice to proceed with construction**? Please include environmental permits, occupancy permits, activity permits, etc. as applicable.

- Yes, please list them:
- No
- I don’t know

26. Are there any labor and/or subcontracting requirements that increase costs?

- Disadvantaged Business Enterprise Program requirements
- Minority and Women Owned Business Enterprise Program requirements
- Limits on share of project that can be subcontracted
- Local hiring requirements
- Union construction workers
- Other:
  - I don’t know

27. How does the agency’s use of third-party consultants impact construction costs?

- Reduces costs a large amount
- Reduces costs moderately
- No impact on costs
- Increases costs moderately
- Increases costs a large amount
- I don’t know
28. Optional comment on how the agency’s use of third-party consultants impacts construction costs:

29. How would you rate the quality of the employees at the state department of transportation?
   - Very low quality
   - Moderately low quality
   - Neither low nor high quality
   - Moderately high quality
   - Very high quality
   - I don’t know

30. Please describe your experience with the employees at the state department of transportation.
   Please describe:
   - Not enough experience to say

31. Are you aware of any of these types of corruption in your state? Select all that apply.
   - Bidder collusion
   - Unethical contractor behavior
   - Improper state employee behavior
   - Other, please describe:
   - None of the above

32. How large of a problem would you rate corruption?
   - Very large
   - Somewhat large
   - Neither large nor small
   - Somewhat small
   - Very small
   - I don’t know

33. Does corruption drive away bidders?
   - Yes
   - No
   - I don’t know
   Comment:

34. Does corruption drive up costs?
   - Yes
   - No
   - I don’t know

35. Please add any additional comments you have about corruption.

36. Please add anything else that you would like to say about aspects of the procurement and administrative process that increase the cost that the government pays for highway construction projects.

37. Was anything confusing about the survey? If so, please explain.

Thank you very much for completing the survey!
We sincerely appreciate your contribution.

If you are comfortable, please forward the survey email to others who you think would be able to answer the questions you are unable to answer.