AASHTO Technology Implementation Group
Nomination of Technology Ready for Implementation
2005 NOMINATIONS DUE BY FRIDAY, SEPTEMBER 9, 2005

<table>
<tr><td>Sponsoring DOT</td><td colspan="4">1. Sponsoring DOT (State): Utah</td></tr>
<tr><td rowspan="5">Primary Technical Contact</td><td colspan="4">2. Name: Michelle A. Page</td></tr>
<tr><td colspan="4">Organization: Utah Department of Transportation</td></tr>
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<tr><td>City: Salt Lake City</td><td colspan="2">State: Utah</td><td>Zip Code: 84114-8410</td></tr>
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<tr><td rowspan="3">Technology Description</td><td colspan="4">3. Name of Technology:
Design Build Traffic Signal Projects</td></tr>
<tr><td colspan="4">4. Briefly describe the technology.
Accelerated design and construction of signal projects once a new signal is warranted.</td></tr>
<tr><td colspan="4">5. Briefly describe the history of its development.
UDOT began development of this process in 2002 with the first pool period starting March 2003. Six design-build teams submitted qualifications for the pool and all six teams were determined to be qualified. The RFP was advertised in the fall of 2003. The first project was turned on within 3 months of the advertisement of the RFP. This is a significant improvement to UDOT's typical 7-month design and 3-month construction schedule. Subsequent projects have revealed additional benefits beyond the schedule benefit.</td></tr>
<tr><td rowspan="6">State of Development</td><td colspan="4">6. For how long and in approximately how many applications has your organization used this technology?
Currently, UDOT has successfully advertised and completed eight Design Build Signal Projects. It has been noted that about 50% of traffic signal projects are good candidates for design build. Those projects that have extensive right-of-way and utility conflicts increase the design build timeframes, narrowing the margin between traditional and design build time savings.</td></tr>
<tr><td colspan="4">7. What additional development is necessary to enable routine deployment of the technology?
Training additional project managers throughout the department how to put together detailed Requests for Proposals (RFPs) for Design Build Traffic Signal Projects. Consider developing a larger consultant pool for Design Build Traffic Signal Projects; may need to provide additional training to contractors to encourage participation in the pool. Construction advertising training regarding Design Build Signal Project packages would be helpful as well. The two most time consuming steps in the process are the preparation of the RFP and the construction advertising so these are the areas where additional development would be the most beneficial.</td></tr>
<tr><td colspan="4">8. Have other organizations used this technology? If so, please list organization names and contacts.</td></tr>
<tr><td>Organization</td><td>Name</td><td>Phone</td><td>E-mail</td></tr>
<tr><td>St. George City</td><td>City Engineer</td><td></td><td></td></tr>
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<tr><td>Potential for Payoff</td><td colspan="4">9. What benefits has your organization realized from using this technology? Include cost savings, safety improvements, transportation efficiency or effectiveness, environmental benefits, or other advantages over other existing technologies.
Timesavings are the greatest benefit of using a design build approach. A traditional approach to a signal project requires at least 12 months (7 months to design, 2-3 months for a Notice to Proceed, and 3 months to construct) whereas a Design Build Signal Project can be started and completed within 3-6 months. In addition, right-of-way acquisition costs, utility relocation cost and design costs drop significantly as impacts are monitored closely due to the expense to the contractor and several viable alternatives in regard to location are tried within UDOT owned right-of-way.</td></tr>
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Implementation Potential	10. Please describe what actions another transportation agency would need to take to adopt this technology. First, an agency needs legislative authority. They would need to promote with the construction industry. In addition, they need to develop cooperation with internal divisions (utilities, right-of-way, safety, construction, etc.) to assist in this process. If federal money is involved, the agency needs SEP 14 approval. Also, an agency needs to train personnel if they are not familiar with owner roles in design build projects.
	11. What is the estimated cost, effort, and length of time required for procurement or adoption by another transportation agency? For initial implementation an agency is looking at approximately $80,000 to get setup for design build contracting. This includes training, pool organization, as well as developing an initial RFP. The time involved for such an effort also depends on whether or not legislative rules currently exist within a given state. Such rules were in place in Utah, but limited the size of a project to greater than $5M in cost before a design build approach could be taken. This rule had to be changed prior to allowing Design Build Signal Projects. It took approximately one year to lay the groundwork in Utah for the first Design Build Signal Project.
	12. What organization(s) currently supply and provide technical support for this technology? AASHTO has a DB subcommittee. It does not do much with small projects like signals.
	13. Please describe any legal, regulatory, social, intellectual property, or other issues that could affect ease of implementation. An agency must have laws that allow for design-build methods. If using federal money an agency must have SEP 14 approval if the project is less than $50M. Utah has approval from federal highways for all sizes of design build projects. In addition, acceptance from the construction industry can be an issue. The design build process is susceptible to availability of work in an area (i.e. contractor need for work). In addition Utah requires for more than one proposal/bidder for a contract to be awarded.
Willingness to Champion	14. Is the sponsoring DOT willing to promote this technology to other states, if partially supported by the AASHTO Task Force on Technology Implementation? ☒ Yes ☐ No
Date Submitted	15. Date: September 8, 2005

16. Please include image(s) of sketches or photographs, if available ☐Image(s) are attached.*

Additional design build information available via the following UDOT website:
http://www.udot.utah.gov/index.php/m=c/tid=1147

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