

# Programmatic Work Plan for Utilizing Alternative Technical Concepts for Design-Bid-Build Construction Projects (SEP-14)

*State Fiscal Year 2025 through State Fiscal Year 2027*

## **Purpose and Scope**

The Missouri Department of Transportation (MoDOT) and the Federal Highway Administration (FHWA) are entering into this programmatic work plan agreement to approve the use of Alternative Technical Concepts (ATC) on any federally-eligible Design-Bid-Build construction projects when deemed appropriate and beneficial according to the guidelines set forth in MoDOT's [Engineering Policy Guide \(EPG\), Article 147.1](#). Currently, each individual project requires a written work plan and formal approval prior to utilizing the ATC process. With this agreement, MoDOT and FHWA agree to programmatically approve the use of ATCs, a form of "innovative contracting" identified under the FHWA's SEP-14 program, without requiring a specific work plan and approval for each individual project.

## **Introduction**

An ATC is a proposed change to agency-supplied base design configurations, project scope, design criteria or construction criteria. This change provides a solution that is equal or better to the requirement in the contract. In the broadest sense, ATCs are similar to value engineering, but they are made as a part of the bid proposal before contract award. ATCs provide flexibility to the bidders in order to enhance innovation and achieve efficiency. MoDOT has successfully used ATCs on a handful of projects since 2010. To assist in determining whether or not to pursue ATCs, MoDOT has published [Guidelines and Procedures](#) in the EPG. Additional resources include a [white paper](#) on the standard ATC contracting process and a list of [frequently asked questions \(FAQs\)](#).

MoDOT routinely performs a Project Delivery Determination process which includes a high level risk assessment on projects that provide opportunity for significant value as a result of contractor input. The Project Delivery Determination includes evaluation of opportunities and obstacles attributed to both Design-Build and Design-Bid-Build. This information is used for decision making on choosing the appropriate delivery method for projects.

Following the decision to utilize Design-Bid-Build based on the outcome of the Project Delivery Determination on a project the owner should consider utilizing the Design-Bid-Build ATC process if the following conditions are present:

- a) Risks identified in the Project Delivery Determination are appropriate for this approach.

- b) The owner desires to achieve significant value from contractor input.
- c) Industry is acceptable to the approach.
- d) Owner resources are available.

## **Two-Step ATC Approval Process**

Step 1: Conceptual ATCs (CATC) are confidentially submitted with enough supportive information that an opinion on the benefits, the drawbacks, and the cost and time impacts for design and construction can be made. The CATC is evaluated against the project goals and standards. A decision is made on a pass/fail basis. Once a CATC is approved (a pass decision), the contractor may choose to pursue the ATC in more detail and submit it for final approval and inclusion in the bidding documents.

Step 2: The contractor must submit the original approved CATC and enough supportive documentation for MoDOT to determine whether all approved and appropriate standards and contract requirements can be met, that all potential impacts have been considered and are acceptable, that the cost and time impacts are acceptable, and that the resulting benefit/cost ratio as defined in the contract is acceptable. If determined acceptable, the ATC is approved and the necessary redesign is undertaken in order to provide the specific contractor with a set of contract documents and plans to bid the project. Each contractor with an approved ATC can choose to bid the approved ATC or can bid the base design that has been provided for the project. The bids will be accepted and compared using the low bid process.

The ATC process can require a significant time investment from the team members, including FHWA. To be successful, you must have time and resources committed to the process, and realize that multiple ATCs could develop in parallel with development of the base design. It is critical to have a good project management team with great time management skills and committed to the success of the process. Ideally, preliminary plans are shared with industry 9 to 12 months prior to beginning the ATC approval process. However, we have implemented on a much shorter timeframe, even within the 5 week advertisement. MoDOT does not alter the bid schedule when using the ATC process.

## **Proposal**

In order to deliver projects as efficiently as possible, MoDOT requests approval under SEP-14 to utilize ATCs, a low-bid procurement process that integrates contractor experience and innovation. The intent is to capture the benefits of contractor's cost and time savings ideas through the use of a competitive process. MoDOT has successfully used FPVS contracting on numerous projects over the previous 3 fiscal years. Delivery of the process will be made within state and federal regulations for Design-Bid-Build jobs.

MoDOT proposes to use a programmatic approval to use ATCs on any federally eligible construction project per the guidelines in the [Engineering Policy Guide Article 147.1](#). In addition, MoDOT agrees to inform FHWA of the intent to evaluate the use of ATCs for specific projects in

a timely manner. Per this notification, FHWA reserves the right to participate in the evaluation of the use of ATCs for the given project.

### ***Procurement Overview:***

The outline below follows the basic steps of the Alternate Technical Concept in Design-Bid-Build process.

- a) MoDOT and/or a consultant develop a base design of all proposed work.
- b) Contractors may, at their discretion, propose an ATC to complete the proposed work. Contractors choosing not to participate in the ATC process must bid the base set of plans furnished by MoDOT. MoDOT reviews the proposed ATC for acceptance.
- c) MoDOT informs contractors (confidentially) if their concept(s) are approved (or not approved) to be used when bidding on the project.
- d) Contractors submit bids based (in part) on their approved concept(s).
- e) Project is awarded to low bidder.
- f) MoDOT and/or a consultant complete the final design and quantities for the awarded bidder.

### **Roles and Responsibilities of MoDOT**

MoDOT will designate various Project Managers on a project-by-project basis who will have primary responsibility for ensuring an ATC project is executed in accordance with state and federal laws and regulations while implementing the project goals established for their respective project. The Project Manager has the responsibility of conferring with MoDOT subject matter experts, such as design, bridge, environmental, financial or Right of Way (ROW) staff, to assist in the decisionmaking process, when appropriate. MoDOT's Design Division Bidding and Contract Services Engineer and the Design Liaison Engineer will serve as the main point of contact with FHWA for ATC projects. Each of these multi-disciplinary entities will comprise the ATC Review Team in collaboration with FHWA. Project specific submittals, approval requests, and coordination may be delegated to the Project Manager, with the approval and under the direction and supervision of the Central Office Design Division.

MoDOT will proactively coordinate and collaborate with FHWA and use the PODI process to define the FHWA involvement in all facets of the DBB using ATC's project. The Project Manager will coordinate project actions, approval requests, activities, submittals, core team status meetings, project coordination meetings with MoDOT and/or Contractor teams, and written or verbal coordination with FHWA. Written responses to FHWA submitted comments or inquiries will be provided in a timely manner.

### **Roles and Responsibilities of FHWA**

The FHWA designated Transportation Engineer (TE) will have primary responsibility for ensuring an ATC project is executed in accordance with federal laws while implementing FHWA's Performance Plan and required stewardship and project involvement. The designated TE will serve as MoDOT's main point of contact for ATC projects in their respective MoDOT District. Project specific submittal reviews, approvals, meeting attendance and coordination may be delegated to other FHWA staff members, with the approval and under the direction of the designated FHWA TE.

FHWA will proactively coordinate and collaborate with MoDOT to determine an agreed upon level of FHWA involvement in all facets of the project. FHWA will provide timely reviews of project submittals and written review comments. If the FHWA TE becomes unavailable during a review period, the FHWA Project Implementation Team Leader or FHWA Assistant Division Administrator may be contacted regarding all project-related issues.

### **Confidentiality**

All members of the ATC review/approval team will be required to sign a confidentiality agreement before reviewing any ATC submittals. All ATC submittals are considered confidential and will not be shared with other bidders. An approved ATC is made public only if it is the low bid. Approved ATCs submitted by other than the low bidder are not disclosed.

It is understood MoDOT and FHWA staff will hold sensitive project information in the strictest confidence. It is understood both MoDOT and FHWA may, at times, require project involvement from respective internal and external specialist(s) (i.e., FHWA Headquarters or Resource Center experts) for specific aspects of the project where contractual, regulatory, or engineering expertise is needed. When this occurs, both MoDOT and FHWA will ensure that project confidentiality is maintained.

FHWA staff cannot sign project-specific confidentiality agreements. However, FHWA employees are bound by 18 USC 1905 which carries a criminal penalty if any employee discloses confidential information.

### **MoDOT Policy and Guidelines**

MoDOT developed guidelines for ATCs in MoDOT's [Engineering Policy Guide, Article 147.1](#). This article contains the basic guidelines, procedures, benefits, and potential drawbacks for using ATCs. [Guidelines](#), [FAQs](#), and a [white paper](#) are also provided. MoDOT will continue to evaluate the [effectiveness](#) of ATCs to ensure they are providing value and are being used on appropriate projects.

### **Evaluation/Performance Measures**

MoDOT will evaluate the effectiveness of ATC's in DBB contracting as projects are completed. Periodic meetings will be conducted with MoDOT project staff and FHWA to modify and improve the guidelines for ATC in DBB contracting. If significant changes are identified those changes will be communicated and coordinated with both Industry and the FHWA Missouri Division Office.

MoDOT reports use of innovative contracting methods under MoDOT Tracker Measure 3e – Innovative Contracting and Value Engineering. This measure tracks use of non-traditional contracting methods by MoDOT such as Design-Build, A+B Contracting, Alternate Technical Concepts, and will also include FPVS Contracting. MoDOT's target for innovative contracting is 10% of MoDOT's total construction program (in dollars). MoDOT's Tracker can be found at <https://www.modot.org/tracker-measures-departmental-performance>. The Tracker Measure is in the Delivering Efficient and Innovative Transportation Projects section.

In addition to the performance measure above MoDOT will provide the following information:

- 1) Benefits of use of ATC's in DBB through MoDOT's Results Document.
- 2) Lessons Learned: MoDOT will provide a summary of any lessons learned from individual FPVS projects and include items that may be improved for future FPVS projects.
- 3) Industry Reaction: MoDOT will record and track responses from the contracting industry, including an assessment of FPVS process improvements proposed by industry.

MoDOT also makes available for the Public an annual [Results Document](#) that includes all the benefits of using innovative contracting.

## Reporting

MoDOT will provide the FHWA Division Office with initial, interim, and final reports on this SEP-14 Programmatic work plan.

- 1) Initial Report: At the end of Year 1, provide an initial report with the following information:
  - a. List all projects let during Year 1 using this contracting method
  - b. Report on Performance Measures above for Year 1 projects
- 2) Interim Report: At the end of Year 2 and each succeeding year before the final year, provide an interim report with the following information:
  - a. List all projects let during succeeding years using this contracting method
  - b. Report on Performance Measures above for projects awarded during that succeeding year
- 3) Final Report: At the end of the programmatic approval period, provide a final report with the following information:

- a. List all projects let during the programmatic approval period using this contracting method
- b. Report on Performance Measures above for projects awarded during the programmatic approval period

Periodic meetings will be conducted with MoDOT Design, MoDOT Construction and Materials, and FHWA to modify and improve the guidelines for using FPVS, as necessary. In the event significant changes are identified as necessary, those changes will be communicated and coordinated with both Industry and the FHWA Missouri Division Office.

### **Summary of Previous ATC's in Design-Bid-Build Projects**

Since 2021, MoDOT has used ATCs on 2 projects. Examples of ATCs used on these projects can be found below:

1. J7P0601 – I-49 Missouri – Arkansas Connector
  - Proposed \$8.8 M savings from Base Bid
2. J7S3194 – Taney County MO 86 Route Bridge over Table Rock Lake
  - No Proposed savings achieved.