



Job No. J7S3194
Taney County, Route 86
ATC Guidelines and Procedures (Draft)

Table of Contents

1.0	Description.....	2
2.0	General Requirements.....	2
3.0	Project Goals.....	2
4.0	Contact Information.....	3
5.0	Schedule.....	3
6.0	Submittal of Conceptual Alternate Technical Concepts.....	4
7.0	Evaluation of Conceptual Alternate Technical Concepts.....	5
8.0	Submittal of Alternate Technical Concepts.....	5
9.0	Evaluation of Alternate Technical Concepts.....	7
10.0	Ineligible Firms.....	8
11.0	Confidentiality.....	8
12.0	Bridge Design Criteria.....	9
13.0	Design Requirements.....	9
14.0	Bidding Requirements.....	10
15.0	Basis of Payment.....	11
16.0	Glossary of Terms.....	11
17.0	Clarifications and Addenda.....	12

1.0 Description.

1.1 This project allows contractors the opportunity to include in their bid proposal, pricing for a pre-approved Alternate Technical Concept (ATC) that differs from the Missouri Department of Transportation (MoDOT) base design proposal. ATCs allow for innovation and cost savings to obtain the best value for the project that meets or exceeds the project goals, and which provides a product equal to or better than the concept it replaces. The ATC guidelines and procedures for this project are restricted to concepts, design standards, specifications, materials, products, construction methods and design solutions for intermediate bridge bents, including bents 5 through 9.

1.2 For the purpose of this contract an ATC is a concept, product or solution that is pre-approved by MoDOT and the Federal Highway Administration Missouri Division (FHWA-MO) for the bidder to include in their bid. ATCs will be included as the basis for determination of the low bidder by MoDOT.

1.3 The bid documents provided by MoDOT will be designated as the “Base Plans” for this contract.

1.4 The proposer may submit up to four (4) Conceptual ATCs (CATC) to be considered for approval by MoDOT and FHWA-MO.

1.5 The proposer may submit a bid with up to two (2) ATCs that are pre-approved by MoDOT and FHWA-MO.

1.6 The proposer will be responsible for design services to develop CATCs and ATCs.

1.7 MoDOT will provide design services to the bidder to complete structural design plans, including biddable quantities, for approved ATCs.

2.0 General Requirements.

2.1 The MoDOT furnished Base Plans contain all of the proposed work for the project to be bid, however the proposer may elect to propose ATCs in lieu of certain items in the Base Plans. If an ATC is pre-approved by MoDOT and FHWA-MO then the bidder has the option of submitting a bid for the Base Plans, or for the Base Plans as modified by the ATC. The bidder will only be allowed to submit one bid for the project.

2.2 ATCs submitted by the bidder shall be pre-approved by MoDOT and FHWA-MO prior to submitting with the bidding documents.

2.3 ATCs shall have a minimum of \$200,000 in cost savings. Cost savings shall include engineering costs for developing biddable quantities and final plans if the bidder is awarded the contract. Cost savings can include the combined savings of up to two (2) approved ATCs.

3.0 Project Goals.

3.1 Approved ATCs shall not negatively impact the project goals listed below:

3.1.1 Complete the project on schedule and on budget.

3.1.2 Construct a facility that adequately and safely serves the transportation needs of local and regional travelers and promotes economic development and tourism.

3.1.3 Minimize public impact by keeping traffic flowing safely and efficiently through the

impacted area during construction.

3.1.4 Incorporate innovative design and construction techniques.

3.1.5 Demonstrate quality construction to provide a long-lasting facility requiring minimal future maintenance.

4.0 Contact Information.

4.1 All CATC and ATC submittals for this project should be forwarded to the Project Contact as listed below:

Jason Evenden, P.E.
 Transportation Project Manager
 Missouri Department of Transportation
 3025 E. Kearney St.
 Springfield, MO 65803
 Telephone Number: (417) 895-7742,
 Email: Jason.Evenden@modot.mo.gov

5.0 Schedule.

Date	Milestone
December 21, 2020	Blast email sent to contractors and design consultants announcing industry informational meeting. Draft ATC guidelines and procedures posted to the MoDOT Contractor Resources website and on project SharePoint site.
January 11, 2021	Industry informational meeting held virtually to outline the project, explain the ATC and bidding processes, present the draft ATC guidelines and submittal schedule, and answer questions.
January 12, 2021	Post the following to secure project SharePoint site: list of attendees from industry meeting, as-built plans, right-of-way plans, design criteria, alignment study, bridge memo, preliminary bridge plans, preliminary geotech information, design exceptions, and RER/completed CE.
January 22, 2021	Final ATC guidelines & procedures and draft geotech report posted to secure project SharePoint site.
February 8, 2021	First day for proposers to submit conceptual ATCs for review and pre-approval and begin one-on-one confidential meetings.
March 12, 2021	Last date of one-on-one confidential meetings.
March 19, 2021	Last day to submit CATCs.

April 16, 2021	Last day of notification to proposer(s) of approved CATC(s).
June 11, 2021	Last day to submit ATCs.
July 9, 2021	Last day of notification to proposer(s) of approved ATC(s).
September 10, 2021	14 weeks before the letting - Final plans, specifications and estimate due to District Office and Bridge Division for review.
October 8, 2021	10 weeks before the letting - Signed and sealed plans and job special provisions due to Central Office Design and FHWA for review.
TBD	Pre-Bid Meeting
November 12, 2021	5 weeks before the letting – MoDOT Bidding and Contracting Services furnishes alternate bid packages to bidders including ATCs in their bids.
November 12, 2021	Tentative Advertisement of Project
December 17, 2021	Tentative letting date/bids due
January 2022	Contract awarded by MoDOT
January 2022	If awarded Contract includes an approved ATC, design modifications started to the engineering plans of record.
March 2022	Contractor issued notice to proceed

6.0 Submittal of Conceptual Alternate Technical Concepts.

6.1 The proposer may submit a CATC for consideration stating the basic proposal and approximate cost in order for MoDOT and FHWA-MO to provide feedback to the proposer without requiring a significant initial design cost. However, it is the proposer’s responsibility to produce sufficient information with the CATC submittal to provide a clear and concise understanding of the proposed CATC in order to provide adequate evaluation by MoDOT and FHWA-MO.

6.2 The proposer shall be responsible for any and all design costs to prepare a CATC.

6.3 The proposer may request confidential one-on-one meetings with the Project Contact and members of the ATC Review Team to discuss their CATC.

- 6.3.1 Meetings may be requested through the Project Contact and should allow a minimum of one (1) week notice.
- 6.3.2 Meetings will be held virtually and limited to two (2) hours in length.
- 6.3.3 Three (3) meetings maximum will be allowed per proposer.
- 6.3.4 The proposer shall be responsible for preparing the agenda for the one-on-one meetings and for leading the meetings. Meeting minutes shall be recorded by the proposer and approved by MoDOT.

6.4 The proposer is encouraged to propose specifications and design standards that differ from MoDOT practice as part of their CATC submittal. These Alternate Applicable Standards (AASs) shall be limited to those manuals, specifications and standards already reviewed and approved by FHWA (for example, AASHTO manuals and manuals/standards from other state departments of transportation). The proposer shall provide AASs with the CATC submittals. MoDOT will have sole authority to approve or disapprove any AASs.

6.5 An electronic copy of each proposed CATC shall be submitted to the Project Contact for review no later than 12:00 Noon CST on the designated date in Section 14.0 ATC Process Schedule.

6.6 Any CATCs submitted after this time will not be considered.

7.0 Evaluation of Conceptual Alternate Technical Concepts.

7.1 The ATC Review Team will be the sole judges of acceptability of CATCs and reserve the right to reject any CATC request for any reason.

7.2 CATC submittals shall include enough structural design details of the proposed substructure to determine acceptance of the CATC.

7.3 CATCs that are deemed to meet the minimum requirements may be approved by the ATC Review Team. Approved CATCs may be submitted as ATCs for more detailed review. Approval, conditional approval, partial approval, or non-approval of any CATC is at the sole discretion of the ATC Review Team.

8.0 Submittal of Alternate Technical Concepts.

8.1 A bidder may only submit an approved CATC as an ATC for review and approval.

8.2 ATC submittals shall include enough structural design details of the proposed substructure to determine acceptance of the ATC.

8.3 The bidder shall request the ATC Form from the Project Contact prior to submitting an ATC. The completed ATC Form shall be submitted via the secure project SharePoint site to the Project Contact with the following information:

- 8.3.1 Summary: A brief description of both the existing contract requirements for performing the work and the proposed ATC.

- 8.3.2 Description: A detailed description of the proposed ATC, including any specifications

and conceptual drawings, and a description of where and how the proposed ATC would be used on the project.

- 8.3.3 Deviation: Reference all requirements of the Base Plans that are inconsistent with the proposed ATC, an explanation of the nature of the proposed ATC deviations from said requirements and impacts to other design elements. Include an analysis of how the proposed ATC will provide a product or solution equal to or better than the product or solution in the Base Plans it replaces.
- 8.3.4 Justification: A detailed analysis justifying the proposed ATC and demonstrating why modifications or revisions to the Base Plans should be allowed. Include information on how the proposed ATC meets or exceeds the project goals.
- 8.3.5 Cost Savings: A detailed discussion of the cost savings associated with the implementation of the proposed ATC, including an itemized list of impacted bid items and quantities supporting the cost savings for the proposed ATC.
- 8.3.6 Schedule Impact: A detailed discussion of the probable impact the proposed ATC will have on contract completion time, including design, construction, and permitting issues.
- 8.3.7 Certification that the proposed ATC meets all applicable federal and state design standards, and that no additional design exceptions are needed for approval of the proposed ATC.
- 8.3.8 Permits: A detailed discussion of permit changes, additional permits and/or agency approvals that may be required as a result of the proposed ATC.
- 8.3.9 Operations: A detailed discussion of the impacts the proposed ATC will have on the long-term traffic operations of the roadway.
- 8.3.10 Safety: A certification that the proposed ATC will not negatively impact the safety of the project, and that all safety related elements in the proposed ATC meet or exceed the Base Plans elements.
- 8.3.11 Environmental Impacts: A detailed discussion of the probable effect the proposed ATC will have on the environment, including impacts to any previous permits or approvals, deviations from the approved project Environmental Document, impacts to environmental commitments and community impacts. Include a discussion of any permit changes, additional permits and/or agency approvals that may be required as a result of the proposed ATC.
- 8.3.12 Maintenance: A detailed discussion of the impacts the proposed ATC will have on the long-term maintenance of the facility.
- 8.3.13 History: A description of any previous use or submission of similar technical concepts or value engineering proposals including dates, job numbers and results/outcomes of the ATC or VE if previously submitted and/or implemented, as known by the bidder. This includes ATCs or VEs from any state DOT. Include contact information for project owners who can confirm ATC implementation and performance.

8.3.14 Inspection: A detailed discussion of any additional testing and construction inspection requirements of the proposed ATC.

8.3.15 Risks: A detailed discussion of added risks to MoDOT and other parties associated with implementing the proposed ATC.

8.4 An electronic copy of each proposed ATC shall be submitted to the Project Contact for review no later than 12:00 Noon CST on the designated date in Section 14.0 ATC Process Schedule. Any ATCs submitted after this time will not be considered.

9.0 Evaluation of Alternate Technical Concepts.

9.1 The ATC Review Team will be the sole judges of acceptability of ATCs and reserve the right to reject any ATC request for any reason.

9.2 ATCs that meet the minimum requirements may be approved by the ATC Review Team to be included in the bidder's bid package. ATCs that do not meet the minimum requirements will not be approved. Approval, conditional approval, partial approval, or non- approval of any ATC is at the sole discretion of the ATC Review Team.

9.2.1 ATCs that are approved may be submitted by the bidder along with their bid. The bidder shall notify MoDOT in writing of their intent to bid no later than 12:00 Noon CST on the designated date in Section 14.0 ATC Process Schedule. An approved ATC which is comprised of multiple elements must be bid as a whole and meet the minimum cost savings. Selective implementation of less than all elements of an approved ATC will not be accepted.

9.2.2 Conditional approval may be granted if some elements of the ATC are recommended for approval provided that certain additional requirements imposed by the ATC Review Team are met. Conceptual ATCs receiving conditional approval must be re-submitted according to the Submittal of Alternate Technical Concepts requirements.

9.2.3 Partial approval may be granted if some elements of the ATC are recommended for approval and other elements are not approved.

9.2.4 ATCs that are not approved may be revised and re-submitted based on comments received from the ATC Review Team.

9.3 ATCs will be evaluated utilizing the following criteria:

9.3.1 The ATC meets or exceeds the minimum requirements and engineering standards of the general conditions.

9.3.2 The ATC is consistent with, and does not negatively impact, the project goals.

9.3.3 The ATC shall not extend the overall construction completion date.

9.3.4 The ATC will not have long term impacts to the maintenance of the project.

9.3.5 The ATC is equal to or better than the Base Plans design. No decrease in the engineering standards from the Base Plans for any safety related item will be

considered.

9.3.6 All safety related elements shall meet or exceed the Base Plans elements.

9.4 The ATC Review Team will make every effort to evaluate each ATC within 10 working days of submittal. Written notification will be provided to the bidder for each ATC that is approved, conditionally approved, partially approved or not approved.

9.5 The ATC Review Team reserves the right to take longer than 10 working days to review submittals, depending on the availability of resources and evaluation needs of the specific ATC. The bidder will be notified in writing if more time will be required for evaluation of the ATC.

9.6 The ATC Review Team will not consider any ATC that is not formally submitted with proper documentation. No verbal ATC submittals will be considered, and no verbal directions or comments will be given concerning proposed ATCs.

9.7 A request from the ATC Review Team for additional information from the bidder will be considered a MoDOT response and allows for extension of the evaluation period.

9.8 The bidder will have no claim for additional costs (including development costs), delays, loss of anticipated profits, or increased material labor costs for any decision by the ATC Review Team on any ATC for approval, conditional approval, partial approval or non-approval, including any request for additional information.

9.9 An approved ATC that is not submitted with the bidding documents, a conditionally approved ATC, or a partially approved ATC will not be considered a pre-approved Value Engineering Change Proposal (VECP). The bidder may submit their approved ATC as a VECP, however the fact that it was approved as an ATC will have no bearing on its potential approval as a VECP, and it will be reviewed independently in accordance with Sec 104.6 of the Missouri Standard Specifications for Highway Construction.

10.0 Ineligible Firms

10.1 The following firms are ineligible to assist the Proposer with preparation of a CATC or ATC due to their involvement in assisting MoDOT with the development of the base plans:

10.1.1 Burns & McDonnell Engineering Company, Inc.

10.1.2 Terracon Consultants, Inc.

10.1.3 TREKK Design Group

10.1.4 Crawford, Murphy & Tilly, Inc.

11.0 Confidentiality

11.1 All members of the ATC Review Team (except FHWA which is covered by federal law) will be required to sign a project-specific confidentiality agreement before reviewing any ATC submittals. A copy of the agreement to be used for this purpose may be requested in writing from the Project Contact.

11.2 MoDOT will not pay stipends for ATCs. The following guidelines shall apply to the public

release of ATCs:

11.2.1 ATCs, whether approved or not, shall be considered confidential and will not be shared with other bidders or the public prior to award of the project.

11.2.2 Approved ATCs included in the successful bidder's bid will be eligible for release following the award of the project.

11.2.3 Approved ATCs included in an unsuccessful bidder's bid remain their property and will not be publicly released.

11.2.4 ATCs, whether approved or not, that are not included in the bid will remain the property of the bidder and will not be publicly released.

11.3 Other bidders' ATCs will not be shared with the successful bidder who is awarded the contract.

11.4 MoDOT expressly reserves the right to adopt any specific ATC as standard practice for use on other contracts administered by MoDOT, whether the ATC is accepted or rejected. The ATC shall not be used by MoDOT until after the award of the project.

12.0 Bridge Design Criteria

12.1 The minimum bridge design requirements for the project are as follows:

12.1.1 Bridge designs shall be in accordance with state and federal regulations.

12.1.2 Bridge designs shall be in accordance with the 2017 AASHTO LRFD Bridge Design Specifications (8th Ed.), Seismic Performance Zone 1, 1986 FHWA Report FHWA/RD-87/014 "Bridge Deck Drainage Guidelines" and MoDOT's Engineering Policy Guide.

12.1.3 Bridge designs shall use an LRFD design with HL-93 live load and a 35 lb/sq ft future wearing surface.

12.1.4 Fatigue design life for the bridge shall be 100 years.

12.1.5 Operational importance = Essential, as defined in LRFD 1.3.5.

13.0 Design Requirements.

13.1 The proposer will be responsible for the design of CATCs and ATCs.

13.2 MoDOT will be responsible for the design of approved ATCs to biddable quantities and the final re-design after award.

13.3 The cost of the design efforts to develop biddable quantities and final re-design will be determined by agreement between MoDOT and the bidder. The cost will be added as a line item in the bidder's modified bid documents.

13.4 Prior to bid, the plans will be developed to a degree such that MoDOT and the bidder are satisfied that accurate biddable quantities are established.

13.5 If the contractor's (successful low bidder) proposal contains an ATC, MoDOT will develop their ATC into a finalized set of plans after award.

13.6 Final re-design will not proceed until the project is awarded and the contract is executed.

13.7 The contractor will be included in review and oversight of developing the ATC re-design plans. If necessary, weekly meetings between the design team and the contractor will be held. All communication between the contractor and design team will be written or in-person/virtual with minutes recorded. MoDOT will have final approval of design plan changes.

13.8 Any final plans for ATCs will be incorporated into the project no later than 120 calendar days after the contractor is awarded the contract. The contractor cannot begin work on any part of the project that is part of the ATC until the plans are provided by MoDOT.

13.9 MoDOT will not be responsible for any costs associated with project delays due to the re-design and production of plans, specifications and quantities as needed for implementation of the ATC's or any additional construction costs not foreseen prior to the ATC design completion.

13.10 The cost of the contractor's ATC is the sole responsibility of the contractor. No additional costs will be paid by MoDOT, and MoDOT will pay only what is specified in the bidding documents for each ATC as awarded. In the event the ATC does not perform or meet the requirements as stated in the proposal, the contractor shall remedy any malfunctions, failures, or non-conformance issues at the contractor's cost.

14.0 Bidding Requirements

14.1 If the bidder elects to bid the project with approved ATCs, the bidder shall submit the following information with their bid documents:

14.1.1 A description of the proposed ATC, including the following as applicable:

14.1.1.1 The completed ATC Submittal Form for the approved ATC.

14.1.1.2 Any supporting documents that are part of the approved ATC including plans, quantities, calculations, manufacturer recommendations, etc.

14.1.1.3 Any AAS that is part of the approved ATC.

14.1.1.4 The final Review Comment and Resolution Sheet (RCRS) for the ATC containing the ATC Review Team's final disposition of all items, and any special conditions placed on the approval of the ATC.

14.1.1.5 The approval letter or email showing the ATC Review Team's approval of the ATC.

14.1.2 A detailed statement separating quantities for the approved ATC from the quantities of the Base Plans.

14.1.3 A detailed statement of the basis of the lump sum savings for the approved ATC. The statement should include assumed unit prices for each of the bid items considered for the lump sum savings. Unit prices shall be the unit prices assumed

at the time the final biddable quantities were furnished to MoDOT, and need not match the unit prices as bid.

14.1.4 Certification that the contractor has reviewed all Requests for Clarification (RFCs) and Addenda related to the project.

14.2 The above listed information shall be submitted in accordance with Sec 102.10 of the Missouri Standard Specifications for Highway Construction. The ATC submittal may be submitted separately prior to the bid opening.

14.3 If the successful bidder includes an approved ATC in their bid and the ATC is abandoned by the contractor or fails to be constructed for any reason, the contractor is obligated to complete the project utilizing the original Base Plans design at the awarded cost, and shall be responsible for any final redesign cost.

14.4 Examples of the bidding requirements and procedures may be presented and discussed at a pre-bid meeting, if held.

15.0 Basis of Payment.

15.1 The proposal documents contain all of the proposed work for the project to be bid as designed by MoDOT. Bidders choosing not to participate in the ATC process must bid the Base Plans furnished by MoDOT.

15.2 Bidders submitting an ATC bid will receive modified bidding documents with separate pay items for the approved ATC(s) and other applicable bid items. If the bidder elects to bid the project with approved ATCs, the bidder shall enter the unit prices in the modified bidding document. If the successful bidder's bid contains approved ATCs that are abandoned by the contractor, or that fail to be constructed for any reason, a no-cost change order will be processed to re-adjust the bid items to the original design quantities. In this circumstance the contractor is obligated to complete the project utilizing the original Base Plans design at the awarded cost.

15.3 No direct payment will be made for any change in quantity of pay items not included in the ATC that are affected by the contractor's decision to use an ATC on this project.

15.4 No direct payment will be made for delay of schedule due to the use of an ATC, including but not limited to delay resulting from the design, review, implementation or construction of an ATC.

15.5 If the ATC causes conflicts with utilities that were not previously identified in the original ATC submittal, the contractor's sole remedy for the effects of the presence of utilities, delay in their relocation, or any other effects they have on delivery of the project shall be a non-compensable, excusable delay as provided in Sec 105.7.3 of the Missouri Standard Specifications for Highway Construction. No time delay will be granted for any utility conflicts identified in the original ATC submittal. The contractor shall be responsible for all utility relocation costs.

16.0 Glossary of Terms.

16.1 Conceptual Alternate Technical Concept (CATC) - Concepts provided by proposers requiring minimal engineering and are intended to allow proposers to present their ideas to the ATC Review Team in a confidential environment prior to investing time and resources into detailed engineering of the concept.

- 16.2 Alternate Technical Concept (ATC) – An alternative standard, concept, product, or solution to the base design presented by the proposer for review by the ATC Review Team.
- 16.3 Approved ATC – An approved alternative standard, concept, product, or solution by the ATC Review Team for the bidder to include in their bid.
- 16.4 Base Plans - The bid documents provided by MoDOT.
- 16.5 ATC Plans - Plans submittals provided by bidders including enough structural design details to determine acceptance of the ATC.
- 16.6 ATC Review Team – Representatives from MoDOT and FHWA-MO independent from team developing Base Plans.
- 16.7 Proposer – Contractor interested in submitting a CATC and ATC for approval.
- 16.8 Proposer’s Engineer – Designer responsible for developing proposer’s conceptual ATC and ATC plans at proposer’s cost.
- 16.9 Base Plan’s Engineer - MoDOT or their consultant responsible for developing the bid documents for the Base Plans.
- 16.10 Bidder – Contractor submitting approved ATC as part of their bid.
- 16.11 Bidder’s Engineer - MoDOT or their consultant responsible for developing the bid documents for approved ATC.
- 16.12 Contractor – Successful low-bidder to be awarded contract by MoDOT.
- 16.13 Contractor’s Engineer - MoDOT or their consultant responsible for developing final plans after award.
- 16.14 Alternate Applicable Standards (AASs) - Manuals, specifications and standards already reviewed and approved by FHWA (for example, AASHTO manuals and manuals/standards from other state departments of transportation).
- 16.15 Value Engineering Change Proposal (VECP) - After project award, change proposals submitted by the contractor and approved or rejected by the Engineer in accordance with [Sec 104.6 of the Missouri Standard Specifications for Highway Construction](#). When approved, contractors will receive 50 percent of VECP and 25 percent of PDVECP net savings.

17.0 Clarifications and Addenda.

- 17.1 Requests for Clarification (RFCs) concerning this document may be made in writing to the Project Contact. All RFCs and responses will be posted to the project website and will not be considered confidential. It is the proposer/bidder/contractor’s sole responsibility to monitor the website to receive the latest information.
- 17.2 The RFC process shall be limited solely to the content of this document and shall not include correspondence related to any specific ATCs or ATC submittals.
- 17.3 Addenda to this document will be issued as determined by the Project Contact. Addenda will be posted to the project website. It is the proposer/bidder/contractor’s sole responsibility to monitor the website to receive the latest information.

