



U.S. Department
of Transportation
**Federal Highway
Administration**

Vermont Division

March 15, 2024

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Mr. Brian R. Hogge, Construction Team Leader
Federal Highway Administration
Office of Infrastructure
1200 New Jersey Avenue, SE
Washington, DC 20590

In Reply Refer To:
HDA-VT

Subject: Lyndon IM 091-3(53) Special Experimental Project No. 14 – Alternative Contracting Request

Dear Brian:

The Vermont Agency of Transportation (VTrans) is requesting SEP-14 approval for the subject project waiving 23 CFR 636.302(a)(1) requirements.

The Division has reviewed the documentation/workplan provided and is open to VTrans' interest in pursuing Progressive Design-Build (PDB) as an alternative delivery and contracting method.

This project is for replacement of deep culverts below Interstate 91 in the town of Lyndon. The hope is that PDB will encourage innovation and allow all opportunities to be considered making the delivery process more efficient and reducing construction duration and costs while ensuring the safety of the traveling public and project quality.

Attached is VTrans' SEP-14 workplan request for your review and approval. If you wish to discuss anything further, please reach out to our Structures Program Manager, Pam Thurber.

Sincerely,

Renwick L Warden

Digitally signed by Renwick L
Warden
Date: 2024.03.19 14:09:27 -0400

Randy Warden
Division Administrator

RW: PMT: *pmt*

Ec:

Pam Thurber, P.E., Structures Program Manager, FHWA-VT Division
Matt DiGiovanni, P.E., Engineering and Operations Supervisor, FHWA-VT Division
John Huyer, P.E., Alternative Contracting Program Manager, Office of Infrastructure



Vermont Agency of Transportation

219 North Main Street, Barre, VT 05641

<https://vtrans.vermont.gov/contact-us>

March 11th, 2024

Mr. Randy Warden
Federal Highway Administration Vermont Division Administrator
1 Home Farm Way
Montpelier, VT 05602

RE: Lyndon IM 091-3(53) SEP-14 Request


I-91 Bridges 96-3N & 96-3S over unnamed tributary to Passumpsic River, Caledonia County

Dear Mr. Warden:

The Vermont Agency of Transportation (VTrans) requests approval to use the Progressive Design-Build (PD-B) delivery method for the Lyndon IM 091-3(53) Project. The PD-B delivery method will award the contract using a qualifications-based selection process. Special Experimental Project No. 14 (SEP-14) approval is requested to waive the 23 CFR 636.302(a)(1) requirements.

Please find the attached SEP-14 workplan for your review and approval. Please advise if you have any comments or questions.

Sincerely,

DocuSigned by:

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Carolyn Cota, P.E. | Structures Program Manager

Cc:

Pamela Thurber, FHWA

Jim Lacroix, AOT Manager

Mahendra Thilliyar, AOT Project Manager

Jeremy Stephens, Chief of Contract Administration Bureau

Angie Farrington, Contract Specialist IV

Special Experimental Project No. 14 (SEP-14)
Alternative Contracting Workplan for
Lyndon IM 091-3(53) Interstate 91 Bridges 96-3N & 96-3S
March 11th, 2024

I. INTRODUCTION

This workplan relates to the Lyndon IM 091-3(53) Project in Lyndon, Vermont (the Project). This letter constitutes a request to the Federal Highway Administration (FHWA) by the Vermont Agency of Transportation (VTrans) for review and approval of this workplan for delivery of the Project using a progressive Design-Build delivery model under the provisions of Special Experimental Project Number 14 (SEP-14) for the use of innovative contracting practices.

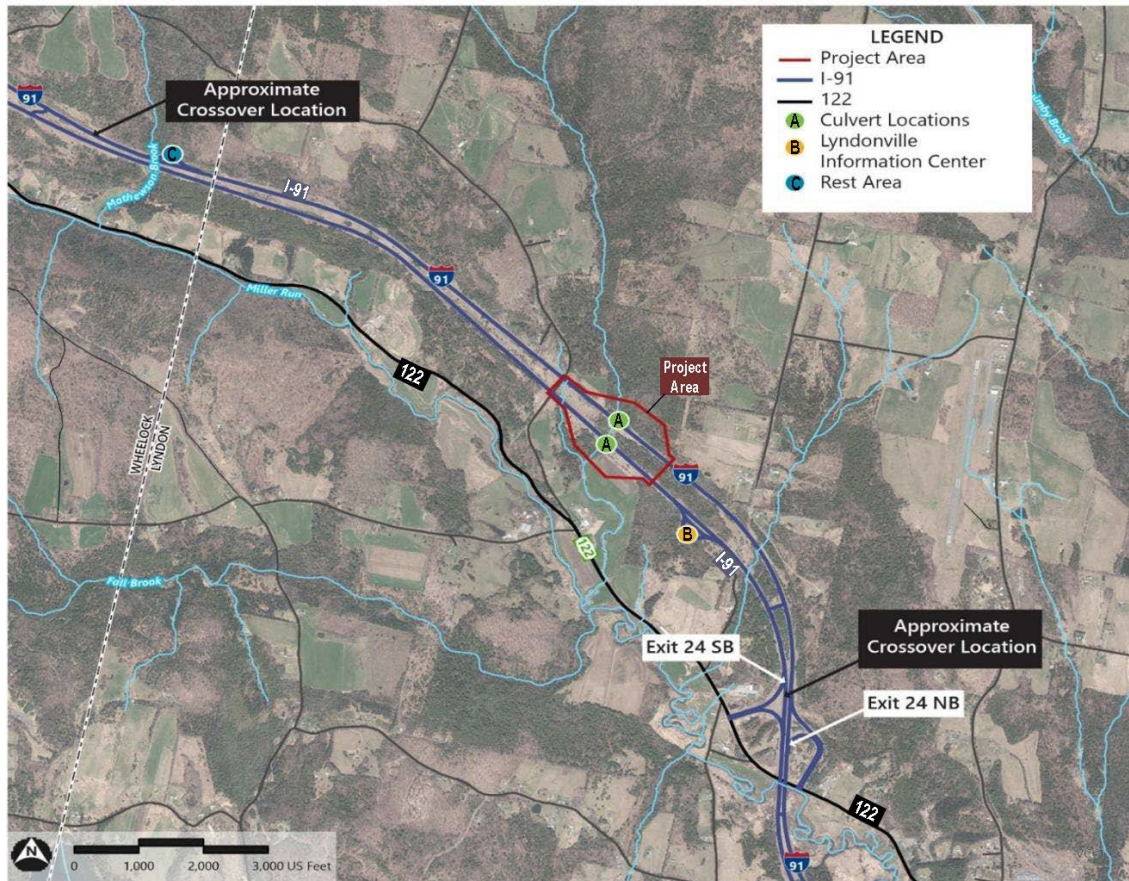
The Project is located in Lyndon, Vermont on Interstate 91 (I-91), approximately 1.2 miles north of Exit 24, and includes the replacement of bridges 96-3N and 96-3S. See figure 1. The existing corrugated galvanized metal plate pipe (CGMPP) bridges were constructed in 1973 and currently have a culvert rating of 5 (Fair) and a channel rating of 6 (Satisfactory). The total project length is approximately 3.7 miles along I-91. These buried structures are two of the many culverts that need repair or replacement due to an aging and deteriorating inventory.

VTrans was engaged in procurement for this project using a traditional two-step Design-Build process. VTrans has had success with the two-step Design-Build process on multiple past projects. However, there was limited interest in the qualification phase and only two Design Build Teams were shortlisted to submit proposals. During the proposal phase one of the shortlisted teams withdrew from participating and as a result VTrans decided to terminate the procurement. VTrans is requesting permission to re-start the procurement utilizing progressive Design-Build.

The overall intent of the SEP-14 program is to foster innovation and explore the full range of opportunities to make the project delivery process more efficient. Progressive Design-Build requires the Design-Builder to progress the design collaboratively with the owner. This collaboration allows the owner to have direct input on the project scope, design features and innovations proposed by the Design-Builder before the project bid process. Owner involvement in the design is intended to improve the cost effectiveness of the project by guiding the project in the direction that provides the best value, weighing cost and project features. In addition, the collaboration allows for timely decisions and evaluation and mitigation of project risks as the project is designed. Timely decision making and risk mitigation is important to Design-Builders and the Progressive Design Build process and should result in increased interest in projects. which will help both the Design-Builder and the owner to evaluate the impacts of risks on the project schedule and cost before the cost is determined. For the subject project, VTrans anticipates that PDB will allow the evaluation of options for traffic management, trenchless technology and accelerated construction techniques for the project. The largest risks for the subject project are geotechnical in nature and each innovation and associated risks can be evaluated prior to the Design-Builder submitting bid prices.

This Project requires a SEP-14 approval because NEPA was completed prior to contracting with a Design-Builder and VTrans intends to select the Design-Builder based only on Qualifications. VTrans acknowledges that this is not currently considered best practice to progress the design and obtain NEPA prior to selection. However, VTrans believes that this project is well suited for PDB. It will serve as a pilot for future Federal-aid policy and procedures, particularly by expediting the procurement process and providing valuable experience for efficient, collaborative delivery of future projects. The advantages of progressive Design-Build noted above will stimulate interest from the contracting community and promote competition during procurement. VTrans will be responsible for reporting to FHWA how the experimental features contribute to the overall success of the Project.

Figure 1: Project Location Map



II. PURPOSE

The proposed progressive Design-Build contracting method is an innovative process that is increasingly utilized by transportation agencies for the delivery of highway projects. Progressive Design-Build delivery places the responsibility for design and construction with a single contractor for each procurement. The single contractor is selected based on qualifications before substantial design work is completed. The owner and the contractor then progress the design together toward authorization of construction work and a final contract price. This contracting method would allow for well-informed decision-making by enabling VTrans to align project scope expectations up front, incorporate desired design details, and use a collaborative, open-book price negotiation approach before completion of final design and execution of construction work.

Under 23 CFR 636.302(a)(1), evaluation of price is required in the selection of a Design-Build Team (DBT) if the contract is awarded after the National Environmental Policy Act (NEPA) process is complete. Since the total contract price will not be known upon the selection of the Design-Build Team (DBT) and the NEPA decision has been completed prior to executing the PDB procurement, SEP-14 approval by FHWA is required. VTrans, the contracting agency, is requesting SEP-14 approval for deviating from the 23 CFR 636.302(a)(1) requirement. The approved environmental document is NEPA – Categorical Exclusion (CE) which was signed on July 3, 2023.

III. PROJECT SCOPE AND BACKGROUND

The Project is located in Lyndon, Vermont on I-91 approximately 1.2 miles north of Exit 24.

The project includes the replacement of the existing corrugated galvanized metal plate pipes (CGMPP) on I-91; bridge 96-3N (8' diameter x 366' long under an average fill depth of 70') and bridge 96-3S (8' diameter x 308' long under an average fill depth of 55'). The existing structures were built in 1973, and currently have a culvert rating of 5 (Fair), and a channel rating of 6 (Satisfactory). The Bidder is advised that these ratings are from the Nov. 2019 inspection. Metal culverts may have unexpected changes in condition between inspections. The total project length is approximately 3.7 miles along I-91, including the traffic control limits.

The Project includes, but is not limited to:

- Complete replacement of bridges 96-3N and 96-3S.
- Maintaining streams and waterways.
- Maintain mobility for the traveling public in a safe and efficient manner through the I-91 corridor at times during construction.

The Project priorities are:

- Provide a high-quality product utilizing innovation where appropriate.
- Provide the best value for the scope of work.
- Provide cost effective and efficient design meeting all project requirements.
- Avoid, minimize, and mitigate environmental impacts.
- Minimize future maintenance requirements for the construction Project.
- Minimize impacts to highway mobility.
- Cultivate a project culture of excellent communication and partnering between Design-Builder, VTrans, FHWA, and project stakeholders.

IV. PROCUREMENT PLAN

This section describes the project sequence with approximate durations for procurement using the progressive Design-Build approach. Each step in the process has an estimated timeframe based on the current understanding of project scope and project funding. If an estimated duration slips more than two months VTrans will provide written notice to FHWA VT with an explanation and narrative on the steps being taken to get back on schedule and/or propose a new duration for approval.

Step 1: Preparation of Request for Proposals (RFP) (Estimated Time: 1-3 months)

The RFP, which will describe the general project scope and terms for the Design- Build contract, will be prepared by VTrans in consultation with FHWA. The scope will identify the description, location, general design criteria, anticipated items of work, and minimum qualifications of the Design-Builder. The RFP will include the evaluation criteria and identify the relative importance of each criterion.

Step 2: Selection of Progressive Design-Builder (Estimated Time: 4-10 months)

This step includes advertising the RFP, evaluating Proposals, selecting the best-qualified Design-Build team, and negotiating and awarding the Design-Build contract. The following tasks will be completed:

1. VTrans will hold an industry forum regarding the procurement.
2. VTrans will advertise the RFP and respond to questions from proposers.
3. Proposers will submit Proposals setting out their qualifications and project approaches in response to the RFP.
4. VTrans's Technical Evaluation Committee will review the Proposals and, short-list no less than 3 and no more than five proposers based on its evaluation of the Proposals according to the criteria outlined in this procurement plan.
5. VTrans's Technical Evaluation Committee will interview the shortlisted teams and thereafter identify the best qualified proposer based on the Committee's evaluation of the Proposals and interviews. FHWA will have a non-voting member on the Technical Evaluation Committee.
6. VTrans will negotiate and enter into a two-part design-build contract with the best qualified proposer.
 - o Phase 1 - Preconstruction Services
 - o Phase 2 – Construction Contract (guaranteed maximum price)

Step 3: Design and Construction Price Negotiation (Estimated time: 10-12 months)

1. The Design-Builder will progress the project design to such that a Guaranteed Maximum Price (GMP) for Phase 2 can be negotiated. This is assumed to be 60 – 90% status of the final design required to build the project.
2. Collaboration between the Design-Builder and VTrans may identify Early Work Packages (EWP) that will benefit the goals of the project, reduce project cost and/or benefit the overall schedule of the Project. EWPs would be negotiated separately from the Phase 2 contract work with a GMP for each particular EWP. To ensure efficient and effective use of federal and state funding, VTrans will procure a separate Consultant Services Contract for an Independent Cost Estimator (ICE). The ICE will provide independent cost estimates to aid VTrans in price negotiations with the Design-Builder to ensure the GMP(s) for Phase 2 and EWPs if proposed are reasonable and fair.
3. If VTrans and the Design-Builder are successful in price negotiations for Phase 2, it will

execute Phase 2 of the Contract with the agreed upon GMP.

4. If VTrans is unable to enter into a Phase 2 Contract, or the Design-Builder, ICE and VTrans fail in the price negotiations, then VTrans will off-ramp the Design-Builder.

Step 4: Design Completion and Construction (Estimated time: 36 months)

The Design-Builder will complete the remaining design and permitting tasks and construct the project for the GMP.

Early Work Package (EWP)

EWP means a portion or phase of physical construction work (including but not limited to site preparation, structure demolition, hazardous material abatement/treatment/removal, early material acquisition/fabrication contracts, or any action that materially affects the objective consideration of alternatives in the NEPA review process) that is procured after NEPA is complete but before all design work for the project is complete. VTrans and the Design-Builder shall ensure that the work included in each EWP is sufficiently independent so that the off-ramp option is not precluded.

Independent Cost Estimator (ICE)

To ensure efficient and effective use of federal and state funding, VTrans will contract with an Independent Cost Estimator (ICE). This representative of VTrans will collaborate with the Design-Builder and provide independent quantity takeoffs, prepare independent cost and schedule estimates, hold cost reconciliation meetings, provide constructability plan reviews, and assist VTrans in managing project risks. The development of all GMPs and changes during construction will be on an open-book basis, and VTrans and its representatives will have the right to access and copy all records, accounts, and other data used by the design-builder in connection with the preparation of any GMP.

Off-Ramp

If VTrans is unable or unwilling to enter into a Phase 2 contract with the design-builder for the project, then the VTrans may take one or more of the following actions:

- Direct the Design-Builder to value engineer or re-examine the scope the project and make modifications to the proposal to satisfy VTrans concerns.
- Enter into negotiations with the Design-Builder to remove portions of the project scope.
- Amend Phase 1 contract to have Design-Builder complete project design or issue a new contract to the designer to complete the project.
- Procure a contractor to construct the project as Design-Bid-Build.
- Re-Advertise for a new Design-Builder.

Proposal Evaluation

Scores will be based on the evaluation criteria set out in the RFP, which are expected to include the following or similar criteria:

- Applicable Experience of Design and Construction Firms, Experience and Qualifications of Design and Construction Key Personnel
- Preconstruction – Phase 1 Approach
- Construction – Phase 2 Approach
- Approach to risk mitigation

- Safety Qualifications
- Interview [shortlisted proposers only]

Final scoring criteria and their relative importance will be established in the RFP for the procurement.

Interview Evaluation

Proposers shortlisted on the basis of the Proposal evaluation will be required to make an oral presentation of their qualifications and approach to the project and answer any questions VTrans's Technical Evaluation Committee may have with respect to the Proposal and the team's qualifications. Interviews will be graded qualitatively, resulting in an interview score. The interview scores will be combined with the Proposal evaluation score.

V. REPORTING

VTrans will request review for the preconstruction services Contract and the final design and construction contract from FHWA – Vermont Division and provide initial, intermediate, and final reports on this project to FHWA – Vermont Division's assigned Transportation Engineer/Project Oversight Manager.

Step 2 Report

VTrans will submit an interim report to FHWA no later than 3 months after Phase 1 contract award. The initial report will include the number of proposers and identify the selected Design-Builder.

Step 3 Report

VTrans will submit an interim report to FHWA no later than 3 months after completion of negotiation of GMP and Phase 2 contract award. The interim report will include innovations realized by the use of progressive Design-Build, use of EWP's, and a summary of the price negotiation process.

Step 4 Report (Final Acceptance)

No later than 6 months after the completion and acceptance of all contracted work on the Project (Construction Contract Acceptance), VTrans will prepare and submit a final report to FHWA. The final report will include a comprehensive assessment on the effectiveness of the PDB project delivery method relative to project cost and time savings and will discuss lessons learned.

Off Ramp Report – If VTrans exercises the off-ramp option, the final report will be prepared and submitted to FHWA no later than 3 months after the off-ramp determination. This report will discuss lessons learned, reasons for using the off-ramp, and considerations of procurement options for the project going forward.