

# REQUEST FOR PROPOSAL

## Norfolk Southern Railway January 2007

### I INTRODUCTION AND PURPOSE

Norfolk Southern Railway (NSR) is seeking proposals including statements of qualifications, for construction management services for the duration of the Heartland Corridor Clearance Improvement Project, a federally funded project. The selected Contract Engineering firm (Contract Engineer) will designate an individual who is a registered Professional Engineer to serve as Construction Manager and provide plan review, inspection, construction surveying, quality assurance materials testing, and contract administration under the overall supervision of the Railway's Project Manager Structures.

### II Project Description

The Heartland Corridor Project will provide for double-stack intermodal service and necessitates clearance work on tunnels and other obstructions in Virginia, West Virginia, Kentucky and Ohio. This request seeks proposals for the work along the NSR route between Walton, VA and Ironton, OH.

The tunnels range in length from 174 to 3302 lf, with a total length of 31,112 lf. Ten of the tunnels were constructed for single track; the other twenty were constructed with a width for two tracks. However, three of the double width tunnels presently have a single track. Most of the tunnels are concrete lined, but one is unlined, and three are masonry lined.

Overall 28 tunnels have vertical clearance deficiencies. Three of those tunnels have relatively minor deficiencies with less than a 6" encroachment. Nine tunnels have significant vertical clearance deficiencies greater than 2'. Six tunnels also had had horizontal clearance deficiencies.

The clearance improvements will require that contractors have track access, which will require rescheduling rail operations around the work windows for extended periods. Some of the longer tunnels will require daily contractor access for up to 11 months.

In addition to the tunnel work, seven through truss bridges will require modification; the tracks must be lowered at three overhead bridges; nine slide detection fences require modification; and three sets of overhead wires must be raised.

Funding for the Heartland Corridor Project is provided under Section 1301 of SAFETEA-LU, in the amount of \$90 million, and Section 1702 of the same, in the amount of a \$5 million designation. The difference between projected total Project costs of approximately \$150 million and funds provided under SAFETEA-LU, will be provided primarily by Norfolk Southern Corporation, with funding support from the Commonwealth of Virginia (Virginia Rail Enhancement Fund, Virginia Department of Rail and Public Transportation) and the State of Ohio (Ohio Rail Development Commission).

The Environmental review is being conducted by the Federal Highway Administration, Eastern Lands Highway Division, the Federal project managing agency.

Appendix A provides a list of the structures, their general characteristics, and type work proposed, and the current project schedule. Appendix B is a Map that shows the tunnel locations. The estimated total project cost is approximately \$150,000,000.

### III SCOPE OF SERVICES

It is imperative that the selected Contract Engineer has extensive tunnel modification and railway engineering and construction management experience. A registered civil engineer with extensive tunnel construction management and experience with projects involving railway operations is essential. It is expected that the selected Contract Engineer will need to provide inspectors in addition to the Construction Manager during the project's duration.

The selected Contract Engineer will provide complete construction management services including: construction management, coordination, scheduling, administration, inspection, construction staking, quality assurance materials testing, drawing submittal review and approval coordination, project records and federal close-out documents for the project.

The Contract Engineer shall provide technical and administrative services and coordination oversight for all activities taken by outside entities in connection with the project. The Contract Engineer shall maintain a close liaison with the NSR Project Manager Structures. The Contract Engineer shall copy the NSR Project Manager Structures and Chief Engineer Bridges and Structures on all correspondence.

Throughout the duration of the project, the Contract Engineer shall perform the following services to include, but not limited to, the following:

A. Pre-construction Phase

- Conduct a peer review of construction plans and comment on constructability.
- Complete review of the submitted schedule of work.
- Review and coordinate analysis of Contractor's submittals with the design team.
- Conduct pre-construction conference.
- Review and comment on the Contractor's schedule

B. Construction Phase.

Provide all necessary project administration including:

- Perform site inspections
- Provide inspectors for day-to-day on –the-job observation/inspection of work. The inspectors shall make reasonable efforts to guard against defects and deficiencies in the work of the Contractor and to ensure that provisions of the contract documents are being fulfilled:
  - Prepare daily inspection reports documenting observed construction activities.
  - Take and maintain digital photographs providing documentation of construction activities; bind and label them.
  - Mark up a field blue-line set of drawings to incorporate the Contractor record drawing markups.
  - Assist in monthly progress payment recommendations by making measurements of bid items.
- Conduct weekly project meetings and prepare minutes:
  - Prepare minutes and distribute to designated parties.
- Monitor project budget, purchases and payment.
- Review the updated construction schedules and maintain records.
- Establish and process job control documents including:
  - daily inspection diaries.
  - weekly progress reports
  - monthly construction payments
  - requests for information
  - survey requests
  - material receipts
  - weighmaster certificates
  - material submittals
  - weekly statements of working days, including a detailed record of track time
  - construction change orders
  - review of certified payroll records

- Review of schedule updates:
  - Compare work progress with planned schedule and notify the Construction Contractor of project slippage. Review the Contractor's plan to get back on schedule.
  - Analyze the schedule to determine the impact of weather and change orders.
  - Obtain monthly updates from the Construction Contractor of construction schedule incorporating actual progress, weather delays and change order impacts.
  - Negotiate time extensions due to change orders or other delays
- Assist NSR in negotiation of change orders:
  - Perform quantity and cost analysis as required for negotiation of change orders.
  - Analyze additional compensation claims that are submitted during the construction period and prepare responses.
  - Perform claims administration including coordinating and monitoring claims responses, logging claims and tracking claim status.
- Review, comment and facilitate responses to requests for information:
  - Prepare responses to RFI related construction issues.
  - Transmit design-related RFIs to design engineer and copy the NSR Project Manager Structures.
  - Conduct meetings with the Construction Contractor and other parties as needed to discuss and resolve RFIs.
- Evaluate cost reduction incentive proposals and provide recommendations to the NSR Project Manager Structures for acceptance or denial.
- Monitor and enforce Construction Contractor's compliance with SWPPP.
- Identify actual and potential problems associated with the construction project and consult with the NSR Project Manager Structures and the design engineer.
- Maintain an awareness of safety and health requirements and enforce applicable regulations and contract provisions for the protection of the public and project personnel.
- Facilitate any necessary utility coordination with NSR C&S Department, the applicable utility and the Construction Contractor.
- Prepare a monthly progress report for the Project Manager Structures describing key issues, cost status, and schedule status.
- Prepare monthly progress payment requests; negotiate differences over amount with the Construction Contractor and process payments through the NSR Project Manager Structures.

C. Quality Assurance. The Contract Engineer shall enforce the quality assurance plan, in conformance with the plans and specifications.

- Schedule and perform quality assurance materials testing to verify compliance of the work with the contract documents.
  - Source Inspections
  - Materials Acceptance
- Review test reports submitted by others to substantiate contract compliance.
- Ensure that Certificates of Compliance or source release tags are furnished by the Construction Contractor along with the applicable delivered materials at the project site.

D. Construction Surveying

- The Contract Engineer shall preserve survey baselines established by the design engineer, perform construction survey verification as needed.
- The survey shall be under the supervision of a licensed Land Surveyor with substantial experience in performing construction staking on similar projects.
  - Construction verification staking shall be performed no later than two working days after the initial request is made through the construction-engineering consultant.
  - The Surveyor shall make reasonable efforts to organize the work to meet the Contractor's operations schedule.
  - Provide office support for the field crews including checking of the field notes after staking.
  - Maintain a log of construction staking requests.

- Maintain a construction-staking plan set.
- Maintain files of all field notes.
- The surveyor shall provide all labor, tools, equipment and materials, including stakes, hubs, flagging, nails and paint, for establishment of one set of initial construction stakes as required by the construction contract. Re-establishing construction staking is the responsibility of the Construction Contractor. Initial construction staking includes but is not limited to the following:
  - Limits of Clearing and Grubbing: Limits of clearing and grubbing will be flagged at 100-foot intervals.
  - Limits of stockpile areas: Limits of stockpile areas shall be flagged at 50 ft. intervals.
  - Rough Grading/Slope Stakes: Slope stakes will be placed at 100-foot intervals; intermediate slope stakes will not be required. Rough grade will be staked at all grade breaks and at 50-foot intervals. Slope stakes to be provided for roadway.
  - Finished Grading: Finished grading stakes for curb and gutter and edge of pavement will be placed at all grade breaks, at 50-foot intervals on straight sections, and at 25-foot intervals on curved sections, and at beginning and end of curves.
  - Top of Rail: Top of rail and centerline of track referencing for surfacing shall be performed at 50 foot intervals on curves and 100 ft. intervals in tangent track.
- After completion of tunnel work, the surveyor shall provide all labor, tools, equipment and materials for establishment of Track Monumenting Final top of rail and track centerline location through tunnels shall be marked at 62 ft intervals as prescribed in NSR MW&S Standard Procedure 40, on plates provided by NSR.

E. Federal Contract Management Requirements.

- Maintain construction documents per federal requirements.
- Enforcement of Labor Compliance requirements, including completion of federal Labor Compliance Pre-job checklist.
- Enforcement of Quality Assurance requirements.

F. Post-Construction Phase.

- Prepare initial punch list and consolidate comments into final punch list.
- Finalize the bid items, claims, change orders, punch list items and correct shop drawings.
- Oversee completion of record drawing.
- Preparation of federal final report including all necessary attachments.
- Preparation of Report of Expenditures Checklist include all necessary attachments.
- Transmit all project files and record drawing to NSR for archiving.

G. Contract Engineer shall maintain a suitable headquarters in the project area for the duration of the project, and provide separate construction site trailers only as they deem necessary. The construction contractor will be required to provide a construction trailer for their use as well as weekly construction meetings, which shall include desks, layout table, phone, computers, fax machine, reproduction machine, and file cabinets. Contract Engineer shall provide all necessary safety equipment required for their personnel to perform the work efficiently and safely. Contract Engineer personnel shall be provided with radio or cellular-equipped vehicles, digital camera, and personal protective equipment suitable for the location and nature of work involved, and in accordance with FRA Roadway Worker and Bridge Worker requirements.

H. Contract Engineer shall confirm completed work conformance with the design clearance envelope by means of a laser survey or other method approved by NSR Project Manager Structures.

## **IV CONTRACTUAL STRUCTURE**

The successful vendor will be awarded a contract. Proposals should include a list of all job classifications that will perform work on the project with an estimate of time for each job classification, based on the project schedule.

A sample contract is provided as Appendix C.

## **V INFORMATION AVAILABLE**

NSR will make the project preliminary engineering report, and the individual preliminary engineering report for each tunnel listed in Appendix A available through a password protected link on its website. The design team consists of Hatch Mott MacDonald, Anderson and Associates, Inc., FMSM, HDR, Inc., and STV/Ralph Whitehead and Associates. The design contract includes a provision for design activities related to construction.

## **VI PROPOSAL REQUIREMENTS – TECHNICAL PROPOSAL**

### A. Corporate Qualifications

The proposal should include a comprehensive statement of firm qualifications. These should focus on the extent to which the contract engineering firm has experience working on tunnel construction or enlargement projects on Class I railroad properties. If multiple firms are proposed, information for all firms should be submitted. Personnel entering railway property must have FRA Roadway Worker training and must have identification badges from e-Railsafe program at e-Verifile.com.

### B. Key Personnel

The Proposal should include a brief section describing the backgrounds of all key personnel, as well as the role these individuals will play in the proposed project. Complete resumes are to be provided in an appendix of the proposal.

## **VII PROPOSAL REQUIREMENTS – COST PROPOSAL**

Contract engineering firm should submit cost estimates, in a separate sealed envelope with the Technical proposal. The cost estimates furnished should detail all personnel costs, material costs, equipment costs, overhead costs, and the costs of any necessary subcontracts. **This cost estimate will not be used as part of the selection criteria. This cost estimate will be used as the initial proposal from which the final contract will be negotiated.**

## **VIII SUBMISSION INFORMATION**

### A. Point of Contact

Technical questions should be directed to:

James N. Carter, Jr.  
Chief Engineer Bridges and Structures  
Norfolk Southern Railway  
1200 Peachtree Street  
Atlanta, GA 30309

jncarter@nscorp.com  
404-529-1408

Questions regarding the submission process, as well as proposal submissions should be directed to:

Dana C. Helsley  
Manager Service Contracts

Norfolk Southern Railway  
110 Franklin Road  
Roanoke, VA 24042-0072

[Dana.helsley@nscorp.com](mailto:Dana.helsley@nscorp.com)  
540-981-3644

#### B. Submission

All proposals are due by 5:00 PM Eastern Standard time March 1, 2007. Proposals received after that time and date will be returned unopened. All proposals shall be submitted to:

Dana C. Helsley  
Manager Service Contracts  
Norfolk Southern Railway  
110 Franklin Road  
Roanoke, VA 24042-0072

[Dana.helsley@nscorp.com](mailto:Dana.helsley@nscorp.com)  
540-981-3644

#### C. Proposal Format

Contract engineering firm should include 10 paper copies of all materials and one electronic copy of the Proposal.

### **IX PRE-BID CONFERENCE**

A pre-bid conference is scheduled for 9:00 AM, Wednesday, February 14, 2007 at the Norfolk Southern offices in Bluefield, West Virginia. These offices are located at 800 Princeton Ave., Bluefield, West Virginia. Attendance at this pre-bid conference is mandatory. Only proposals from contract engineering firms who are represented at the pre-bid meeting will be considered.

### **X SELECTION CRITERIA**

The successful proposal will be decided based on the following criteria (importance is not indicated by order).

- Firm Qualifications, with focus on experience gained in successful completion of similar clearance improvements performed under traffic on a Class 1 railroad – 30 points
- Qualifications of Key Personnel, specialized experience and technical competence in the type of work required, including where appropriate, experience in energy conservation, pollution prevention, waste reduction, and the use of recovered materials – 25 points
- Adequacy of Resources to perform the work – 20 points
- Past performance on contracts with government agencies and private industry in terms of cost control, quality of work, and compliance with performance schedules. – 15 points
- Location in the general geographic area - 10 points