



Memorandum

Subject: **ACTION:** Request for FY 2009 Candidates for the Innovative Bridge Research and Deployment (IBRD) Program (**Reply Due: August 15, 2008**)

Date: June 26, 2008

In Reply Refer To: HIBT-1

From: /s/ **Original Signed by**
M. Myint Lwin, P.E., S.E.
Director, Office of Bridge Technology

To: Directors of Field Services
Acting Resource Center Director
Division Administrators

The purpose of this memorandum is to announce the FY 2009 solicitation for candidate projects from the States for the Innovative Bridge Research and Deployment (IBRD) Program. Funds are available for bridge project/s on any public roadway that meet one or more of the eight program goals as listed in Section 5202 (b)(2) of SAFETEA-LU, Public Law 109-59. These eight goals are listed in the attachment.

We are requesting your assistance in identifying FY 2009 candidate projects that demonstrate innovative bridge materials, innovative material technology, and construction techniques that improves bridge safety and reliability. With respect to safety and reliability, applicants should describe the benefits associated with the project or activity for which funding is sought, including whether the project, activity, or improvement:

- Will result in a measurable reduction in the loss of property, injury, or life thereby enhancing bridge integrity and decreasing vulnerability to damage from both natural and man-made hazards;
- Enhances the innovative technology to monitor, measure, and report on engineering and operational performance of high performance material in bridges ranging from material degradation to cracking or loss of section to catastrophic failure;
- Helps in reducing future maintenance and life-cycle costs;
- Incorporates innovative construction time to minimize work zone exposure to improve safety; and
- Employs operational and technological improvements that promote safety and congestion relief.

For FY 2009, we estimate that approximately \$5.3 million is available for the IBRD Program. We request your assistance in identifying FY 2009 candidate projects for IBRD. Please discuss the IBRD Program with your State department of transportation (DOT) and



solicit candidate projects. Please assist this office and your State by determining each candidate's eligibility, by assuring the completeness of each application. The applications shall be submitted **ONLINE** at www.fhwa.dot.gov/ibrd/application/ and are **due on or before August 15, 2008**.

To facilitate widespread dissemination, this memorandum will be posted at: www.fhwa.dot.gov/bridge/ibrd/. Questions concerning this program should be addressed to Raj Ailaney, Office of Bridge Technology, at (202) 366-6749.

cc:

Division Bridge Engineers

Attachments

ATTACHMENT No. 1

INNOVATIVE BRIDGE RESEARCH AND DEPLOYMENT PROGRAM

FY2009 PROGRAM INFORMATION

BACKGROUND

The Innovative Bridge Research and Deployment (IBRD) program was established by Public Law 109-59-Aug. 10, 2005, SAFETEA-LU, Section 5202(b)(1) to promote, demonstrate, evaluate, and document the application of innovative designs, materials, and construction methods in the construction, repair, and rehabilitation of bridges and other highway structures.

FUNDING

Funds are provided to the States under the IBRD program to pay the Federal share of the cost of projects that demonstrate innovative accelerated bridge design and construction technology, and the application of innovative material technology in the repair, rehabilitation, replacement, or new construction of bridges and other highway structures. This program is funded by SAFETEA-LU, Section 5101(a)(1) at \$13.1 M for each of the fiscal years 2005 through 2009. Of this amount, \$4.125 M for fiscal years 2006 through 2009 is directed to conduct research and deploy technologies related to high-performance concrete bridges.

For fiscal year 2008, Congress rescinded the IBRD program. It is expected that funding for fiscal year 2009 will be available as authorized in SAFETEA-LU. The actual amount available can vary in yearly congressional appropriations.

FEDERAL SHARE:

In accordance with 23 U.S.C. 503(b) (5), the Secretary shall determine the Federal share of the costs for any project eligible under this program. The FHWA Administrator recommends for approval to the Secretary the Federal share for each project considering several factors, including the innovation parts of the project, the amount of funds requested for the project, and the available funding for the program.

ELIGIBILITY:

- Funds are available for bridge project/s that meet one or more of the eight program goals listed in Section 5202 (b)(2) of SAFETEA-LU, Public Law 109-59:

Goals—the goals of the program shall include:

- A. The development of new, cost-effective, innovative highway bridge applications;**
 - B. The development of construction techniques to increase safety and reduce construction time and traffic congestion;**
 - C. The development of engineering design criteria for innovative products, materials, and structural systems for use in highway bridges and structures;**
 - D. The reduction of maintenance costs and life-cycle costs of bridges, including costs of new construction, replacement or rehabilitation of deficient bridges;**
 - E. The development of highway bridges and structures that will withstand natural disasters;**
 - F. The documentation and wide dissemination of objective evaluations of the performance and benefits of these innovative designs, materials, and construction methods;**
 - G. The effective transfer of resulting information and technology; and**
 - H. The development of improved methods to detect bridge scour and economical bridge foundation designs that will withstand bridge scour.**
- The project may be on any public roadway, including State and locally funded projects.
 - Funds may be used for costs of preliminary engineering, repair, rehabilitation, or construction of bridges or other highway structures, and costs of project performance evaluation and performance monitoring of the structure following construction.

SELECTION CRITERIA:

The FHWA will use the following criteria to evaluate the submitted candidates for selection:

1. Project/s that will meet one or more of the goals of the program as listed in the Eligibility Section with a particular emphasis on safety and reliability of bridges and tunnels;
2. Project/s that will incorporate innovative materials;
3. Project/s that have been funded for design, construction or rehabilitation and are ready or will be ready for construction by fiscal year 2011;

4. Project/s with designs, materials, and construction methods that have broad application;
5. Project/s that leverages Federal funds with other public or private resources.

In addition, the FHWA may consider:

1. State priorities – For States that submit more than one project application, consideration is also given to the individual State’s priorities if specified.
2. Availability of innovative material and/or innovative material product – and projects that apply an innovative material and/or a product made of an innovative material, which is readily available for application in other projects and in other States.
3. Expedient completion of project in a timely manner. For large-scale projects, consideration is given to the State’s total funding plan to expedite the completion of the project.
4. Leveraging of private or other public funding – Because the annual requests for funding far exceed the available IBRD funds, commitment of other funding sources to complement the requested IBRD funding is also a consideration.

SOLICITATION PROCEDURE:

Each year, a memorandum is sent from the FHWA Headquarters Office of Bridge Technology to the FHWA Division Offices requesting the submission of candidate projects for a given fiscal year’s funding. This solicitation is also published on the IBRD Web site at www.fhwa.dot.gov/bridge/ibrd/. The State DOTs coordinate with local and Federal agencies, universities and colleges, private sector entities, and nonprofit organizations within their respective States in order to develop viable candidate projects. The State DOTs submit the candidate applications to the FHWA division offices. After review and consultation with the DOT, the division office submits the **acceptable candidate** projects **ONLINE** at www.fhwa.dot.gov/bridge/ibrd/application/. The candidate project applications are due on or before August 15, 2008.

The candidate project applications are reviewed and evaluated by an IBRD selection panel comprised of representatives from the FHWA Office of Bridge Technology, the FHWA Office of Infrastructure R&D, and Resource Center. After the initial selection, an allocation plan is prepared for presentation of the candidate projects to the Federal Highway Administrator, for the final selection of projects for funding.

SUBMISSION REQUIREMENTS:

State DOTs submit applications for funding under this program. A prescribed format for a project submission is provided in the format of a project application form, and the following information should be included to properly evaluate the candidate projects. Those applications that do not include this information will be considered incomplete and will be rejected.

- **State** in which the project is located;
- **Ranking** of the project as determined by the State DOT, if more than one project is submitted;
- **County** in which the project is located;
- **Congressional District** in which the project is located;
- **Name of Congressional Representative** as of the date of application in whose district the project is located;
- **Structure Name & Location** – Provide the bridge name (if appropriate) and describe the specific location of the project, including route number/name and mileposts (if applicable), and feature(s) crossed by the bridge;
- **Structure Description** – Provide a description of the structure including type (e.g., continuous prestressed concrete box girder), number of spans, total length, and total width (out to out);
- **Innovation** – Specify the innovation (e.g., SCC, crack free decks, ASR prevention and mitigation, deep foundation techniques, rapid method of QC/QA for foundations and walls, techniques to mitigate stream instability and scour, and /or investigation of bridges with unknown foundations.) that is being used in the project;
- **Proposed Work** – Describe the specific application of the innovation proposed in this particular request, and whether this is a complete project or part of a larger project;
- **Program Goals** – The State’s submission should show how the application of the innovation would meet one or more of the IBRD program goals;
- **Letting Date** – The proposed letting date for the main project should be specified, in which the proposed candidate is a part;

- **Estimated Costs** – Provide the estimated cost of the project as follows: cost of the entire project; cost of the innovative portion of the projects, as well as preliminary engineering costs associated with the innovative portion of the project; and the cost of proposed activities to monitor and document the performance of the innovative application;
- **Amount of Federal IBRD Funds Requested** – Indicate the amount of Federal IBRD funds being requested; and
- **Commitment of Other Funds** – Indicate the amounts and sources of any private or other public funding being provided as the IBRD part of this project. Only indicate those amounts of funding having documented commitments. The submission must include written confirmation of these commitments from the entity controlling the funds.

Note: Additional information on project applications can be submitted through FHWA Division Office by FedEx mail, if needed.

APPLICATION GUIDANCE:

- **Priority ranking** – Each State, in cooperation with the FHWA division office, is requested to prioritize their candidate projects.
- **Funding for repeated applications** – The States are encouraged not to submit candidate projects, which essentially duplicate a previous project using the same material in the same type of application if that original project was funded with IBRD/IBRD funds.
- **High cost projects** - Subject to special considerations, high cost projects may be funded at less than 100% of a State's requested amount. In FY 2009, the threshold amount will depend on the total number of eligible project/s submitted as well as on the total amount of funds requested.

DECISION PROCESS FOR FUNDING:

Projects are to be screened for eligibility first by the FHWA division office and then evaluated by the Headquarters IBRD selection panel. The States are expected to build the projects for which IBRD funds are awarded.

STATE DEPARTMENT OF TRANSPORTATION'S RESPONSIBILITIES:

- Coordinate with State, local, and Federal agencies, universities and colleges, private sector entities and nonprofit organizations within the State to develop viable candidate projects;

- Ensure that the applications for candidate projects meet the submission requirements;
- Establish priorities for other candidate projects; and
- Submit completed applications to the local FHWA division office in a timely manner so that the submission deadline can be met.

FHWA DIVISION OFFICE RESPONSIBILITIES:

- Provide the solicitation memorandum and the program information to the State DOTs;
- Request candidate projects be submitted by the State to the FHWA division office in time to meet the submission deadline established in the solicitation;
- Help applicants complete information required in the application form;
- Review and prioritize all candidate applications submitted by the State prior to sending them to the FHWA Headquarters to ensure that they are complete and meet the submission requirements;
- Submit the candidate applications to FHWA Headquarters by the established submission deadline. Submission of these applications shall be **by ONLINE** submission only.
- Record required application data in the IBRD online database via the IBRD Web site at www.fhwa.dot.gov/bridge/ibrd/application/

FHWA HEADQUARTERS PROGRAM OFFICE RESPONSIBILITIES:

- Request candidates from the States through the annual solicitation memorandum;
- Review candidate project submissions and compile program and project information for preparation of the allocation plan;
- Submit the allocation plan to the Federal Highway Administrator for approving final project selection; and
- Allocate funds for the selected projects.

FHWA HEADQUARTERS PROGRAM OFFICE CONTACT:

Raj Ailaney, P.E.
Senior Bridge Engineer – Planning and Contracts
Office of Bridge Technology (HIBT-1)
Email: Raj.Ailaney@dot.gov
Phone: (202) 366-6749 Fax: (202) 366-3077

ATTACHMENT No. 2

FY2009 APPLICATION

For

INNOVATIVE BRIDGE RESEARCH AND DEPLOYMENT PROGRAM

State _____

State's Priority Ranking: # _____ of _____

Project type (new construction, replacement, rehabilitation, or repair) _____

NBI structure number _____ County _____

Congressional District _____

Name of Congressional Representative _____

Structure Name and/or Identifying Description (e.g., Number/Name of Route on the Bridge and Feature Crossed) _____

Structure description (e.g., bridge type, number of spans, length, width, material)

Innovative designs, materials and construction methods (describe the designs, materials, and/or construction methods; and how they are used and how the project meets one or more of the program goals). Each application (proposal) shall include and address the following items:

1. Project Name:
2. Project classification/technology: such as, SCC, SCC/HPC, Geotechnology, Hydraulics/Scour etc.
3. Project Summary:
4. Project Description:
 - a. Describe designs, materials and construction methods;
 - b. Describe how it is used and how the projects meet one or more of the program goals including a statement on safety and congestion benefits (**also please see the cover memorandum for details**); and
 - c. Technical merits (technical details, quality of innovation, technically sound, cost effective, likelihood of having a lasting impact on the State, and likelihood of having a national lasting impact.) **Note:** Please limit the narrative (proposal) on this section to 2 pages.

Schedule for start of work (month/year): _____

Cost Estimates:

Total project cost:	P
Cost of “innovative material” portion of the construction	A
Preliminary engineering cost, if requested	B
Cost of innovative material performance evaluation (e.g., for a 2-year post-construction period)	C
PE costs + construction costs + evaluation costs = (A + B + C)	T

Total Federal Program Funds Requested _____

Commitment of Other Funds _____

State Department of Transportation Contact Person

Name: _____
Title: _____
Agency: _____
Ph: _____
Fax: _____
E-mail: _____

Local Agency Contact Person (if applicable):

Name: _____
Title: _____
Agency: _____
Ph: _____
Fax: _____
E-mail: _____

FHWA Division Office Contact Person:

Name: _____
Title: _____
Agency: _____
Ph: _____
Fax: _____
E-mail: _____