

## INVITING EXPRESSION OF INTEREST

The Indian Road Congress (IRC) published the IRC:112(2011) Code of Practice for Concrete Bridges (Limit State method). Thereafter IRC, published IRC: SP:105-2015, which is an explanatory handbook to this code (IRC:112) (including worked out Examples) for explaining its clauses and provisions to practicing bridge Engineers. Subsequent to the publication of IRC:112-2011, several amendments and erratas were added in code IRC:112, which were published in Indian Highways spread over last 8 years. Many new clauses were also introduced in this code. The impact of these changes in the main code need to be incorporated in the explanatory handbook (IRC:SP:105), so that the guideline can be used by the practicing engineers. Therefore, it has been decided by IRC to engage a Consultant for carrying out the work of preparation of first revised edition of IRC: SP:105-2015.

Indian Roads Congress (IRC) invites Expression of Interest (EoI) from Consultants/Individuals who are interested in taking up the work of Revision of IRC:SP:105-2015 titled “Explanatory Hand Book to IRC:112-2011 Code of Practice for Concrete Road Bridges” A copy of Terms of Reference (ToR) is available on IRC Website [www.irc.nic.in](http://www.irc.nic.in). Please submit your proposals in the prescribed format upto 30<sup>th</sup> March, 2020.

**Terms of Reference for Engagement of Consultants for Revision of  
IRC:SP:105-2015 titled “Explanatory Hand Book to IRC:112-2011  
Code of Practice for Concrete Road Bridges”**

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## **1.0 INTRODUCTION**

- 1.1 The Indian Road Congress (IRC) published the IRC:112(2011) Code of Practice for Concrete Bridges (Limit State method), which was prepared by B-4 Committee (Plain, Reinforced and Prestressed Concrete Committee) and ratified by apex committee of BSS and the IRC council. Thereafter IRC, through the same process, published IRC: SP:105-2015, which is an explanatory handbook to this code (including worked out Examples) for explaining its clauses and provisions to practicing bridge Engineers.

Subsequent to the publication of IRC:112(2011) and IRC:SP:105-2015, several amendments and erratas were added in code IRC:112, which were published in Indian Highways spread over last 8 years. Many new clauses were also introduced in this code. The impact of these changes in the main code need to be incorporated in the explanatory handbook (IRC:SP:105), so that the guideline can be used by the practicing engineers. Therefore, it has been decided by IRC to engage a Consultant for carrying out the work of preparation of first revised edition of IRC: SP:105.

- 1.2 The revised Explanatory Handbook IRC SP:105 will have to go through the following committees / councils of approval from IRC, before being finally published by IRC.
- (i) B-4 Committee (Plain, Reinforced and Prestressed Concrete Committee)
  - (ii) The Bridge Standards and Specifications Committee (BSS)
  - (iii) The Executive Council
  - (iv) The IRC Council

## **2.0 OBJECTIVE**

The objective of the proposed consultancy is to thoroughly review and revise the current document of IRC SP:105, to cover all general corrections that are necessary and to include the erratas, amendments and new clauses introduced in IRC:112 after its publication in 2011 till date. The intent is to revise the handbook not only to incorporate the changes brought in the main code subsequent to publication of the handbook, but also to generally improve the sections such that it easy for the user to interpret the clauses and apply them correctly in actual practice.

## **3.0 SCOPE OF WORK**

- 3.1 The scope of work shall include:

- a) Review of IRC SP:105 (2015) and identify the Sections and Sub-sections which needs modification/improvement..
- b) Study of the various amendments and new clauses to IRC 112 after its publication till date. Finalization of explanatory notes on various clauses of the IRC 112 in approved format, in consultation with B4 Committee.
- c) Attending meetings of the B-4 Committee or other Sub-Committees of the IRC as and when required for interaction with respective Committee Members.
- d) Carrying out modifications in the draft Revision of IRC:SP:105 by incorporating the comments/inputs of the B-4 Committee and apex committees of BSS and Council
- e) Submission of the final draft of Revised Explanatory Handbook IRC: SP: 2015 incorporating all comments complete in all respects in soft and hard copies for publication by the Indian Roads Congress. Scope also include proof editing of the draft code, published by IRC secretariat, before final publication of the same.

#### **4.0 METHODOLOGY**

- a) The team of Consultant shall be required to interact regularly with B-4 Committee of IRC for drafting the document.
- b) The team shall furnish the concepts to be adopted for preparation/revision of explanatory handbook of each section of IRC 112 and the same shall be principally accepted by the B-4 Committee, before finalization.
- c) The Team Leader/experts of the Bidders will maintain close liaison with the Convenor of B-4 Committee at each stage of the assignment, provide any clarification and carry out modifications as suggested.
- d) The Bidder shall attend the meetings convened by IRC in connection with the work and carryout any number of modifications/revisions as may be required.
- e) If any change in methodology is felt to be necessary during the course of drafting of the explanatory handbook, the same shall be brought to the notice and got approved by the B-4 Committee before being adopted by the Bidder.
- f) The selected Bidder will proceed with the assignment in a systematic manner and submission shall be in sequence and stages as indicated in the offer as agreed to by the IRC. The IRC shall be kept informed regularly on the progress made by the Bidder.
- g) The Bidder shall be responsible for timely submission of the draft Revision of Explanatory Handbook IRC: SP: 105 and getting the same evaluated in a phased manner within the scheduled time. The Bidder will work in close liaison with the B-4 Committee and other technical Committees, as per the direction of IRC, so that the work is completed as per schedule at each stage. The Team leader of the Bidder shall attend all meetings convened by the Convenor, B-4 Committee for considering the

drafts submitted by the Bidder. The Team Leader may also require attending other meetings convened by other technical Committees for the finalization of draft Revision of Explanatory Handbook.

- h) In case of any disagreement between the Bidder and B-4 Committee on any technical matter, the decision by the Convenor B-4 Committee shall be final and binding on the Bidder.

## 5.0 STAGES OF CONSULTANCY WORK AND TIME SCHEDULE

- 5.1 A total time of 12 months is envisaged for the services, excluding the approval time. The Bidder shall carry out the work in the following stages and as per time schedule mentioned below.

S. No.	Stage of work	Activities to be completed	Time for Completion of each stage.
1	Stage-I	Submission of Inception Report highlighting general approach, broad changes in each section of IRC: SP:105, in consultation with B-4 Committee along with the schedule program for drafting the revised document of IRC:SP:105 section wise. (i) Preliminary Report (ii) Final report incorporating all suggestions of B-4 committee.	2 weeks 2 weeks
2	Stage-IIA	Submission of draft document based on regular interaction and approval of B-4 Committee	6 months
3	Stage IIB	Incorporating comments of B-4 Committee and submission of draft document for approval of BSS Committee	2 weeks
4	Stage -IV	Incorporating comments of BSS committee and submission of draft document for approval of EC and IRC Council	2 weeks
5	Stage-V	Incorporating comments of IRC Council and Submission of final document complete in all respects	1 month

**All reports and documents shall be submitted in 3 hard copies along with editable soft copy in MS word format including Auto cad files.**

- 5.2 The above time schedule is based on the assumption that the approval/comments from various Committees of the IRC would be forthcoming within 30 days of the submission of the draft document to them. In case the approvals are delayed at any stage, the Bidder would be entitled to get extra time on this account without any additional cost.

## 6.0 GENERAL REQUIREMENTS

6.1 All reports including the draft and final copies of the explanatory handbook and documents generated in the course of the services shall be confidential and shall be the absolute property of IRC. The Bidder shall deliver all the documents to IRC upon completion of this assignment.

6.2 The Bidder shall not use the draft commentary or any other documents related to this assignment for purposes unrelated to this work or in any technical presentation or paper without prior written approval of IRC.

6.3 The Bidder will have no right to sell the draft commentary or other related documents or make any commercial transactions relating to the same.

6.4 The Bidder shall not issue any comments /clarifications on the draft documents to the general public without the consent of IRC.

## **7.0 CONTRACT AGREEMENT**

7.1 The selected Bidder will have to sign a Contract Agreement with the **IRC** on award of the work within 30 days of the issue of letter of acceptance by the IRC.

7.2 The selected Bidder should be in a position to commence services as soon as possible but not later than 30 days from the date of issue of letter of acceptance.

7.3 For any delay in submission of the draft documents beyond the specified period for reasons not attributable to the Bidder, he will be entitled to extension of time at no extra cost. The decision of IRC in this regard will be final and binding.

7.4 The successful Bidder will be required to provide a performance security in the form of a Bank Guarantee from a scheduled Bank for an amount of Rs. 5.0 Lacs (Rupees Five Lacs only), valid for a period of 12 months from the date of commencement of services, which shall be extended in case the services are not completed within this stipulated time. This bank guarantee will be released by IRC within 90 days of successful completion of the services.

7.5 The performance security is liable to be forfeited and the contract is liable to be terminated under the following conditions:

- (i) The Bidders fails to mobilize and commence the services according to his programme and proposed manning schedule within 30 days of issue of letter of acceptance by IRC.
- (ii) If the Bidder delays the completion of work or task beyond the prescribed period of completion including extension time, if any, approved by the IRC.

7.6 The assignment shall be carried out to the full satisfaction of B-4 Committee and acceptance of the final draft of Revision of Explanatory Handbook IRC SP:105 will be entirely dependent on the approval of that Committee.

## 8.0 PAYMENT SCHEDULE:

The selected Bidder shall be paid the fee in stages based on the completion of various stages of work described in Para 5 above, as mentioned below unless otherwise agreed during negotiations and indicated in the acceptance letter.

### PAYMENT SCHEDULE

S.NO.	On Completion of Stage of Work (Refer Clause 5)	Cumulative payment (%)
1.	Stage-1: Submission of Inception Report highlighting general approach, design philosophy, based on the format and contents of various Sections of IRC 112 and IRC: SP:105, in consultation with B-4 Committee along with the schedule for drafting the revised document of IRC:SP:105 section wise.	
	(i) Preliminary Report	5%
	(ii) Final Report incorporating all suggestions of B-4 Committee	10%
2	Stage 2: Approval of draft document by B-4 Committee	80%
6	Stage 3: Approval of document by BSS Committee	90%
7	Stage 5: Approval of the document by IRC Council and publication of the revised explanatory handbook.	100%

## 9.0 REQUIREMENT OF KEY PROFESSIONALS

- 9.1 The Bidder shall appoint experts in the field as Key Professionals with defined tasks. The key professionals shall be the persons of repute, keeping in view the expected level of knowledge required for the work which involves production of a document of national/international standard. The Bidder should furnish the designations, address, date of birth, contact details, academic qualifications, details of experience, and willingness to work, of the key personnel who will be actually involved in the revision of Explanatory Handbook IRC:SP:105. The personnel to be deployed shall have at least 15 years of professional experience in the field of bridge engineering. Key Professionals should have a post graduate degree in Structural Engineering. Publication of technical papers in National/International Journal will be considered as an added qualification. The personnel to be deployed should form a team with suitable blend of theoretical knowledge and in-depth practical experience of bridge design and construction.
- 9.2 The experts to be deployed by the Bidder must have the capability and preferably previous experience of undertaking similar nature of works. For this purpose, the Bidder may have a joint venture with other bidders, or may hire suitable personnel with their consent (consent letter to be enclosed with the proposal) to augment their capability. The Key Professional, proposed to be deployed should have thorough knowledge of various IRC codes, Manuals, Special Publications, AASHTO LRFD and Eurocodes, Specifications of Ministry of Road Transport & Highways, the Guidelines for Road and Bridge works.

- 9.3 The Bidder shall have their own estimate of the man month requirements of different experts along with the list of experts and their deployment schedule. Bidder shall also make his own assessment about the requirement of sub-professionals. A minimum estimate of man-months of key professionals, as envisaged is as given below :

<b>S. NO.</b>	<b>KEY PROFESSIONAL</b>	<b>MINIMUM MAN-MONTH ENVISAGED</b>
1.	Team Leader	8.0
2	Senior Bridge Engineer - 1	6.0
6	Senior Bridge Engineer - 2	6.0
7	ACAD MANAGER	2.0

- 9.4 The Services shall be carried out by the selected Bidder only through Key Professionals specified in the technical proposal and request for any change in key professionals will not be entertained after the award of work except for the reasons beyond the control of the Bidder, provided that the proposed replacement is equivalent or higher qualifications and prior approval of IRC is obtained.

## **10.0 PREPARATION OF PROPOSAL**

The Bidder shall submit his bid in two covers, namely, Technical proposal and Financial Proposal. The proposal must be in English Language.

### **10.1 Technical Proposal:**

The bidders having expertise in the field may jointly submit the offer for the work. In such case, one bidder (Lead Partner) shall co-ordinate the work on behalf of the Joint Venture and a detailed MOU between the partners of such joint venture/consortium stating inter-relationship and division of work between the associates should be submitted along with the technical proposal. A Power of Attorney signed by all parties must accompany the proposal authorizing the lead partner to submit and negotiate the proposal on their behalf. However, each JV partner shall be responsible to the IRC in respect of the entire job. Moreover, for the purpose of operation of contract, each bidder will be responsible for the obligations specified in MOU

- 10.2 A partner to a particular JV or associates to consultancy group cannot be partner/associate to any other joint venture /consultancy group while bidding for this work.
- 10.3 Experience of the key experts will be given substantial weightage in the evaluation of technical proposal.
- 10.4 Financial proposals of only those bidders whose technical proposals are approved will be opened and final award will be decided by the IRC on the basis as given in clause 11.
- 10.5 The technical proposal must provide the following information but not limited to the formats attached in Appendix-I.
- (i) Brief description of the Bidder's organization as per Annexure 'A'.

- (ii) The composition of the proposed team, the task that would be assigned to each number and their deployment schedule as per Annexure 'B'.
- (iii) Curricula Vitae (CV) signed by the proposed Key Professional staff. The information should include qualifications, number of technical publication, responsibilities held in various assignments (similar information in respect of the key professionals of the Associates/Sub Consultants also to be provided) as per Annexure C.
- (iv) Estimate of total time effort (Person x Months) provided for the services supported by bar chart Diagram showing the time proposed for each professional staff as per Annexure D.
- (v) Any comments/suggestions in Terms of Reference and a description of the methodology (Work plan) which the Bidders proposes to execute the services listed bar chart of activities.
- (vi) The Bidder comments, if any, on the data, services and facilities to be provided by the client and indicated in the TOR,

#### 10.6 Financial Proposal:

The financial proposal should give the consultancy fee for the Assignment taking into account tax liability and cost of insurances, if any. GST will be paid extra as per the prevailing norms. The quoted fee of the Bidders shall cover all the relevant expenses including:

- (a) Technical efforts/R&D inputs/ collection of data and so on
- (b) Secretarial work including paper and stationery, preparation of graphs, photocopy, computer assistance, printing, correspondence, postage/mail, fax/telephone, internet
- (c) All expenses on TA /DA for attending IRC meeting
- (d) Contingencies

10.7 The validity of the offer should be for 120 days from date of opening of the bid.

10.8 IRC reserves right to reject any or all offers /quotations without assigning any reason, whatsoever, and the Bidder will not be entitled for any compensation of reimbursement of the cost of preparation and submission of bid.

#### 10.9 Submission of Proposal:

The technical bid and financial proposal must be submitted in separate envelopes with "Technical Bid" or "Financial Bid" written on envelope to the Secretary General of IRC . Both these envelopes should be placed in a separate envelope with the forwarding letter and must be delivered on or before the time stipulated in the ToR. Name of work "Engagement of Consultant for preparation of First Revision of Explanatory Handbook IRC:SP:105". The Technical Bid shall be opened on the same date at --- PM in the presence of bidders. The financial bid of only successful bidders shall be opened on a date which will be intimated to the qualified bidders by IRC.

### 11.0 EVALUATION OF BIDS:

11.1 A two stage procedure will be adopted in evaluating the proposal; (i) technical evaluation which will be carried out prior to the opening in financial proposal and (ii) Financial

evaluation. The bidders will be ranked using the combined technical/financial scores as indicated below:

11.2 The technical bids will be evaluated as per broad criteria given below:

(i) Bidder's Resources & Annual turnover in last 10 years	10Marks
(ii) Approach and Methodology (*)	10 Marks
(iii)Qualification and relevant experience of Key Professional	80Marks

(\*) Bidders may be asked to give a presentation regarding Approach and Methodology of carrying out the assignment, before opening of financial Bids. If so required by IRC

11.3 The work involves preparation of Revised Explanatory Handbook IRC: SP:105 by incorporating the commentary and explanation of various amendments including the amendments and new clauses introduced in IRC:112(2011) that may be published during the course of this contract. Key Professionals should have proven in-depth knowledge in the field of bridge design. The professionals as well as sub-professionals must have sufficient experience and knowledge in the actual design of various components of bridge. Higher qualification in bridge engineering including some experience in construction is desirable. This aspect will be considered in the evaluation of technical proposals. Based on the above points, the following minimum experience and technical qualifications are prescribed for different personnel.

(a) Team Leader (Sr. Bridge Engineer): He should be at least Post Graduate in I/Structural Engineering with minimum 15 years of experience in design/ of bridges.

(b) Sub-professionals Should be at least Post Graduate in I/Structural Engineering with minimum 10 Years of experience in design/ of bridges.

11.4 The proposal will be examined on the basis of criteria broadly indicated above. The minimum score of 75% for technical proposal will be considered as the qualifying mark. The financial proposal of only those Bidders who have qualified technically will be opened.

11.5 IRC reserves the right to award to or reject any or all offers without assigning any reason, whatsoever, and no Bidder will be entitled for any compensation or reimbursement of cost for preparation and submission of the bid.

11.6 The Evaluation Committee will give marks for the financial proposals in the following manner:

(i) The lowest financial proposal (FM) amongst the offers will be given a financial score (SF) of 100 pints. The financial score of other proposals will be computed as follows:

$SF = 100 \times FM / F$  ( where F is the amount quoted by a Bidder)

Proposal will be finally ranked according to their Combined Technical Score (ST)and Financial Score (SF) as indicated below:

$S = ST \times 0.9 + SF \times 0.1$

The assignment will be awarded to the bidder who scores the maximum marks.

11.7 Negotiations:

Negotiations may be carried out with the bidder who has the combined highest marks in Technical & Financial Bid. After Negotiations, the work will be awarded to the successful Bidder and an agreement will be signed with him.

12.0 Any other additional information can be obtained from Secretary General, Indian Roads Congress, Kamakoti Marg, Sector VI, R.K. Puram, New Delhi-110022 ( Telephone 26185303, Fax:26183699)

(Secretary General)  
Indian Roads Congress

# **APPENDIX- 1**

## **Annexure-A**

### **BRIEF DESCRIPTION OF BIDDERS ORGANISATION**

1. Name & Address of the applicant.
2. Telephone No. /Telex No. /Fax No.
3. Legal status of the applicant (attach copies of original document defining the legal status).
  - An individual
  - An academic Institution
  - A professional association
  - A proprietary Consultancy firm
  - A firm in partnership
  - A limited Company or Corporation
  - Joint Venture/Consortium
4. Name and Titles of Directors & Officers with designations to be concerned with this work.
5. Designation of individuals authorized to act for the organization.
6. Has the applicant or any constituent partner in case of partnership firm, ever abandoned the awarded work of similar nature before its completion? If so, give name of the project and reasons for abandonment.
7. Has the applicant or any constituent partner in case of partnership firm, ever been Debarred/black listed or tendering in any organization at any time? If so, give details.
8. Has the applicant or any constituent partner in case of partnership firm, ever been convicted by a court of law? If so, give details.
9. Has the applicant or any of its constituent partner in case of partnership firm, received any National / International awards for projects done by the bidder.
10. List of permanent employees of the bidder, who are members of Technical Committees of Indian Roads Congress / Bureau of Indian Standards at present.
11. In which field of Civil Engineering construction the applicant has specialization and interest?
12. Any other information considered necessary but not included above.

**APPENDIX- 1**

**Annexure-B**

**DETAILS OF KEY PROFESSIONALS TO BE EMPLOYED FOR THE WORK**

Sl. No.	Designation	*Name	Qualification	Professional experience and nature of work carried out, which best illustrates his/her suitability for the post	Remarks
1	2	3	4	5	6

**(SIGNATURE OF APPLICANT)**

# **APPENDIX- 1**

## **Annexure-C**

### **Curriculum Vitae of “Key Personnel”**

**Important:**

**The applicants must fill information in each column without fail.**

**In case of nil information, NIL should be filled in.**

**Additional sheets could be attached, whenever space provided is not enough.**

PART-1	Key Personnel	
1.	Name	
2.	Date of Birth	
3.	Qualifications B.Tech/ M.Tech/ other	Subject, year of acquisition
4.	Specialization	
5.	Length of General Professional Experience	Details of companies served. / Name of Projects desired/executed/investigated, duration and nature of experience to be given in Chronological Sequence starting from latest to the oldest assignment.
6.	Membership of Technical Institutions / IRC Committees	
7.	Technical Publications	

**Certificate:**

**The information furnished above is true to my knowledge and belief. I am aware that any misinformation or its concealment, which forms the basis of pre-qualification, is liable for any action against the bidder, which would include termination of the agreement and/or blacklisting.**

\_\_\_\_\_  
**(Name and Signature of the Key Personnel)**

\_\_\_\_\_  
**(Name & Signature of authorized signatory of the consultancy firm with seal)**

# **APPENDIX- 1**

## **Annexure-D**

### **WORK PROGRAMME AND TIME SCHEDULE FOR KEY PERSONNEL**

Sl. NO.	Name of Key Personnel	Position in Project	Months / Weeks (in the form of bar chart)	Total
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The material so prepared shall become the property of the Indian Roads Congress. However the IRC agrees to acknowledge the name of the Consultant at an appropriate location in the document.

- i) The cost for attending such meetings towards this shall be in-built in the quotation and no extra fee will be payable over and above the fee as per the agreement.
- j) The IRC shall provide the text for the introduction in the document.
- k) The Consultants shall supply three hardcopies of the final draft along with editable soft copy in MS Word.