

**Terms of Reference for
Engagement of Consultant for
Preparation of
Commentary and Explanatory Handbook for
the Unified Concrete Code (IRC--)**

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Commentary and Explanatory Handbook for the Unified Concrete Code.

1.0 INTRODUCTION

- 1.1 The Indian Roads Congress (IRC) is in the process of finalisation of the Code of Practice for Concrete Bridges (Limit State Method) through its Reinforced, Prestressed and Composite Concrete Committee designated as the B-4 Committee. As the new code will be a complete change from the present codes based on working stress method, it has been decided that it will require a Commentary and Explanatory Handbook (including worked out examples) for explaining its clauses and provisions to practicing bridge engineers. It has also been decided to engage a reputed consultant for carrying out the work of preparation of the Commentary.
- 1.2 The draft of the Commentary will have to go through the following channels of approval from various bodies of the IRC, before being finally published as a document of the Indian Roads Congress.
- (i) the Concrete, Prestressed and Composite Concrete Committee – the B4 Committee
 - (ii) the Bridges Standards and Specifications Committee (BSS).
 - (iii) the Executive Committee (EC)
 - (iv) the Council.

2.0 OBJECTIVE

The objective of the proposed consultancy is to develop a comprehensive document which will explain the philosophy and the thought process that went into the drafting of each clause of the Limit State Code so as to make it easy for the user to interpret the clauses and apply them correctly in actual practice. .

3.0 SCOPE OF WORK

The scope of work shall include:

- a) Intensive study of the contents of the Limit State Code as already finalized by the B-4 Committee (Content Table of the Draft Code enclosed as Appendix-1) so as to identify modifications/improvements if any required, and put up the same for approval of the B-4 Committee.
- b) Finalization of explanatory notes on various clauses of the Code in approved format in consultation with B-4 Committee.
- c) Attending meetings of the B-4 Committee or other Sub-Committees of the IRC as and when required for interaction with the Committee members.
- d) Carrying out modifications in the draft Commentary for incorporating the comments / inputs of the B-4 Committee.
- e) Carrying out modifications in the draft Commentary for incorporating the comments / inputs of the BSS Committee.

- f) Carrying out modifications in the draft Commentary for incorporating the comments / inputs of the Executive Committee.
- g) Submission of the final draft Commentary incorporating all comments complete in all respects for publication by the Indian Roads Congress.

4.0 METHODOLOGY

- a) The Consultant will have to evolve and adopt an interactive approach. The Consultant shall be required to interact with various Committees of the IRC for fine-tuning of the methodology to be adopted by him.
- b) The Consultant shall furnish the approach paper and concepts to be adopted for preparation of Commentary for each Section of the Code and the same shall be got approved by the B-4 Committee, before finalization.
- c) The Team Leader/experts of the Consultant 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 Consultant shall attend the meetings convened by IRC in connection with the work and carry out 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 Commentary, the same shall be brought to the notice of and got approved by the B-4 Committee before being adopted by the Consultant.
- f) The selected Consultant will proceed with the assignment in a systematic manner and submission shall be in sequence and stages as indicated in the offer and as agreed to by the IRC. The IRC shall be kept informed regularly on the progress made by the Consultant.
- g) The Consultant shall be responsible for timely submission of the draft code to the B-4 Committee and getting the same evaluated in a phased manner within the scheduled time. The selected Consultant will work in close liaison with the B-4 Committee and other technical Committees, as per the direction of IRC, so that work is completed as per schedule at each stage. The Team Leader of the Consultant shall attend all meetings convened by the Convenor, B-4 Committee for considering the drafts submitted by the Consultant. The Team Leader may also be required to attend other meetings convened by other technical Committees for the finalization of the draft code.
- h) In case of any disagreement between the Consultant and B-4 Committee on any technical matter, the decision by the Convenor, B-4 Committee shall be final and binding on the Consultant.

5.0 STAGES OF CONSULTANCY WORK AND TIME SCHEDULE

5.1 A total time of 14 months is envisaged for the services. The Consultant 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. (from commencement of services)
1	Stage-I	Submission of Inception Report highlighting general approach, design philosophy based on the format and content of various Sections, in consultation with the B-4 Committee along with the schedule for drafting the document sectionwise. (i) Preliminary Report (ii) Final Report incorporating all suggestions of B-4 Committee	1 Month 1 Month
2	Stage-II	Submission of draft document based on regular interaction and approval of B-4 Committee	6 Months
3	Stage III	Incorporating comments of B-4 Committee and submission of draft document for approval of BSS Committee)	2 Months
4	Stage-IV	Incorporating comments of BSS Committee and submission of draft document for approval of EC and Council of IRC	2 Month
5	Stage-V	Obtaining approval of the Council of the IRC and submission of final document complete in all respects	2 Month

5.2 The above time schedule is based on the assumption that approvals /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 Consultant would be entitled to get appropriate 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 Commentary and the documents generated in the course of the services, shall be confidential and shall be the absolute property of the IRC. The Consultant shall deliver all the documents to the IRC upon completion of this assignment.

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

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

7 CONTRACT AND PERFORMANCE SECURITY

- 7.1 The selected Consultant 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 Consultant should be in a position to commence the 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 Consultant, 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 Consultant will be required to provide a performance security in the form of a Bank Guarantee from a Scheduled Bank for an amount equal to 5% of the Fee valid for a period of 24 months from the date of commencement of the services. 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 also liable to be terminated under the following conditions:
- (i) The Consultant 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 the IRC.
 - (ii) If the Consultant delays the completion of work task beyond the prescribed period of completion including extension of 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 the Commentary will be entirely dependant on the approval of that Committee.

8 PAYMENT SCHEDULE:

The selected Consultant 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 described in para 5	Cumulative payment (%)
1.	Signing of Contract and Commencement of services	5 %
2.	Stage-I: Submission of inception report highlighting general approach, design philosophy based on the format and content of various Sections along with suggested changes, if any, in the format and content, in consultation with the B-4 Committee and programme for drafting of each chapter. (i) Preliminary Report (ii) Final Report incorporating all suggestions of B-4 Committee	NIL 10 %
3.	Obtaining approval of the design philosophy and general approach by the Indian Roads Congress	20 %
4.	Stage-2: Submission of draft Commentary based on regular interaction and broad concurrence of B-4 Committee in three equal instalments of 20%.	80 %
5.	Stage-3: Obtaining approval of the draft Commentary by B-4 Committee and submission of final draft to B-4 Committee for submission to BSS Committee	90 %
6.	Stage-4: Incorporating comments of BSS Committee and submission of final draft Commentary to IRC	95 %
7.	Stage-5: Obtaining approval of the Council of the IRC and submission of final document	100 %

9 REQUIREMENT OF KEY PROFESSIONALS

9.1 The Consultant shall appoint experts in the field as Key Professionals with defined works. The key professionals shall be persons of repute with academic bent of mind, keeping in view the expected level of knowledge required for the work which involves production of a document of national / international standard, to be followed on a countrywide basis. The Consultant should furnish the designations, address, date of birth, telephone nos., academic qualifications, willingness to work etc. of the key personnel who will be actually involved in drafting of the Commentary. The personnel to be deployed shall have at least 15 years of professional experience in the field of bridge engineering. Key personnel should have post graduation degree in civil/structural engineering and should have been a member of any IRC/BIS Committee on bridge related topics for 5 years or more. Publication of technical papers in National / International journals 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 Consultant must have the capability and preferably, previous experience of undertaking similar nature of works. For this purpose, the Consultant may have a joint venture with other firms, or may hire suitable personnel

with their consent (consent letter to be enclosed with the proposal) to augment their capability. The key personnel, proposed to be deployed, should have thorough knowledge of the various IRC Codes, Manuals, Special publications, Specifications of the Ministry of Road Transport & Highways, and Guidelines for bridge works.

- 9.3 The Consultant will be given the freedom to fix the man month requirements of different experts along with the list of experts and their deployment schedule. Consultant shall also make his own assessment about the requirement of sub-professionals.
- 9.4 The services shall be carried out by the selected Consultant only through the key personnel specified in the technical proposal and request for any change in the key personnel will not be entertained after the award of work except for the reasons beyond the control of the Consultant, provided that the proposed replacement is of equivalent or higher qualifications and prior approval of IRC is obtained.

10 PREPARATION OF PROPOSAL

The Consultant shall submit his offer in two covers, namely, Technical Proposal & Financial Proposal. The proposal must be in English language.

10.1 Technical Proposal:

The firms having expertise in the field may jointly submit the offer for the work. In such case, one firm (Lead partner) shall coordinate the work on behalf of the Joint Venture and a detailed Memorandum of Understanding 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 firm will be responsible for the obligations specified in the scope of work.

10.2 A partner to a particular joint venture 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 the technical proposal.

10.4 Financial proposals of only those firms whose technical proposals are approved by the IRC will be opened and the final award will be decided by the IRC on least cost basis.

10.5 The technical proposal must provide the following information using, but not limited to the formats attached in Appendix-II.

- (i) Brief description of the Consultant's organization as per Annexure 'A'.

- (ii) The composition of the proposed team, the task that would be assigned to each member and their deployment schedule as per Annexure 'B'.
- (iii) Curricula Vitae (C.V.) signed by the proposed key professional staff. The information should include qualifications, number of technical publication, responsibilities held in the various assignments (similar information in respect of the key personnel's of the associates/sub Consultants also to be provided) as per Annexure 'C'.
- (iv) Estimates of the total time effort (persons x months) provided for the services supported by bar chart diagrams showing the time proposed for each professional staff as per Annexure 'D'.
- (v) Any comments/suggestions in the Terms of Reference and a description of the methodology (work plan) which the Consultants proposes to execute the services, listed with bar chart of activities.
- (vi) The Consultant 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 fee for the Assignment taking into account the tax liability and cost of insurances, if any.

The quoted fee of the Consultant shall cover all the relevant expenses including;

Technical efforts/R&D inputs/collection of data etc:

Secretarial work including paper and stationery, typing, preparation of graphs, drawings, photographs, photocopy, computer assistance, printing, correspondence, postage/mail, fax/telephone

TA/DA expenses for attending IRC meetings

Out of pocket expenses

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

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

10.9 Submission of Proposal:

The technical and financial proposal must be submitted in separate envelopes with 'Technical Bid' or 'Financial Bid' written on the envelopes. 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 Commentary and Explanatory Handbook for the Limit State Code. The technical bid will be opened on the same day at _____PM in the presence of

bidders. The financial bid of only successful bidders will be opened later on a date which will be intimated to qualified bidders.

11 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 firms will be ranked using the combined technical/financial scores as indicated below:
- 11.2 The technical bids will be evaluated as per the broad criteria given below:
- (i) Firm's Resources & Annual turnovers in last 10 years 10 marks
 - (ii) Approach and methodology 10 marks
 - (iii) Qualification and relevant experience of key personnel 80 marks
- 11.3 The works involves preparaton of Commentary and expalanation of various clauses of the Limit State Code and, therefore for successful completion of job, the key personnel should have proven indepth knowledge and experience in the field of bridge design. The professionals as well as sub-professionals must have sufficient experience and knowledge in actual design of various components of the bridge. Higher qualification in bridge engineering including some experience in construction is desirable. This aspect will be considered in the evaluation of technical proposal. 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 Civil/Structural Engineering with minimum 15 years of experience in design/construction of bridges. He should have been a member of any of the IRC bridge committees.
 - (b) Associates: Should be at least Post Graduate in Civil/Structural Engineering with minimum 10 Years of experience in design / construction of bridges..
- 11.4 The proposal will be examined of the basis of the criteria broadly indicated above. The minimum score of 75% for the technical proposal will be considered as the qualifying mark. The financial proposal of only those Consultants who have qualified technically will be opened.
- 11.5 IRC reserves the right to award or reject any or all offers without assigning any reason, whatsoever, and no Consultant will be entitled for any compensation or reimbursement of cost for the preparation and submission of the bid.
- 11.6 Ranking of the Technical & Financial Proposal:

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

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

$$SF = 100 \times FM/F \text{ (where F is amount of financial proposal of the firms).}$$

Proposals 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 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 Consultant and an agreement will be signed with him.

12. Any other additional information can be obtained from Secretary General, Indian Roads Congress; Kama Koti Marg, Sector –VI, R.K Puram , New Delhi – 110022 (Telephone : 26185303, Fax: 26183669)

PROPOSED CONTENTS FOR Unified Concrete Code

BRIEF DESCRIPTION OF CONSULTANTS 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
 - A proprietary 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 firm.
10. List of permanent employees of the firm, 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-2
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-2
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 firm, 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-2
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.
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