

PUNJAB BARRAGES IMPROVEMENT PHASE –II (PBIP-II)PROJECT

**Prequalification Document for
Procurement of Works of
Rehabilitation and Modernization of Jinnah Barrage**



Issued on: May 2011

Invitation for Prequalification No: JB/PQ-01

Employer: Head PMO for Punjab Barrages Rehabilitation & Modernization Projects

Irrigation and Power Department, Government of Punjab, Lahore

Country: Islamic Republic of Pakistan

Summary Description

This standard procurement document (SPD) consists of the prequalification procedure for procurement of Civil, Mechanical and Electrical Works for Rehabilitation and Modernization of Jinnah Barrage. A brief description of this document is given below:

Prequalification Document for Procurement of Works

PART 1 – PREQUALIFICATION PROCEDURES

Section I. Instructions to Applicants (ITA)

This Section specifies the procedures to be followed by Applicants in the preparation and submission of their Applications for Prequalification (AFPs). Information is also provided on opening and evaluation of AFPs.

Section II. Prequalification Data Sheet (PDS)

This Section consists of provisions that are specific to each prequalification and supplement the information or requirements included in Section I, Instructions to Applicants.

Section III. Qualification Criteria and Requirements

This Section contains the methods, criteria, and requirements to be used to determine how Applicants shall be prequalified and later invited to bid.

Section IV. Application Forms

This Section contains the forms for the Application Submission Form and all the forms required to be submitted with the Application.

Section V. Eligible Countries

This Section states the country eligibility policy of the Bank, and provides lists of ineligible countries

PART 2 – WORKS REQUIREMENTS

Section VI. Scope of Works

This Section includes a summary description, delivery and completion schedules, technical specifications and drawings of the Works subject of this prequalification.

Preface

This Prequalification Document (an update of the September 1999 document) for Procurement of Works (PQD) has been prepared by the World Bank's Procurement Policy and Services Group and is based on the Standard Procurement Document "Prequalification Document for Procurement of Works" issued by the World Bank, dated September 1999, revised March 2000. This PQD reflects the structure and the provisions of the Master Procurement Document "Prequalification Document for Procurement of Works" issued by the Multilateral Development Banks and International Financial Institutions, except where specific considerations of the procurement policies of the World Bank have required a change. This PQD incorporates the new features of the May 2004 Procurement Guidelines.

PART 1 – Prequalification Procedures

Section I. Instructions to Applicants

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Section I. Instructions to Applicants

A. General

1. Scope of Application	1.1 In connection with the Invitation for Prequalification indicated in Section II, Prequalification Data Sheet (PDS), the Employer, as defined in the PDS, issues this Prequalification Document (PQD) to applicants interested in bidding for the works described in Section VI, Scope of Works. The number of contracts and the name and identification of each contract, and the International Competitive Bidding (ICB) number corresponding to this prequalification, are provided in the PDS.
2. Source of Funds	2.1 The Borrower or Recipient (hereinafter called “Borrower”) indicated in the PDS has applied for or received financing (hereinafter called “funds”) from the International Bank for Reconstruction and Development or the International Development Association (hereinafter called “the Bank”) towards the cost of the project named in the PDS. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) resulting from the bidding for which this prequalification is conducted.
3. Fraud and Corruption	3.1 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), as well as bidders, suppliers, and contractors and their subcontractors under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts.¹ In pursuance of this policy, the Bank: (a) defines, for the purposes of this provision, the terms set forth below as follows: (i) “corrupt practice”² is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party; (ii) “fraudulent practice”³ is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or

¹ In this context, any action taken by a bidder, supplier, contractor, or a sub-contractor to influence the procurement process or contract execution for undue advantage is improper.

² “another party” refers to a public official acting in relation to the procurement process or contract execution]. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions.

³ a “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

	other benefit or to avoid an obligation; (iii) “collusive practice”⁴ is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party; (iv) “coercive practice”⁵ is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party; (v) "obstructive practice" is (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or (bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under sub-clause 3.1 (e) below. (b) will reject a proposal for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question; (c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to address such practices when they occur; (d) will sanction a firm or individual, including declaring ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a Bank-financed contract; and
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⁴ “parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels.

⁵ a “party” refers to a participant in the procurement process or contract execution.

	(e) will have the right to require that a provision be included in bidding documents and in contracts financed by a Bank loan, requiring bidders, suppliers, and contractors and their sub-contractors to permit the Bank to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by the Bank.
4. Eligible Applicants	4.1 An Applicant shall be a private, public or government owned legal entity, subject to ITA 4.8, or any combination of them in the form of association(s) including Joint Venture (JV) with the formal intent, as evidenced by a letter of intent), to enter into an agreement or under an existing agreement. In the case of a JV, unless otherwise specified in the PDS, (i) all parties shall be jointly and severally liable, and (ii) there shall be no limit on the number of partners.
	4.2 The eligibility criteria listed in this Clause 4 shall apply to the Applicant, including the parties constituting the Applicant, i.e., its proposed partners, subcontractors or suppliers for any part of the Contract including related services.
	4.3 An Applicant may have the nationality of any country, subject to the restrictions pursuant to sub clause 4.11. An Applicant shall be deemed to have the nationality of a country if the Applicant is a citizen, or is constituted, incorporated or registered and operates in conformity with the provisions of the laws of that country, as evidenced by its Articles of Incorporation or Documents of Constitution, and its Registration Documents.
	4.4 Applicants and all parties constituting the Applicant shall not have a conflict of interest. Applicants shall be considered to have a conflict of interest, if they participated as a consultant in the preparation of the design or technical specifications of the Works that are the subject of this prequalification. Where a firm, or a firm from the same economic or financial group, in addition to consulting, also has the capability to manufacture or supply goods or to construct works, that firm, or a firm from the same economic or financial group, cannot normally be a supplier of goods or works, if it provided consulting services for the contract corresponding to this prequalification, unless it can be demonstrated that there is not a significant degree of common ownership, influence or control.
	4.5 An Applicant shall submit only one application in the same Prequalification process, either individually as an Applicant or as a partner of a joint venture. No Applicant can be a subcontractor while submitting an application individually or as a partner of a joint venture in the same Prequalification process. A Subcontractor in any application may participate in more than one application, but only in that capacity. An Applicant who submits, or participates in, more than one application

	will cause all the applications in which the Applicant has participated to be disqualified.
	4.6 A firm that has been determined to be ineligible by the Bank in relation to the Bank Guidelines On Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants shall be not be eligible to be awarded a contract.
	4.7 An Applicant that is under a declaration of ineligibility by the Bank in accordance with ITA 3, at the date of submission of the application or thereafter, shall be disqualified. The Bank maintains a list of firms and individuals that have been sanctioned by the Bank pursuant to Sub-Clause 3.1 (c) and are not eligible to participate in procurement financed by the Bank. The list is regularly updated; its address is specified in the PDS.
	4.8 Government-owned entities in the Employer’s Country shall be eligible only if they can establish that they are legally and financially autonomous, and operate under commercial law, and that they are not dependent agencies of the Employer.
	4.9 Applicants shall not be under execution of a Bid–Securing Declaration in the Employer’s Country.
	4.10 Applicants and all parties constituting the Applicant shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.
	4.11 Applicants from an eligible country may be excluded if, (a) as a matter of law or official regulations the Borrower’s country prohibits commercial relations with that country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of goods or the contracting of works required; or (b) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower’s country prohibits any import of goods or contracting of works or services from that country, or any payments to persons or entities in that country. Section VI, Eligible countries provide lists of ineligible countries pursuant to this Sub Clause 4.11.
5. Eligible Goods and Related Services	5.1 All goods and related services to be supplied under the Contract to be financed by the Bank shall have as their origin in any country in accordance with Section V, Eligible Countries.
	B. Contents of the Prequalification Document
6. Sections of Prequalification Document	6.1 The document for the prequalification of Applicants (hereinafter - “prequalification document”) consists of parts 1 and 2 which comprise all the sections indicated below, and should be read in conjunction with any Addendum issued in accordance with ITA 8.
	PART 1 Prequalification Procedures

	• Section I. Instructions to Applicants (ITA) • Section II. Prequalification Data Sheet (PDS) • Section III. Qualification Criteria and Requirements • Section IV. Application Forms • Section V. Eligible Countries PART 2 Works Requirements • Section VI. Scope of Works
	6.2 The “Invitation for Prequalification Applications” issued by the Employer is not part of the prequalification document. A sample form is provided as an attachment to this Prequalification Document for information only.
	6.3 The Employer accepts no responsibility for the completeness of the prequalification document and its addenda unless they were obtained directly from the Employer.
	6.4 The Applicant is expected to examine all instructions, forms, and terms in the Prequalification Document and to furnish all information or documentation required by the Prequalification Document.
7. Clarification of Prequalification Document	7.1 A prospective Applicant requiring any clarification of the Prequalification Document shall contact the Employer in writing at the Employer’s address indicated in the PDS. The Employer will respond in writing to any request for clarification provided that such request is received no later than fourteen (14) days prior to the deadline for submission of applications. The Employer shall forward copies of its response to all applicants who have acquired the prequalification document directly from the Employer including a description of the inquiry but without identifying its source. Should the Employer deem it necessary to amend the prequalification document as a result of a clarification, it shall do so following the procedure under ITA 8 and in accordance with the provisions of ITA 17.2.
8. Amendment of Prequalification Document	8.1 At any time prior to the deadline for submission of applications, the Employer may amend the Prequalification Document by issuing addenda.
	8.2 Any addendum issued shall be part of the Prequalification Document and shall be communicated in writing to all who have obtained the prequalification document from the Employer.
	8.3 To give prospective Applicants reasonable time to take an addendum into account in preparing their applications, the Employer may, at its discretion, extend the deadline for the submission of applications.
	C. Preparation of Applications
9. Cost of Applications	9.1 The Applicant shall bear all costs associated with the preparation and submission of its application. The Employer will in no case be

	responsible or liable for those costs, regardless of the conduct or outcome of the prequalification process.
10. Language of Application	10.1 The application as well as all correspondence and documents relating to the prequalification exchanged by the Applicant and the Employer, shall be written in the language specified in the PDS. Supporting documents and printed literature that are part of the application may be in another language, provided they are accompanied by an accurate translation of the relevant passages in the language specified in the PDS, in which case, for purposes of interpretation of the application, the translation shall govern.
11. Documents Comprising the Application	11.1 The application shall comprise the following: (a) Application Submission Form, in accordance with ITA 12; (b) documentary evidence establishing the Applicant’s eligibility to prequalify, in accordance with ITA 13; (c) documentary evidence establishing the Applicant’s qualifications, in accordance with ITA 14; and (d) any other document required as specified in the PDS.
12. Application Submission Form	12.1 The Applicant shall prepare an Application Submission Sheet using the form furnished in Section IV, Application Forms. This Form must be completed without any alteration to its format.
13. Documents Establishing the Eligibility of the Applicant	13.1 To establish its eligibility in accordance with ITA 4, the Applicant shall complete the eligibility declarations in the Application Submission Form and Forms ELI (eligibility) 1.1 and 1.2, included in Section IV, Application Forms.
14. Documents Establishing the Qualifications of the Applicant	14.1 To establish its qualifications to perform the contract(s) in accordance with Section III, Qualification Criteria and Requirements, the Applicant shall provide the information requested in the corresponding Information Sheets included in Section IV, Application Forms.
15. Signing of the Application and Number of Copies	15.1 The Applicant shall prepare one original of the documents comprising the application as described in ITA 11 and clearly mark it “ORIGINAL”. The original of the application shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Applicant. 15.2 The Applicant shall submit copies of the signed original application, in the number specified in the PDS, and clearly mark them “COPY”. In the event of any discrepancy between the original and the copies, the original shall prevail

	D. Submission of Applications
16. Sealing and Identification of Applications	16.1 The Applicant shall enclose the original and the copies of the application in a sealed envelope that shall: (a) bear the name and address of the Applicant; (b) be addressed to the Employer, in accordance with ITA 17.1; and (c) bear the specific identification of this prequalification process indicated in the PDS 1.1.
	16.2 The Employer will accept no responsibility for not processing any envelope that was not identified as required.
17. Deadline for Submission of Applications	17.1 Applicants may always submit their applications by mail or by hand. When so specified in the PDS, applicants shall have the option of submitting their applications electronically, in accordance with electronic application submission procedures specified in the PDS. Applications shall be received by the Employer at the address and no later than the deadline indicated in the PDS. A receipt will be given for all applications submitted.
	17.2 The Employer may, at its discretion, extend the deadline for the submission of applications by amending the Prequalification Document in accordance with ITA 8, in which case all rights and obligations of the Employer and the Applicants subject to the previous deadline shall thereafter be subject to the deadline as extended.
18. Late Applications	18.1 Any application received by the Employer after the deadline for submission of applications prescribed in accordance with ITA 17 will be treated as indicated in the PDS.
19. Opening of Applications	19.1 Any specific electronic application opening procedures required if electronic submission of applications is permitted pursuant to Sub Clause 17.1 shall be as specified in the PDS. Employer shall prepare a record of the opening of applications that shall include, as a minimum, the name of the Applicant. A copy of the record shall be distributed to all Applicants.
	E. Procedures for Evaluation of Applications
20. Confidentiality	20.1 Information relating to the evaluation of applications, and recommendation for prequalification, shall not be disclosed to Applicants or any other persons not officially concerned with such process until the notification of prequalification is made to all Applicants.
	20.2 From the deadline for submission of applications to the time of notification of the results of the prequalification in accordance with ITA 28, any Applicant that wishes to contact the Employer on any matter related to the prequalification process, may do so but only in

	writing.
21. Clarification of Applications	21.1 To assist in the evaluation of applications, the Employer may, at its discretion, ask any Applicant for a clarification of its application which shall be submitted within a stated reasonable period of time. Any request for clarification and all clarifications shall be in writing.
	21.2 If an Applicant does not provide clarifications of the information requested by the date and time set in the Employer's request for clarification, its application may be rejected.
22. Responsiveness of Applications	22.1 The Employer may reject any application which is not responsive to the requirements of the prequalification document.
23. Domestic Bidder Price Preference	23.1 Unless otherwise specified in the PDS, a margin of preference for domestic bidders shall not apply in the bidding process resulting from this prequalification.
24. Subcontractors	24.1 Applicants planning to subcontract any of the key activities indicated in Section III, Qualification Criteria, shall specify the activity(ies) or parts of the works to be subcontracted in the Application Submission Form. Applicants shall clearly identify the proposed specialist subcontractors in Forms ELI-1.2 and EXP (experience)-4.2(b) in Section IV. Such proposed specialist subcontractor(s) shall meet the corresponding qualification requirements specified in Section III, Qualification Criteria and Requirements.
	24.2 At this time, the Employer does not intend to execute certain specific parts of the Works by subcontractors selected in advance by the Employer (Nominated Subcontractors) unless otherwise stated in the PDS.
	F. Evaluation of Applications and Prequalification of Applicants
25. Evaluation of Applications	25.1 The Employer shall use the factors, methods, criteria, and requirements defined in Section III, Qualification Criteria and Requirements to evaluate the qualifications of the Applicants. The use of other methods, criteria, or requirements shall not be permitted. The Employer reserves the right to waive minor deviations in the qualification criteria if they do not materially affect the capability of an Applicant to perform the contract.
	25.2 Only the qualifications of subcontractors that have been identified in the application may be considered in the evaluation of an Applicant. However, the general experience and financial resources of subcontractors may not be added to those of the Applicant for purposes of prequalification of the Applicant.
	25.3 In case of multiple contracts, the Employer shall prequalify each Applicant for the maximum number and types of contracts for which

	the Applicant meets the appropriate aggregate requirements of such contracts, as specified in Section III, Qualification Criteria and Requirements.
26. Employer's Right to Accept or Reject Applications	26.1 The Employer reserves the right to accept or reject any application, and to annul the prequalification process and reject all applications at any time, without thereby incurring any liability to Applicants.
27. Prequalification of Applicants	27.1 All Applicants whose applications have met or exceeded ("passed") the specified threshold requirements will, to the exclusion of all others, be prequalified by the Employer.
28. Notification of Prequalification	28.1 Once the Employer has completed the evaluation of the applications it shall notify all Applicants in writing of the names of those applicants who have been prequalified.
29. Invitation to Bid	29.1 Promptly after the notification of the results of the prequalification the Employer shall invite bids from all the Applicants that have been prequalified.
	29.2 Bidders may be required to provide a Bid Security or a Bid Securing Declaration acceptable to the Employer in the form and an amount to be specified in the Bidding Documents, and the successful Bidder shall be required to provide a Performance Security to be specified in the Bidding Documents.
30. Changes in Qualifications of Applicants	30.1 Any change in the structure or formation of an Applicant after being prequalified in accordance with ITA 27 and invited to bid shall be subject to a written approval of the Employer prior to the deadline for submission of bids. Such approval shall be denied if as a consequence of the change the Applicant no longer substantially meets the qualification criteria set forth in Section III, Qualification Criteria and Requirements, or if in the opinion of the Employer, a substantial reduction in competition may result. Any such changes shall be submitted to the Employer not later than 14 days after the date of the Invitation for Bids.

Section II. Prequalification Data Sheet

A. General

ITA 1.1	The Employer is Head, Project Management Office (PMO) for Punjab Barrages Rehabilitation and modernization projects, Irrigation and Power Department, Government of Punjab, Lahore, Pakistan.
ITA 1.1	The No. of contract is: One which includes Civil, Mechanical and Electrical works for Rehabilitation and Modernization of Jinnah Barrage.
ITA 1.1	ICB name and number is Rehabilitation and Modernization of Jinnah Barrage (JB/ ICB-01)
ITA 2.1	The name of the Borrower is Islamic Republic of Pakistan
ITA 2.1	The name of the Project is Punjab Barrages Improvement Phase-II (PBIP-II) Project Rehabilitation and Modernization of Jinnah Barrage
ITA 4.1	(i) The parties in a JV shall be jointly and severally liable. (ii) Maximum number of partners in the JV shall be three.
ITA 4.7	The electronic address of firms debarred by the Bank is http://www.worldbank.org/debarr.

B. Contents of the Prequalification Document

ITA 7.1	For clarification purposes, the Employer's address is Attention: Head, Project Management Office (PMO) for Punjab Barrages, Irrigation and Power Department, Government of Punjab, Lahore, Pakistan. Address: Project Offices Building, Canal Bank MustafaAbad (Dharampura) Floor: 1ST floor City: Lahore Postal Code: 54840 Country: Pakistan Telephone: 00 92 42 99250351 00 92 42 99239376 Facsimile number: 00 92 42 99250352 Electronic mail address: pmoipd@yahoo.com

C. Preparation of Applications	
ITA 10.1	The language of the application as well as of all correspondence is English.
ITA 11.1 (d)	The Applicant shall submit with its application, the following additional documents: • Name and brief CV of persons with relevant experience; • List of plant and equipment relevant to the nature of work; and • Any other document to be helpful for prequalification.
ITA 15.2	In addition to the original, the number of copies to be submitted with the application is five (5).
D. Submission of Applications	
ITA 17.1	Applicants shall not have the option of submitting their applications electronically. For application submission purposes only, the Employer's address is: Attention: Head, Project Management Office (PMO) for Punjab Barrages Rehabilitation and modernization projects, Irrigation and Power Department, Government of Punjab, Lahore, Pakistan. Address: Project Offices Building, Canal Bank MustafaAbad (Dharampura) Floor: 1ST floor City: Lahore Postal Code: 54840 Country: Pakistan Telephone: 00 92 42 99250351 00 92 42 99239376 Facsimile number: 00 92 42 99250352 Electronic mail address: pmoipd@yahoo.com Pre PQ conference will be held as under: Date: June 16, 2011 Time: 1000 hrs Venue: PMO Committee Room The deadline for application submission is: Date: July 13, 2011 Time: 1430 hrs
ITA 18.1	The Employer reserves the right to accept or reject late applications.
ITA 19.1	If electronic submission of applications shall be permitted, electronic application opening procedures are: Not Applicable
E. Procedures for Evaluation of Applications	
ITA 23.1	A margin of preference shall not apply for eligible domestic bidders.
ITA 24.2	At this time the Employer does not intend to execute certain specific parts of the Works by subcontractors selected in advance (Nominated Subcontractors).

Section III. Qualification Criteria and Requirements

This Section contains all the methods, criteria, and requirements that the Employer shall use to evaluate applications. The information to be provided in relation to each requirement and the definitions of the corresponding terms are included in the respective Application Forms.

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Eligibility and Qualification Criteria				Compliance Requirements			Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Partner	One Partner	
1. Eligibility							
1.1	Nationality	Nationality in accordance with ITA Sub-Clause 4.3	Must meet requirement	Existing or intended JV must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
1.2	Conflict of Interest	No conflicts of interest in ITA Sub-Clause 4.4	Must meet requirement	Existing or intended JV must meet requirement	Must meet requirement	N/A	Application Submission Form
1.3	Bank Ineligibility	Not having been declared ineligible by the Bank, as described in ITA Sub-Clause 4.7	Must meet requirement	Existing JV must meet requirement	Must meet requirement	N/A	Application Submission Form
1.4	Government Owned Entity	Applicant required to meet conditions of ITA Sub-Clause 4.8	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments
1.5	United Nations resolution or Borrower's country law	Not having been excluded as a result of the Borrower's country laws or official regulations, or by an act of compliance with UN Security Council resolution, in accordance with ITA 4.11	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Forms ELI – 1.1 and 1.2, with attachments

Eligibility and Qualification Criteria				Compliance Requirements			Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Partner	One Partner	
2. Historical Contract Non-Performance							
2.1	History of Non-Performing Contracts	Non-performance of a contract did not occur within the last 10 years prior to the deadline for application submission based on all <i>information on fully settled disputes or litigation</i> . A fully settled dispute or litigation is one that has been resolved in accordance with the Dispute Resolution Mechanism under the respective contract and where all appeal instances available to the applicant have been <i>exhausted</i> .	Must meet requirement by itself or as partner to past or existing JV	N/A	Must meet requirement by itself or as partner to past or existing JV	N/A	Form CON-2
2.2	Failure to Sign Contract	Not being under execution of a Bid Securing Declaration pursuant to Sub-Clause 4.9 for 2 years	Must meet requirement	Must meet requirement	Must meet requirement	N/A	Application Submission Form
2.3	Pending Litigation	All pending litigation shall in total not represent more than 10 %, of the Applicant's net worth and shall be treated as resolved against the Applicant	Must meet requirement by itself or as a partner to past or existing JV	N/A	Must meet requirement by itself or as a partner to past or existing JV	N/A	Form CON – 2

Eligibility and Qualification Criteria				Compliance Requirements			Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Partner	One Partner	
3. Financial Situation							
3.1	Financial Performance	Submission of audited balance sheets or if not required by the law of the Applicant's country, other financial statements acceptable to the Employer, for the last 5 years to demonstrate: (a) the current soundness of the applicant's financial position and its prospective long term profitability, and (b) Capacity to have a cash flow amount of US\$ 7 million/month equivalent	Must meet requirement (a) Must meet requirement (b) Must meet requirement	N/A (a) N/A (b) Must meet requirement	Must meet requirement (a) Must meet requirement (b) N/A	N/A (a) N/A (b) N/A	Form FIN – 3.1 with attachments
3.2	Average Annual Construction Turnover	Minimum average annual construction turnover of US\$ 50 million equivalent calculated as total certified payments received for contracts in progress or completed, within the last 5 years, five years.	Must meet requirement	Must meet requirement	Must meet at least 25% of the requirement	Must meet at least 50 %, of the requirement	Form FIN – 3.2

Eligibility and Qualification Criteria		Compliance Requirements					Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Partner	One Partner	
4. Experience							
4.1	General Construction Experience	Experience under construction contracts in the role of contractor, subcontractor, or management contractor for at least the last 10 years prior to the application submission deadline, and with activity in at least nine (9) months in each year.	Must meet requirement	N/A	Must meet requirement	N/A	Form EXP – 4.1
4.2 (a)	Specific Construction Experience	Participation as contractor, management contractor or subcontractor, in at least 2 contracts within the last 10 years with a value of at least US\$ 50 million that have been successfully and substantially completed and that are similar to the proposed works. The similarity shall be based on the physical size, complexity, methods / technology or other characteristics as described in Section VI, Scope of Works	Must meet requirement	Must meet requirement	N/A	Must meet requirement for one contract (can be a specialist subcontractor)	Form EXP 4.2(a)
4.2 (b)		For the above or other contracts executed during the period stipulated in 4.2 (a) above, a minimum construction experience in the following key activities:				Must meet the following requirements for the key activities listed below (can be a specialist subcontractor)	Form EXP – 4.2 (b)

Eligibility and Qualification Criteria		Compliance Requirements					Documentation
No.	Subject	Requirement	Single Entity	Joint Venture			Submission Requirements
				All Parties Combined	Each Partner	One Partner	
		Civil Works (i) Rehabilitation/Construction of at least one major river structure of capacity 100,000 cusecs or more. (ii) Execution of reinforced concrete works for at least 0.40 mcft /month. (iii) Execution of stone works of total volume not less than 2.4 mcft/month. (iv) Construction and removal of coffer dams in major rivers and canal requiring production rate at least 06 mcft/month of earth work and other material required for construction of coffer dam. (v) Installation of Sheet Piles of Hydraulic structures not less than 80 Tons/month.	Must meet requirements Must meet requirements Must meet requirements Must meet requirements Must meet requirements	Must meet requirements Must meet requirements Must meet requirements Must meet requirements	N/A N/A N/A N/A	Must meet requirement Minimum requirement of 60% of this activity Minimum requirement of 60% of this activity Minimum requirement of 60% of this activity Minimum requirement of 60% of this activity	

Eligibility and Qualification Criteria		Compliance Requirements			Documentation	
No.	Subject	Requirement	Single Entity	Joint Venture		Submission Requirements
				All Parties Combined	Each Partner	
		Mechanical & Electrical Works (i) Design, fabrication / rehabilitation / refurbishing and installation of average 15 gates (40ft X 15ft) per annum along with their hoisting system for major river structure / barrage over the last ten years; (ii) Design, procurement of plant and machinery, supply and installation of electric power and automatic control systems / network for activity (i).	Must meet requirements Must meet requirements	Must meet requirements Must meet requirements	N/A N/A	Minimum requirement of nine (9) gates Must meet requirement

Section IV. Application Forms

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Application Submission Form

Date: _____

ICB No. and title: _____

To: Head/Project Director,
Project Management Office (PMO) for Punjab Barrages,
Irrigation & Power Department,
Government of Punjab, Lahore.

We, the undersigned, apply to be prequalified for the referenced ICB(s) and declare that:

- (a) we have examined and have no reservations to the Prequalification Documents, including Addendum No. _____, issued in accordance with Instructions to Applicants (ITA) Clause 8: *[insert the number and issuing date of each addendum]*.
- (b) we, including any subcontractors or suppliers for any part of the contract resulting from this prequalification process, have nationalities from eligible countries, in accordance with ITA Sub-Clause 4.3: *[insert the nationality of the Applicant, including that of all partners in case of a Joint Venture, and the nationality of each already identified subcontractor and supplier of related services, if applicable]*;
- (c) we, including any subcontractors or suppliers for any part of the contract resulting from this prequalification, do not have any conflict of interest, in accordance with ITA Sub-Clause 4.4;
- (d) we, including any subcontractors or suppliers for any part of the contract resulting from this prequalification, have not been declared ineligible by the Bank, or under the Employer's country laws, official regulations, or under execution of a Bid Securing Declaration in the Employer's Country, or by an act of compliance with a decision of the United Nations Security Council, in accordance with ITA Sub-Clauses 4.7, 4.9 and 4.11;
- (e) *[insert either "we are not a Government owned entity" or "we are a Government entity, and we meet the requirements of ITA Sub-Clause 4.8]*;
- (f) we, in accordance with ITA Sub-Clause 24.1, plan to subcontract the following key activities and/or parts of the works:

[insert any of the key activities identified in Section III- 4.2 (b) which the Applicant intends to subcontract]
- (g) we declare that the following commissions, gratuities, or fees have been paid or are to be paid with respect to the prequalification process, the corresponding bidding process or execution of the Contract:

<u>Name of Recipient</u>	<u>Address</u>	<u>Reason</u>	<u>Amount</u>
<i>[insert full name for each occurrence]</i>	<i>[insert street/ number/city/country]</i>	<i>[indicate reason]</i>	<i>[specify amount in US\$ <u>equivalent</u>]</i>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

[If none has been paid or is to be paid, indicate “none”.]

- (h) We understand that you may cancel the prequalification process at any time and that you are neither bound to accept any application that you may receive nor to invite the prequalified applicants to bid for the contract subject of this prequalification, without incurring any liability to the Applicants, in accordance with ITA Clause 26.

Signed *[insert signature(s) of an authorized representative(s) of the Applicant]*

Name *[insert full name of person signing the application]*

In the Capacity of *[insert capacity of person signing the application]*

Duly authorized to sign the application for and on behalf of Applicant’s Name *[insert full name of Applicant]* Address *[insert street number/town or city/country address]*

Dated on *[insert day number]* day of *[insert month]*, *[insert year]*

Form ELI -1.1

Applicant Information Form

Date: _____

ICB No. and title: _____

Page _____ of _____ pages

Applicant's legal name

[insert full legal name]

In case of Joint Venture (JV), legal name of each partner:

[insert full legal name of each partner in JV]

Applicant's Actual or Intended country of constitution:

[indicate country of Constitution]

Applicant's actual or Intended year of constitution:

[indicate year of Constitution]

Applicant's legal address in country of constitution:

[insert street/ number/ town or city/ country]

Applicant's authorized representative information

Name: *[insert full legal name]*

Address: *[insert street/ number/ town or city/ country]*

Telephone/Fax numbers: *[insert telephone/fax numbers, including country and city codes]*

E-mail address: *[indicate e-mail address]*

Attached are copies of original documents of

- ☐ Articles of Incorporation or Documents of Constitution, and documents of registration of the legal entity named above, in accordance with ITA 4.2.
- ☐ In case of JV, letter of intent to form JV or JV agreement, in accordance with ITA 4.1.
- ☐ In case of Government owned entity, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITA 4.8.

Form ELI -1.2

Applicant's Party Information Form

[The following form shall be filled in for the Applicant's parties including partner(s) of a joint venture, subcontractors, suppliers and other parties]

Date: _____

ICB No. and title: _____

Page _____ of _____ pages

JV applicant legal name:

[insert full legal name]

Applicant's Party legal name:

[insert full legal name of Applicant's Party]

Applicant's Party country of registration:

[indicate country of registration]

Applicant Party's year of constitution:

[indicate year of constitution]

Applicant Party's legal address in country of constitution:

[insert street/ number/ town or city/ country]

Applicant Party's authorized representative information

Name: *[insert full legal name]*

Address: *[insert street/ number/ town or city/ country]*

Telephone/Fax numbers: *[insert telephone/fax numbers, including country and city codes]*

E-mail address: *[indicate e-mail address]*

Attached are copies of original documents of

- ☐ **Articles of Incorporation or Documents of Constitution, and Registration Documents of the legal entity named above, in accordance with ITA 4.2.**
- ☐ **In case of a Government owned entity, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with ITA 4.8.**

Form CON – 2

Historical Contract Non-Performance

[The following table shall be filled in for the Applicant and for each partner of a Joint Venture]

Applicant's Legal Name: *[insert full name]*

Date: _____

Joint Venture Party Legal Name: *[insert full name]*

ICB No. and title: _____

Page _____ of _____ pages

Non-Performing Contracts in accordance with Section III, Qualification Criteria and Requirements			
☐ Contract non-performance did not occur during the <i>[number]</i> years specified in Section III, Qualification Criteria and Requirements, Sub-Factor 2.1.			
☐ Contract(s) not performed during the <i>[number]</i> years specified in Section III, Qualification Criteria and Requirements, requirement 2.1			
Year	Non performed portion of contract	Contract Identification	Total Contract Amount (current value, US\$ equivalent)
<i>[insert year]</i>	<i>[insert amount and percentage]</i>	Contract Identification: <i>[indicate complete contract name/ number, and any other identification]</i> Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Reason(s) for non performance: <i>[indicate main reason(s)]</i>	<i>[insert amount]</i>
Pending Litigation, in accordance with Section III, Qualification Criteria and Requirements			
☐ No pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.2.			
☐ Pending litigation in accordance with Section III, Qualification Criteria and Requirements, Sub-Factor 2.2 as indicated below.			

Year	Outcome as Percentage of Total Assets	Contract Identification	Total Contract Amount (current value, US\$ equivalent)
<i>[insert year]</i>	<i>[insert percentage]</i>	Contract Identification: [indicate complete contract name, number, and any other identification] Name of Employer: <i>[insert full name]</i> Address of Employer: <i>[insert street/city/country]</i> Matter in dispute: <i>[indicate main issues in dispute]</i>	<i>[insert amount]</i>

Form FIN – 3.1

Financial Situation

[The following table shall be filled in for the Applicant and for each partner of a Joint Venture]

Applicant's Legal Name: *[insert full name]*

Date: _____

Applicant's Party Legal Name: *[insert full name]*

ICB No. and title: _____

Page _____ of _____ pages

1. Financial data

Financial information in (US\$ equivalent in 000s)	Historic information for previous 5 years, Five Years (US\$ equivalent in 000s)				
	Year 1	Year 2	Year 3	Year 4	Year 5
Information from Balance Sheet					
Total Assets (TA)					
Total Liabilities (TL)					
Net Worth (NW)					
Current Assets (CA)					
Current Liabilities (CL)					
Information from Income Statement					
Total Revenue (TR)					
Profits Before Taxes (PBT)					

2. Financial documents

The Applicant and its parties shall provide copies of the balance sheets and/or financial statements for five years pursuant Section III, Qualifications Criteria and Requirements, Sub-factor 3.1. The financial statements shall:

- (a) reflect the financial situation of the Applicant or partner to a JV, and not sister or parent companies.
 - (b) be audited by a certified accountant.
 - (c) be complete, including all notes to the financial statements.
 - (d) correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).
- ☐ Attached are copies of financial statements (balance sheets, including all related notes, and income statements) for the five years required above; and complying with the requirements.

Form FIN - 3.2

Average Annual Construction Turnover

[The following table shall be filled in for the Applicant and for each partner of a Joint Venture]

Applicant's/Joint Venture Partner's Legal Name: *[insert full name]*

Date: _____

Applicant's Party Legal Name: *[insert full name]*

ICB No. and title: _____

Page _____ of _____ pages

Annual turnover data (construction only)		
Year	Amount and Currency	US\$ equivalent
<i>[indicate year]</i>	<i>[insert amount and indicate currency]</i>	<i>[insert amount in US\$ equiv.]</i>
Average Annual Construction Turnover *		

- * Average annual construction turnover calculated as total certified payments received for work in progress or completed, divided by the number of years specified in Section III, Qualification Criteria and Requirements, Sub-Factor 3.2.

Form EXP - 4.1

General Construction Experience

[The following table shall be filled in for the Applicant and for each partner of a Joint Venture]

Applicant's/Joint Venture Partner's Legal Name: *[insert full name]*

Date: _____

Applicant JV Party Legal Name: *[insert full name]*

ICB No. and title: _____

Page _____ **of** _____ **pages**

[Identify contracts that demonstrate continuous construction work over the past [number] years pursuant to Section III, Qualification Criteria and Requirements, Sub-Factor 4.1. List contracts chronologically, according to their commencement (starting) dates.]

Starting Month / Year	Ending Month / Year	Contract Identification	Role of Applicant
<i>[indicate month/ year]</i>	<i>[indicate month/ year]</i>	Contract name: <i>[insert full name]</i> Brief Description of the Works performed by the Applicant: <i>[describe works performed briefly]</i> Amount of contract: <i>[insert amount in US\$ equivalent]</i> Name of Employer: <i>[indicate full name]</i> Address: <i>[indicate street/number/town or city/country]</i>	<i>[insert "Contractor" or "Subcontractor" or "Contract Manager"]</i>
		Contract name: <i>[insert full name]</i> Brief Description of the Works performed by the Applicant: <i>[describe works performed briefly]</i> Amount of contract: <i>[insert amount in US\$ equivalent]</i> Name of Employer: <i>[indicate full name]</i> Address: <i>[indicate street/number/town or city/country]</i>	<i>[insert "Contractor" or "Subcontractor" or "Contract Manager"]</i>
		Contract name: <i>[insert full name]</i> Brief Description of the Works performed by the Applicant: <i>[describe works performed briefly]</i> Amount of contract: <i>[insert amount in US\$ equivalent]</i> Name of Employer: <i>[indicate full name]</i> Address: <i>[indicate street/number/town or city/country]</i>	<i>[insert "Contractor" or "Subcontractor" or "Contract Manager"]</i>

Form EXP - 4.2(a)

Similar Construction Experience

[The following table shall be filled in for contracts performed by the Applicant, each partner of a Joint Venture, and specialist sub contractors]

Applicant's/Joint Venture Partner's Legal Name: *[insert full name]*

Date: _____

JV Party Name: *[insert full name]*

ICB No. and title: _____

Page _____ of _____ pages

Similar Contract No. <i>[insert number] of [insert number of similar contracts required]</i>	Information		
Contract Identification	<i>[insert contract name and number, if applicable]</i>		
Award date	<i>[insert day, month, year, i. e., 15 June, 2005]</i>		
Completion date	<i>[insert day, month, year, i.e., 03 October, 2007]</i>		
Role in Contract <i>[check the appropriate box]</i>	Contractor ☐	Management Contractor ☐	Subcontractor ☐
Total Contract Amount	<i>[insert total contract amount in local currency]</i>		US\$ <i>[insert total contract amount in US\$ equivalent]</i>
If partner in a JV, or subcontractor, specify participation in total contract amount	<i>[insert a percentage amount]</i>	<i>[insert total contract amount in local currency]</i>	<i>[insert total contract amount in US\$ equivalent]</i>
Employer's Name:	<i>[insert full name]</i>		
Address:	<i>[indicate street / number / town or city / country]</i>		
Telephone/fax number	<i>[insert telephone/fax numbers, including country and city area codes]</i>		
E-mail:	<i>[insert e-mail address, if available]</i>		

Form EXP - 4.2(a) (cont.)

Similar Construction Experience (cont.)

Similar Contract No. [insert number] of [insert number of similar contracts required]	Information
Description of the similarity in accordance with Sub-Factor 4.2(a) of Section III:	
1. Amount	<i>[insert amount in US\$ in words and in Figures]</i>
2. Physical size	<i>[insert physical size of activities]</i>
3. Complexity	<i>[insert description of complexity]</i>
4. Methods/Technology	<i>[insert specific aspects of the methods/technology involved in the contract]</i>
5. Other Characteristics	<i>[insert other characteristics as described in Section VI, Scope of Works]</i>

Note: Each JV partner should mention only the work executed by them according to share in the previous joint venture.

Form EXP - 4.2(b)

Construction Experience in Key Activities

Applicant's Legal Name: *[insert full name]*

Date: _____

Applicant's Party Legal Name: *[insert full name]*

Nominated Subcontractor's Legal Name (as per ITA 24.2): *[insert full name]*

ICB No. and title: _____

Page _____ **of** _____ **pages**

All Subcontractors for key activities must complete the information in this form as per ITA 24.2 and Section III, Qualification Criteria and Requirements, Sub-Factor 4.2.

- Key Activity No One:** *[insert brief description of the Activity, emphasizing its specificity]*

	Information		
Contract Identification	<i>[insert contract name and number, if applicable]</i>		
Award date	<i>[insert day, month, year, i.e., 15 June, 2005]</i>		
Completion date	<i>[insert day, month, year, i.e., 03 October, 2007]</i>		
Role in Contract <i>[check the appropriate box]</i>	Contractor ☐	Management Contractor ☐	Subcontractor ☐
Total Contract Amount	<i>[insert total contract amount in local currency]</i>		US\$ <i>[insert Total contract amount in US\$ equivalent]</i>
If party in a JV, specify participation of total contract amount	<i>[insert a percentage amount]</i>	<i>[insert total contract amount in local currency]</i>	<i>[insert total contract amount in US\$ equivalent]</i>

	Information
Employer's Name:	<i>[insert full name]</i>
Address:	<i>[indicate street / number / town or city / country]</i>
Telephone/fax number	<i>[insert telephone/fax numbers, including country and city area codes]</i>
E-mail:	<i>[insert e-mail address, if available]</i>

2. Activity No Two

3.

	Information
Description of the key activities in accordance with Sub-Factor 4.2(b) of Section III:	
	<i>[insert response to inquiry indicated in left column]</i>

Note: Each JV partner should mention only the work executed by them according to share in the previous joint venture.

Section V. Eligible Countries

Eligibility for the Provision of Goods, Works and Services in Bank-Financed Procurement

1. In accordance with Para 1.8 of the Guidelines: Procurement under IBRD Loans and IDA Credits, dated May 2004, the Bank permits firms and individuals from all countries to offer goods, works and services for Bank-financed projects. As an exception, firms of a Country or goods manufactured in a Country may be excluded if:

Para 1.8 (a) (i): as a matter of law or official regulation, the Borrower's Country prohibits commercial relations with that Country, provided that the Bank is satisfied that such exclusion does not preclude effective competition for the supply of the Goods or Works required, or

Para 1.8 (a) (ii): by an Act of Compliance with a Decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's Country prohibits any import of goods from that Country or any payments to persons or entities in that Country.

2. For the information of borrowers and bidders, at the present time firms, goods and services from the following countries are excluded from this bidding:

(a) With reference to paragraph 1.8 (a) (i) of the Guidelines:

ISRAIL

(b) With reference to paragraph 1.8 (a) (ii) of the Guidelines:

NIL

PART 2 – Works Requirements

Section VI. Scope of Works

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1. Description of the Works

1.1 General

The Irrigation and Power Department (IPD), Government of the Punjab, Pakistan, intends to receive a loan from the World Bank (WB) for procuring the rehabilitation and modernization works at Jinnah Barrage. The Project Management Office (PMO) for Punjab Barrages has been designated the responsible agency to execute these works under the supervisory consultants residential.

The Jinnah Barrage, completed in 1943, commissioned in 1946, is located on the Indus River, about 203 km (126 miles) below Tarbela Dam and at a distance of 5 km (3 miles) downstream of Kalabagh Town, Punjab, Pakistan. Jinnah Barrage also connects Punjab with North West Frontier Province (NWFP) through a double lane road bridge. Location plan is attached as Figure 1.

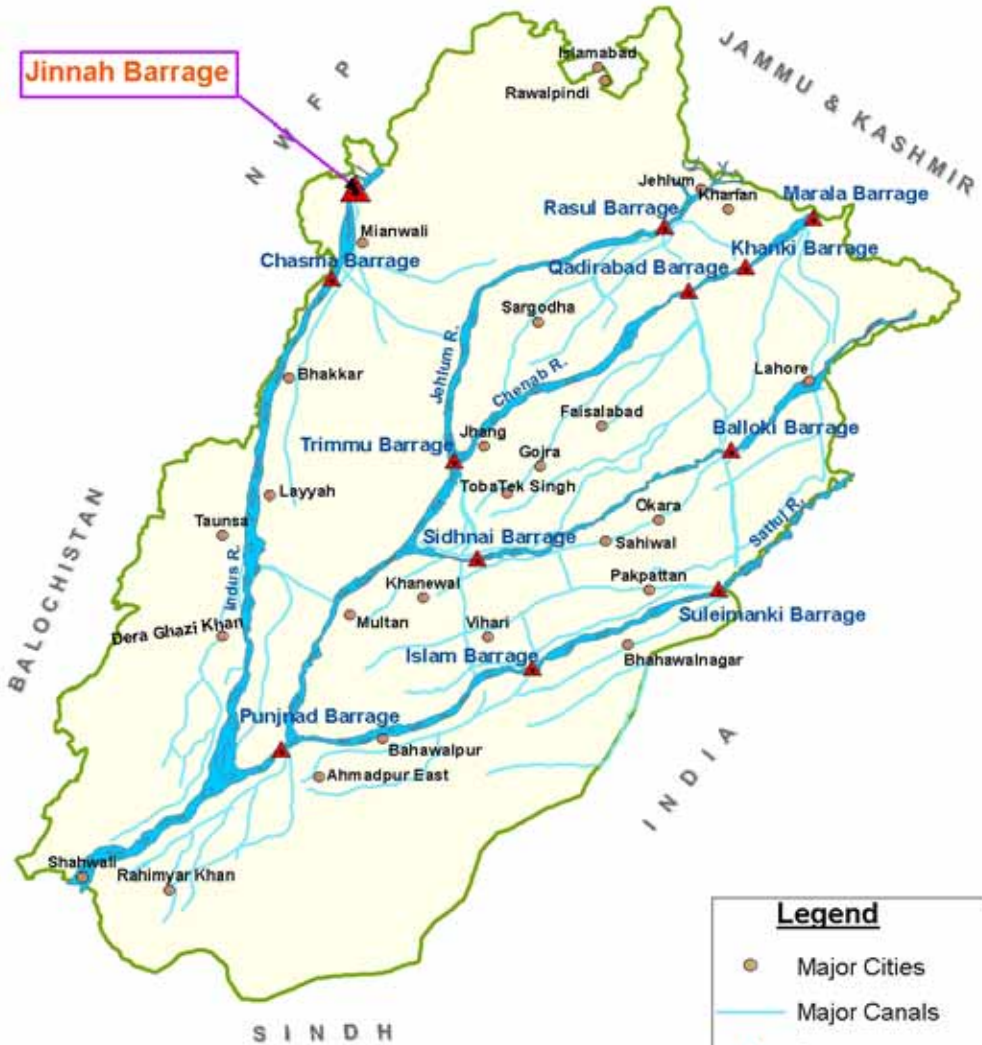
The barrage consists of 42 weir bays with two undersluices located on its left and right sides each having 7 bays. Total length of the barrage is 1,153 m (3781 ft). The span of each bay is 18 m (60 ft) with 2 m (6.6 ft) wide piers. There is a 6m (20 ft) wide navigation lock channel housed at the end of right undersluices. There are two divide walls upstream and downstream of the barrage separating weir from undersluices. Two fish ladders, each with an 3.4 m (11 ft) span are located along the left and right divide walls. The two end bays of left undersluices are provided with a silt excluder where barrels have been installed in the pocket area abutting with the canal head regulator.

Thal Canal off-takes from the left side and its Head Regulator (H/R) have seven bays of 7.3 m (24 ft) width and 1.5 m (5 ft) thick piers. Currently, the Thal canal is running at 7,500 cusec and has

The Jinnah barrage is facing serious structural and hydraulic problems, which have the potential to jeopardize the safety of barrage and immediate efforts are required for the rehabilitation and modernization of the barrage.

Feasibility Consultants previously engaged by the I&P Department to review the health of Jinnah Barrage discovered the development of serious retrogression downstream of the structure causing damage to the protection works, concrete friction blocks, the floor and the loose stone apron. The barrage gates are also giving trouble in their operations. It is planned to tackle these problems of the barrage through the execution of rehabilitation works at Jinnah barrage.

PUNJAB PROVINCE



problem until detection of settlement of the downstream flexible apron, serious damages to downstream friction blocks, surface of downstream floor and defects in the regulatory equipment for gates and failure of river training works to guide the river flow to the centre of the barrage. The Design Consultants have conducted studies as well as analyzed previous investigations and studies carried out by various agencies including detailed feasibility. The following problems exist at barrage in light of design consultant study,

- 1) Hydraulic jump not forming on downstream glacis.
- 2) Un-dissipated energy causing damages to inverted filters, stone aprons and downstream (d/s) river bed.
- 3) Damage due to dislodging of friction blocks and formation of potholes on the downstream floor mostly around dislodged friction blocks.
- 4) Partly nonfunctioning of instrumentation (pressure pipes and piezometers).
- 5) Excessive retrogression in downstream river water profiles.
- 6) Adverse river approach, masking of upstream facing barrage prominently left half and parallel flow close to the upstream barrage.
- 7) Defective gates regulatory system, hoisting machinery and roller tracks.

1.2 Location

Jinnah barrage is situated about 203 km (126 miles) downstream of Tarbela Dam and 05 km (03 miles) downstream of Kalabagh Town. It is geographically situated between the longitude ($71^{\circ} 26' 00''$ E to $71^{\circ} 36' 00''$ E) and the latitude ($32^{\circ} 51' 00''$ N to $32^{\circ} 59' 00''$ N)

1.3 Works Detail

The Jinnah Barrage Rehabilitation and Modernization project includes Civil, Mechanical and Electrical Works. Proposed layout plan of the project is shown on Page No. 6-15

Civil Works

The contract comprises the execution and completion of the works and the remedying of any defects therein and, except in so far as the contract otherwise provides, the provision of all labour, materials, equipments, plants, temporary works and everything whether of a temporary or permanent nature required in and for such execution, completion and remedying so far as the necessity for providing the same is specified in or can reasonably be inferred

a. Subsidiary Weir

- i. Sub-weir with crest RL 676 at a distance of **600 ft - 800 ft** from the main barrage gate line with appurtenant structures.
- ii. Repair to impact/friction blocks, floor, replenishing of loose stone aprons in GI wire crates/gabions.

b. Undersluices

- i. Proposed sub-weir at a distance of **600 ft - 800 ft** from the main barrage gate line with appurtenant structures as for main weir.
- ii. Crest Level of the sub-weir at EL 675 with vertical 3 ft wide slots for 25 % of the total undersluice weir length with bottom EL 667.

c. Other Related Works

- i. Extension of downstream divide walls by about 405 ft to separate the working of main weir and undersluices in between the two structures.
- ii. Extension of downstream Guide banks by about 1450 ft from gate line of existing barrage.
- iii. Extension of navigation wall by about 657 ft to separate the flow in right undersluices and navigation bay.
- iv. Provision of two fish ladders
- v. River Training works on upstream side as per Model Study recommendation.
- vi. Cofferdams on upstream and downstream of barrage.

B. Ancillary Works

- i. Temporary Diversion Channel
- ii. Renovation of colony buildings and its maintenance during project period.

Railways and others for construction and rehabilitation of Old Railway Bridge for all types of traffic and its maintenance till completion of Jinnah Barrage Project.

Mechanical & Electrical Works

The scope of work includes the design, manufacture, factory testing, packing for transport, insurance, transportation to site, storage at site, erection site testing, commissioning, guarantee and making good defects of gates and other associated works of Jinnah barrage rehabilitation and modernization project. The scope of works also includes the rehabilitation of workout and corroded part(s) of existing gates including trusses, skin plate and end girders.

A. Mechanical Works

B. Electrical Works

C. Ancillary Works

A. Mechanical Works

- i. Replacement of Sill Beams.
- ii. Modification & Replacement of Roller Trains.
- iii. Modification and placement of rocker assembly/ Roller track inside the grooves.
- iv. Modification of Sealing Arrangement.
- v. Modification of Roller Guards.
- vi. Fixation of Bulk Head Gate Guides.
- vii. Replacement of existing wooden planks by Galvanized Steel Grating.
- viii. Replacement of Steel Wire Rope along with rope sockets, adjusters etc.
- ix. Modification of gate leaves including replacement of back trusses.

- xiv. Rehabilitation works for gates of Head Regulator of the Thal Canal and X-regulator.
- xv. Complete replacement of all the gates and gearing system of silt ejectors of Thal canal.

B. Electrical, Control and Instrumentation Systems

- i. Provision of an electrical power supplies from WAPDA with alternate source.
- ii. Establishment of an electrical switchgear and control room for the distribution of power to the barrage.
- iii. Communication system.
- iv. Provision of electrical drive systems and both local/remote control and monitoring systems for barrage, and canal gates.
- v. Provision of secure power supplies and facilities to accommodate the remote monitoring systems
- vi. Adapting the existing stand pipe pore pressure measuring system on the barrage and Thal canal head regulator to interface with the remote pore pressure monitoring system.
- vii. Provision of pressure monitoring system.
- viii. To establish the DATA monitoring work stations at different stations.
- ix. Provision of complete electrical and control system for Bulkhead gate Cart.

C. Ancillary works

- i. Re-Construction of Existing Road from Barrage to Irrigation work shop and canal colony.
- ii. Construction of incline facilities for Bulkhead gates.

vi. Rehabilitation of workshop and other buildings.

1.4 Services to be provided by the Employer

Camping of contractor staff, Equipment, Machinery Yard and Material Storage Depots – The I & P Department owns enough land near the construction site that will accommodate the camping of contractor staff, Equipment, Machinery Yard and Material Storage Depot. The most appropriate site for the barrage works will be on the left bank of the river as it is easily accessed and the right bank is occupied for the construction of the hydroelectric power plant. The Contractor will need to develop suitable access roads from the material storage yards to the barrage site.

2. Construction Period

2.1 Activity Plan for Execution of Project

The model activity plan for the execution of the project is Thirty Six (36) months.

3. Site and Other Data

3.1 Climate

Meteorological data for the area in the immediate vicinity of the project area are scarce with some data available from stations at Mianwali and Dera Ishmail Khan. Climate of the area surrounding the project is generally very hot and dry in the summer and cold in the winter. Summer starts from March and continues until September. July to September are the months of summer monsoon. Winter sets in October and lasts until February. December to February are typically the months of the winter monsoon.

- **Rainfall**

Average annual rainfall of Mianwali during the period 1960 through 2004 is 502.8 mm. Most of the rainfall occurs during the summer monsoon period (July to September) which amounts to 52.8 % of total average annual rainfall. November is the month of minimum rainfall of 7.3 mm and August of the maximum amounts to 109.4 mm. However, the maximum rainfall during 24 hours was recorded on August 2, 1976 at 259.1 mm. The maximum annual rainfall was 1086 mm during the year 1992 and minimum annual rainfall was 136

Today, both frequency and intensity of wind storms have decreased. Average monthly wind speed, as recorded at Mianwali for the period 1968-2004, varies between 1.25 and 2.90 knots per hour, during November and June, respectively. However, maximum wind speed recorded at Mianwali was 60 knots per hour in the months of June and September, 1982.

- **Evaporation**

Evaporation which is directly related to the temperature has been calculated from the average monthly values recorded at the Jamali Balochan station (1965 to 1982). Using these values the Summer (April to December) evaporation is of the order of 1,831.8 mm while the winter evaporation approximates to 671.5 mm.

- **Humidity**

Humidity is measured at 0800 hours and 1700 hours at Mianwali Meteorological Observatory. The average relative humidity for 1960-2004 varies between 36 % in May to 67 % in January. Morning data from January to December show maximum average relative humidity of 85 % in January and afternoon minimum average relative humidity of 26 % in May.

- **Temperature**

The hottest months are May, June and July while December, January and February are the coldest. Based on data for the period 1960 through 2004 recorded at Mianwali, located approximately 42 km from the Jinnah Barrage, the maximum mean daily temperature during summer in the month of June is 36.6⁰ C. The lowest and the highest values of mean monthly maximum temperature are 16.0⁰ C and 44.0° C during the month of January and June, respectively. Minimum mean daily temperature varies between 7.8⁰ C and 30.7° C. The lowest and the highest values of mean monthly minimum temperature fluctuate between 0.7⁰ C and 30.7° C.

Tarbela dam on the Indus River. The catchment area upstream of the barrage is 286,000 square km. Its topographic location of the center line of the barrage is 32° 55' 4.76" N, 71° 31' 20.31" E. The average altitude of the barrage area is 201.00 m (660.00 ft) a.m.s.l. The normal pond level is maintained at 211.13 m (693.00 ft) by manually operated counterweights type gates. The barrage is designed to pass normal flood discharge up to 26,900 m³/sec (950,000 cusec) and super flood limit of 31,200 m³/sec (1,100,000 cusec). Minimum and maximum discharges ranges during the working period (November to June) have been computed based on the last 10 year data and are given below:

Sr No.	Month	Minimum Discharges (cfs)	Maximum Discharges (cfs)
1	Nov	48739	81741
2	Dec	28929	67452
3	Jan	14495	40106
4	Feb	22661	60794
5	Mar	17199	79659
6	Apr	26961	104542
7	May	93620	178354
8	June	121142	234402

The data of the instance peak flood discharges passed through the barrage are given below:

Sr No.	Year	Flood discharge (cfs)
1	2010	936453
2	1992	846040
3	1976	861965

o Topography

The project area is surrounded on the west, north and east sides by high hill ranges. Those to the west and north are the Bhangi Khel and Khattak Niazi and to the east the Dhuk Hills. The Dhuk Hills are the westward extension of the Salt Range. The Salt Range consists of orogenically uplifted sedimentary layers containing salt deposits formed during the stagnation and drying of a sea which previously covered the area.

To the north of the area the Indus flows through a narrow gorge between the two

Historically the downstream flood plain has been wide, being 10km (6 miles) in width immediately downstream of the barrage and reaching 21km (13 miles) in width 25km (15 miles) downstream from the barrage.

- **Geology**

The area of study lies at the northern end of the Mianwali depositional trough where the River Indus enters the plains of the Punjab and Thal Desert after cutting a narrow gorge through the Salt Range at Kalabagh. The general ground elevation of the river flood plain is about 210 m (690 ft) a.m.s.l. with the ground rising gradually to the foot of the surrounding hills of the Salt and Surghar Ranges.

In 1987 Kalabagh Consultants carried out a series of hand bored investigation holes downstream of Jinnah Barrage along the Indus river channel. These holes found about 3 meters of fine to medium sand overlying sandy gravel and cobbles. In 1995, The geological investigations were carried out for Jinnah Hydel power project and around it 14 boreholes were installed from 10 to 30 meter depth which shows strata of gravelly mixed sand. The feasibility consultants also investigated 4 bore holes and similar positions were depicted. To confirm the strata and other geological characteristics, the design consultants also investigated two bore holes and similar conditions were depicted.

A number of potential sources for rip rap material are Khairabad, Daud Khel, Pai Khel, Malia Khel. Chashma. Chapri, Saidmar, Hanjar and Kirana near Sargodha. During construction of the Jinnah barrage rip rap material was obtained from Sikhanwali Quarry in the Kirana Hills near Sargodha and brought by rail directly to the site. More recently, the same source has been used to provide stockpiles of rip rap material on the bunds of the barrage, the material being brought by rail to Mari Indus and then brought to site by road. This source has also been considered as suitable for the Chashma Hydropower Project. Now the Railway track is abandoned and carriage through the road link is available.

The sand found on the site of the power station and in the Mari Indus terrace

3.2 Transportation and Communications

- **Railway**

The project is located about 7 km from the Daud Khel railway station. The railway service lines at Daud Khel are:

- Kundian - Daud Khel - Attock railway line connecting Kundian with Karachi – Peshawar main railway line at Attock.
- Kundian - Shershah - Multan railway line, meeting Karachi – Lahore main railway line at Multan.
- Kundian - Khushab railway line.
- By railway distance of Kundian from Karachi is about 1220 km.

- **Road**

The Jinnah Barrage is connected by a 42 km metalled road from the district headquarters at Mianwali. Towns of the area are linked with one another through metalled roads. The project area is accessible from the port of Karachi through a good road network of national super highways and secondary roads. By road the distance between Jinnah Barrage and Karachi is about 1209 km.

The following provides a description of road travel between the port of Karachi and the Jinnah barrage.

The road starts from Karachi Port Trust and passes through West Wharf Gate, Circular bridge Maripur, Gul Bai and Sher Shah roundabout. Al-Azam square and railway overhead bridge joins Sharah-e-Pakistan and the super highway. The Sharah-e-Pakistan ends at Jamshoro Junction near the railway crossing to Kotri. From this point Indus highway starts and passes through Manjhand, Sewan Sharif, Bhan-Saeedabad Dadu, Kaker, Khairpur Nathan Shah, Mehar, Nazirabad, Waggon, Larkana. Dhamrah, Bungal Dero, Rato Dero, Alikhan Garhi Yasin, Shikarpur, Kandhkot and Kashmoor. The border between the provinces of Sind and the Punjab starts at Kashmoor. The road passes through Rojhan, Rajanpur, Jampur, Kot Chatha, D.G. Khan via Ghazi Ghat bridge, Karamdad Qureshi, Basira, Muzaffar garh, Khanpur, Bughasher, Blianpur, Bashir Kot,

having pavement width of 3.0 m to 3.7 m and formation width 7.9 m to 9.8 m.

- **Telephone and Telegraph**

Facilities of telephone and telegraph are available in the project area. Mianwali is connected with other main towns of the country through nation wide dialing system. A telephone line is also available at the irrigation colony at Jinnah Barrage.

- **Railway Limitations**

For transportation of over sized consignments by railway from Karachi to Kundian and Daud Khel following are the limitations: Maximum weight limit for approximate weight is 20 tonnes.

- **Drinking Water, Fuel and Power**

According to the survey carried out during June 1988 to June 1989 by Binnie and Partners of UK., groundwater in surrounding areas of Jinnah Barrage is potable. Depth to water table ranges from 150 cm to 600 cm as per observations. River water after filtration is also fit for drinking. Results of water quality analysis of the reservoir are given in section "Environmental Considerations". According to population census report 1981, 77% households of the area used hand pumped water, 10% piped water, 5% well water and 8% canal water for drinking purposes. Electric supply is available only to 22% of the district population. Others are obliged to use kerosene oil or other sources even for lighting, cooking and heating purposes. Wood/bush wood is used as fuel by 78% households, 20% use dung-cakes and 2% other fuels. The regional 220KV grid station is situated 1 km from Mari Indus city and 2 km from Daud Khel city. Power transmission line of Daud Khel grid station passes at a distance of 4 km from the barrage.

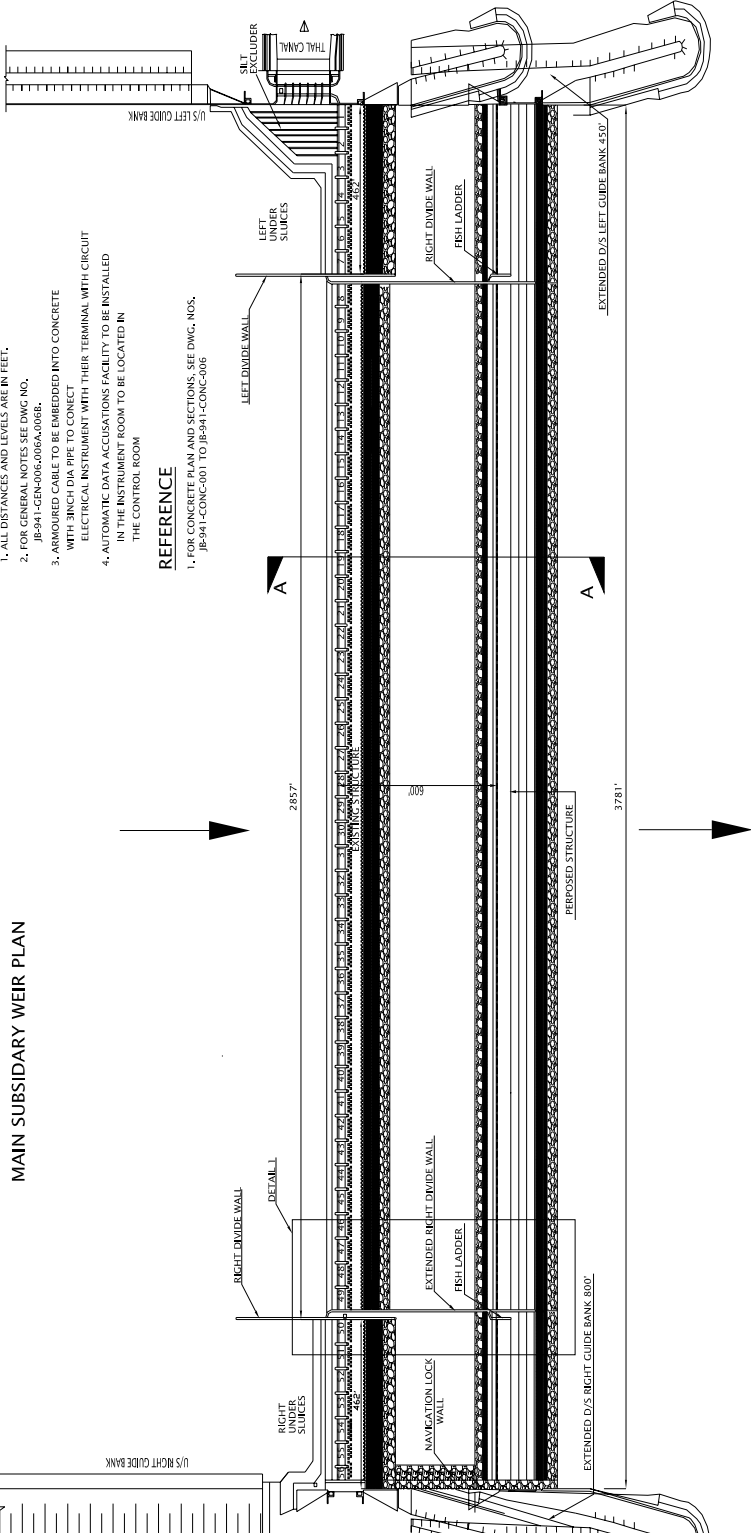
- **Area to be handed over to contractor during construction:**

Map shown on Page No. 6-16 is the detail of the area which will be handed over to the Contractor during the construction on temporary basis. The areas are

- Proposed area for Consultant's Offices and Mess
- Proposed area for Labour Camps, Site Facilities and Shopping
- Area proposed for Workshop
- Proposed Jetty area and Batching Plant

1	Earth Work	53,244,000 cft
2	Concrete	6,595,300 cft
3	Fabrication of Steel	3,648,700 Kg
4	Stone Work	10,057,800 cft
5	Jute Bags 1.25 cft	826,926 Each
6	Sheet Piling	1,209,456 Kg
7	Dismantling of Temporary Diversion Works (i) Stone Masonry (ii) Jute Bags (iii) Earth	2,213,500 cft 826,900 Each 18,124,000 cft

1	trusses, skin plate and end girders. Under sluice gates (3 trusses and 5'-3" skin plate)	15 Nos.
2	Rehabilitation of worn out and corroded lower part of the gate including trusses, skin plate and end girders. Weir gates (2 trusses and 4'-9" skin plate)	42 Nos.
3	Replacement of sill beams for barrage gates	58 Nos.
4	Installation of Bulkhead gate guides	55 Nos.
5	Modification of groove and rocker assembly, for barrage gates	1 Job
6	Electrification and modernization of Winch machines with provision of manual operation for barrage and canal gates.	72 Nos.
7	Installation of local and central control units for automatic operation of gates	1 Job
8	Construction of incline facility and Jetty for bulkhead gates.	1 Job
9	Rehabilitation of existing work shop	1 Job



MAIN SUBSIDIARY WEIR PLAN

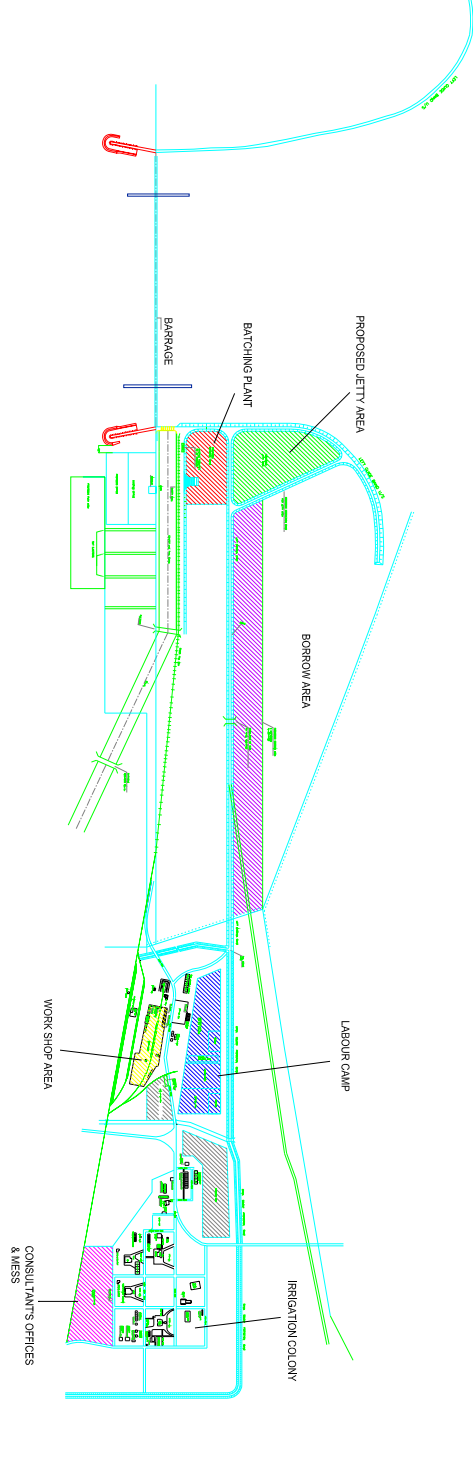
NOTES

1. ALL DISTANCES AND LEVELS ARE IN FEET.
2. FOR GENERAL NOTES SEE DWG. NO. JB-941-GEN-006-006A-006B.
3. ARMOURD CABLE TO BE EMBEDDED INTO CONCRETE WITH 3/4" DIA PIPE TO CONNECT ELECTRICAL INSTRUMENT WITH THEIR TERMINAL WITH CIRCUIT
4. AUTOMATIC DATA ACQUISITIONS FACILITY TO BE INSTALLED IN THE INSTRUMENT ROOM TO BE LOCATED IN THE CONTROL ROOM

REFERENCE

1. FOR CONCRETE PLAN AND SECTIONS, SEE DWG. NOS. JB-941-CONC-001 TO JB-941-CONC-006

LEGEND	
LABOUR CAMP	
CONSULTANT'S OFFICES	
WORK SHOP	
BATCHING PLANT	
JETTY AREA	
PROPOSED BORROW AREA	



AREA TO BE HANDED OVER TO CONTRACTOR FOR CONSTRUCTION
Labour Camp, Borrow Area, Batching Plant, Jetty Area, Consultant Offices

