

Annex: Procedural Rules

Unless otherwise agreed by the Employer and the Contractor, the DB shall visit the site at intervals of not more than 140 days, including times of critical construction events, at the request of either the Employer or the Contractor. Unless otherwise agreed by the Employer, the Contractor and the DB, the period between consecutive visits shall not be less than 70 days, except as required to convene a hearing as described below.

The timing of and agenda for each site visit shall be as agreed jointly by the DB, the Employer and the Contractor, or in the absence of agreement, shall be decided by the DB. The purpose of site visits is to enable the DB to become and remain acquainted with the progress of the Works and of any actual or potential problems or claims, and, as far as reasonable, to endeavour to prevent potential problems or claims from becoming disputes.

Site visits shall be attended by the Employer, the Contractor and the Engineer and shall be co-ordinated by the Employer in co-operation with the Contractor. The Employer shall ensure the provision of appropriate conference facilities and secretarial and copying services. At the conclusion of each site visit and before leaving the site, the DB shall prepare a report on its activities during the visit and shall send copies to the Employer and the Contractor.

The Employer and the Contractor shall furnish to the DB one copy of all documents which the DB may request, including Contract documents, progress reports, variation instructions, certificates and other documents pertinent to the performance of the Contract. All communications between the DB and the Employer or the Contractor shall be copied to the other Party. If the DB comprises three persons, the Employer and the Contractor shall send copies of these requested documents and these communications to each of these persons.

If any dispute is referred to the DB in accordance with Sub-Clause 20.4 of the Conditions of Contract, the DB shall proceed in accordance with Sub-Clause 20.4 and these Rules. Subject to the time allowed to give notice of a decision and other relevant factors, the DB shall:

- (a) act fairly and impartially as between the Employer and the Contractor, giving each of them a reasonable opportunity of putting his case and responding to the other's case, and
- (b) adopt procedures suitable to the dispute, avoiding unnecessary delay or expense.

The DB may conduct a hearing on the dispute, in which event it will decide on the date and place for the hearing and may request that written documentation and arguments from the Employer and the Contractor be presented to it prior to or at the hearing.

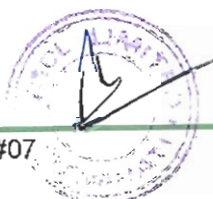
Except as otherwise agreed in writing by the Employer and the Contractor, the DB shall have power to adopt an inquisitorial procedure, to refuse admission to hearings or audience at hearings to any persons other than representatives of the Employer, the Contractor and the Engineer, and to proceed in the absence of any party who the DB is satisfied received notice of the hearing; but shall have discretion to decide whether and to what extent this power may be exercised.

The Employer and the Contractor empower the DB, among other things, to:

- (a) establish the procedure to be applied in deciding a dispute,
- (b) decide upon the DB's own jurisdiction, and as to the scope of any dispute referred to it,
- (c) conduct any hearing as it thinks fit, not being bound by any rules or procedures other than those contained in the Contract and these Rules,
- (d) take the initiative in ascertaining the facts and matters required for a decision,
- (e) make use of its own specialist knowledge, if any,
- (f) decide upon the payment of financing charges in accordance with the Contract,
- (g) decide upon any provisional relief such as interim or conservatory measures, and
- (h) open up, review and revise any certificate, decision, determination, instruction, opinion or valuation of the Engineer, relevant to the dispute.

The DB shall not express any opinions during any hearing concerning the merits of any arguments advanced by the Parties. Thereafter, the DB shall make and give its decision in accordance with Sub-Clause 20.4, or as otherwise agreed by the Employer and the Contractor in writing. If the DB comprises three persons:

- (a) it shall convene in private after a hearing, in order to have discussions and prepare its decision;
- (b) it shall endeavour to reach a unanimous decision: if this proves impossible the applicable decision shall be made by a majority of the Members, who may require the minority Member to prepare a written report for submission to the Employer and the Contractor; and



- (c) if a Member fails to attend a meeting or hearing, or to fulfil any required function, the other two Members may nevertheless proceed to make a decision, unless:
- (i) either the Employer or the Contractor does not agree that they do so, or
 - (ii) the absent Member is the chairman and he/she instructs the other Members not to make a decision.



Chief Executive Officer
Guwahati Metropolitan Dev. Authority



Form FIN – 5: Acknowledgment of Compliance with Guidelines for Procurement under Japanese ODA Loans*

- A. I, **Dilip Gogoi, General Manager** duly authorized by **IVRCL LIMITED** hereby certify on behalf of the Bidder and myself that information provided in the Bid submitted by the Bidder for (Loan No. ID – P 201, Guwahati Water Supply Project) is true, correct and accurate to the best of my knowledge and belief. I further certify that on behalf of the Bidder that;
- (i) the Bid has been prepared and submitted in compliance with the terms and conditions set forth in Guidelines for Procurement under Japanese ODA Loans ("Guidelines"); and
 - (ii) the Bidder has not taken any action which is or constitutes a corrupt, fraudulent, collusive or coercive practice and is not subject to any conflict of interest as stipulated in the relevant section of the Guidelines.
- II. I certify that neither the Bidder nor any subcontractor, or expert nominated by the Bidder in the Bid has been sanctioned by any development assistance organizations.
- C. I further certify on behalf of the Bidder that, if selected to undertake services in connection with the Project, we shall carry out such services in continuing compliance with the terms and conditions of the Guidelines.


Authorized SIGNATORY
For and on behalf of **IVRCL LIMITED**

Date : 20/07/11

IVRCL LIMITED

Guwahati Sub Regional Office : H. No. 3, Rupkumar Path, Chachal, VIP Road, Guwahati - 781022
Tel : 0361-213785, e-mail : guwahatioffice@ivrinfra.com
Kolkata Regional Office : Akash Tower, Unit 3-A, 3rd Floor, 781 - Anandapur, Kolkata - 700 107
Tel : 033-30131600, e-mail : ivrkolkata@ivrinfra.com
Head Office : "MIHIR", B-2-350/S/A/24/1-3&2, Road # 2, Panchavati Colony, Banjara Hills, Hyderabad - 500 034. A P
Phone : 040-2335 6613/15/18/21/51 to 55, 30931111/1444 (60 lines), Fax : 040-2335 6693




Chief Executive Officer
Guwahati Metropolitan Dev. Authority

Performance Security

Bank Guarantee

[insert Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: The Chief Executive Officer (CEO),
JICA ODA Loan Project,
Guwahati Metropolitan Development Authority,
3rd Floor, STAFFED Building,
G.M.C.H Road, Bhangagarh,
Guwahati-781005, Assam, India.
Tel.: +91 361 2529650, Fax: +91 361 2529991

Date: _____

PERFORMANCE GUARANTEE No.: _____

We have been informed that [insert name of Contractor] (hereinafter called "the Contractor") has entered into Contract No. [insert reference number of the contract] dated [insert date of the contract] with you, for the execution of [insert name of contract and brief description of Works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Contractor, we [insert name of Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [insert amount in figures] ([amount in words]),¹ such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by our office/branch [Name of Issuing Bank of Guwahati, Assam, India where this guarantee is encashable/payable, of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the Day of, 2...², and any demand for payment under it must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded.

[signature(s)]

[Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.]

¹ The Guarantor shall insert an amount representing the percentage of the Contract Price specified in the Contract and denominated either in the currency(cies) of the Contract or a freely convertible currency acceptable to the Employer.

² Insert the date twenty-eight days after the expected date of receiving Performance Certificate. The Employer should note that in the event of an extension of the Time for Completion and/or Defects Notification Period, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."



Advance Payment Security

Demand Guarantee

[insert Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: The Chief Executive Officer (CEO),
JICA ODA Loan Project,
Guwahati Metropolitan Development Authority,
3rd Floor, STATFED Building,
G.M.C.H Road, Bhangagarh,
Guwahati-781005, Assam, India.
Tel.: +91 361 2529650, Fax: +91 361 2529991

Date: _____

ADVANCE PAYMENT GUARANTEE No.: _____

We have been informed that [insert name of Contractor] (hereinafter called "the Contractor") has entered into Contract No. [insert reference number of the contract] dated [insert date of the contract] with you, for the execution of [insert name of contract and brief description of Works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum [insert amount in figures] ([amount in words]) is to be made against an advance payment guarantee.

At the request of the Contractor, we [insert name of Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [insert amount in figures] ([amount in words])¹ upon receipt **by** our office/branch [Name of Issuing Bank of Guwahati, Assam, India where this guarantee is encashable/payable, of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract.

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above must have been received by the Contractor on its account number [insert account number] at [insert name and address of Bank].

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as indicated in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that ninety (90) percent of the Contract Price has been certified for payment, or on the ___ day of _____, 2____,²

whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[signature(s)]

[Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product


Chief Executive Officer
Guwahati Metropolitan Dev. Authority

¹ The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Employer.

² Insert the expected expiration date of the Time for Completion. The Employer should note that in the event of an extension of the Time for Completion, the Employer would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Retention Money Security

Demand Guarantee

[insert Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: The Chief Executive Officer (CEO),
JICA ODA Loan Project,
Guwahati Metropolitan Development Authority,
3rd Floor, STAFED Building,
G.M.C.H Road, Bhangagarh,
Guwahati-781005, Assam, India.
Tel.: +91 361 2529650, Fax: +91 361 2529991

Date: _____

RETENTION MONEY GUARANTEE No.: _____

We have been informed that [insert name of Contractor] (hereinafter called "the Contractor") has entered into Contract No. [insert reference number of the contract] dated [insert date of the contract] with you, for the execution of [insert name of contract and brief description of Works] (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, when the Taking-Over Certificate has been issued for the Works and the first half of the Retention Money has been certified for payment, payment of [insert the second half of the Retention Money or if the amount guaranteed under the Performance Guarantee when the Taking-Over Certificate is issued is less than half of the Retention Money, the difference between half of the Retention Money and the amount guaranteed under the Performance Security] is to be made against a Retention Money guarantee.

At the request of the Contractor, we [insert name of Bank] hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of [insert amount in figures] ([amount in words])¹ upon receipt by our office/branch [Name of Issuing Bank of Guwahati, Assam, India where this guarantee is encashable/payable, of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract.

It is a condition for any claim and payment under this guarantee to be made that the payment of the second half of the Retention Money referred to above must have been received by the Contractor on its account number [insert account number] at [insert name and address of Bank].

This guarantee shall expire, at the latest, 21 days after the date when the Employer has received a copy of the Performance Certificate issued by the Engineer. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

[signature(s)]

[Note: All italicized text (including footnotes) is for use in preparing this form and shall be deleted from the final product.]


Chief Executive Officer
Guwahati Metropolitan Dev. Authority

¹ The Guarantor shall insert an amount representing the amount of the second half of the Retention Money or if the amount guaranteed under the Performance Guarantee when the Taking-Over Certificate is issued is less than half of the Retention Money, the difference between half of the Retention Money and the amount guaranteed under the Performance Security and denominated either in the currency(ies) of the second half of the Retention Money as specified in the Contract, or in a freely convertible currency acceptable to the Employer.

Reply to Queries on Bidding Documents for Contract C#07, held on 21 May 2011, at PIU Office, Guwahati, Assam

Sl. No.	Volume / Section / Sub-section	Clause No. / Page No.	Subject / Item	Query raised by the Pre-qualified Bidders	Clarification by GMDA
	BIDDER A				
A1			Topography Survey	In the BOQ it is indicated that the Topography Survey (Item No. 1.1) is for 60 km whereas the Pipe Length is about 407 km. Also in the Scope of Work (Item No. 2.3.2.i) it is mentioned, "Topography survey of a part of project area". Please clarify whether the area for Topography survey is different from the rest of the pipeline or within it.	The portion of the package area which was not surveyed and was left out by employer is given under the scope of contractor. So the scope of topography survey by the contractor becomes the part of the total package area. Area to be surveyed (BOQ Item 1.1) will be shown to successful bidder. It shall be the responsibility of the Contractor to propose pipeline alignments and exact pipe locations and to complete the survey of the pipeline routes. Based on the approval of the above, the Contractor shall submit shop drawings.
A2			Dismantling of Asphalt & Concrete Roads	Dismantling of Asphalt & Concrete Roads: This item is included along with Excavation of Pipe Trenches (BOQ Item No. 2.2). Generally this should be measured separately and considered as a separate BOQ item. Please clarify.	As per bid document. Dismantling (demolishing) the existing road structures shall be included in the cost for excavation.
A3			Pipe store yard	Please provide the distance of Employer's D.I. Pipe store from the proposed project sites.	Maximum 15 km from the package boundary. Refer Addendum No.-01.
A4			Disposal	Please provide the distance of the disposal site for disposal of excavated soil from the proposed site.	The distance is within 10 km (refer to Addendum No.1).
A5			Retention money	Please allow Retention Money to be	As per bid document.

Sl. No.	Volume / Section / Sub-section	Clause No. / Page No.	Subject / Item	Query raised by the Pre-qualified Bidders	Clarification by GMDA
				deposited in the form of Bank Guarantee of an equivalent amount instead of cash retention from the R.A. Bills.	
A6			Excise duty	Please confirm whether the Excise Duty Exemption has been considered for this project.	Yes, as mentioned in the bid document.
A7			Service tax	As the D.I. pipe is provided by the Employer, please confirm that there is no service tax to be considered for the same.	No service tax is applicable for DI pipes which are to be supplied by employer.
A8			Bid validity period	Please confirm that Bid Validity Period is 120 days from deadline of submission of bid.	Yes, as per bid document. Refer clause ITB 18.1.
A9			Soft copy of tender document	We request you to provide soft copy of the Tender documents.	Soft copy of BOQ will be provided.
	BIDDER B				
B1			Pipe store yard	Kindly provided us the location of store yard from where the pipes are issued and approx. distance to the laying site.	Maximum 15 km from the package boundary. Refer Addendum 1.
B2			Lining & Coating	Kindly confirm the mix proportion for Cement mortar to be used for Internal and external lining of MS Pipes.	As per specification lining and coating is epoxy based. Refer clause 4.3 of Technical specification.
B3			Gasket	Kindly confirm whether EDPM rubber gasket and flange gaskets for D.I. Pipes are issued by Employer or in contractor's scope.	As per clause 1.7.3 Gaskets for Spigot & socket pipes will be supplied by employer. Contractor has to procure required socketed and flanges specials (which includes flanged pipes as per 4.2.3) required for bends, specials and other appurtenances.

Sl. No.	Volume / Section / Sub-section	Clause No. / Page No.	Subject / Item	Query raised by the Pre-qualified Bidders	Clarification by GMDA
B4			Lining	As the diameters of M.S. Pipes are small, we request you to kindly allow for inside painting instead of inlining.	As per specification.
B5			M.S. Pipes fabrication	Kindly accept for M.S. Pipes fabricated by ERW process instead of spirally welded.	As per specification.
B6			ROU clearance	Kindly provide the details of ROU clearance for the project. Whether in Contractor's scope or Employer's Scope.	Preparation of Working drawing (BOQ item 1.2) is contractor's scope. Based on this ROU clearance is under the Employer's scope assisted by the Contractor.
B7			Service tax	As the D.I. Pipes supply is in Employer's scope, kindly confirm whether service tax to be considered on the free issue materials or not.	No service tax is applicable for DI pipes which are to be supplied by employer.
	BIDDER C				
C1	Section VI A, Sub section I	1.7.3 Page 4 of 17	Employer supplied DI Pipes	Please provide the maximum distance of the Employer's store yard/yards, from where DI pipes are to be issued for laying and jointing work.	Maximum 15 km from the package boundary. Refer Addendum No.-01.
C2	Section II Bid Data Sheet	ITB 14.7	Excise duty exemption	Since this is JICA assisted Project and tenders are invited under Local Competitive Bidding, we presume that excise duty exemption is available for finished material/raw material/ valves/pipes/special procured under this project, please confirm.	Yes.
C3	Part I		Service Tax	Since DI pipes supply is in Employer's scope, kindly confirm whether service tax is applicable on freely issued	No service tax is applicable for DI pipes which are to be supplied by employer.

Sl. No.	Volume / Section / Sub-section	Clause No. / Page No.	Subject / Item	Query raised by the Pre-qualified Bidders	Clarification by GMDA
				material. If so, it may please be reimbursed as per actuals.	
C4			Approved vendor list	As there is no approved vendors list for supply of cement/steel/ valves/ MS pipes& specials etc. we presume that they can be procured from reputed manufacturers, as per the corresponding specification, please confirm.	As per specification in the Bid document.
C5	BOQ Pipeline	Item No. 2.02 & Item No. 8	Removal of asphalt road and concrete road surfacing; Road Restoration	The total quantity of earthwork excavation in ordinary rock including removal of asphalt and concrete road surfacing 0.0m to 1.50m below GL is given as 74,300 Cum; Whereas the total quantity of road restoration for GSB+ WMM+DBM+SDBC +BM+concrete roads is given as 1,43,100 Cum. Since the quantities given for road restoration are more than the excavated quantities, kindly reconfirm the quantities to be executed for Item No. 2.02& Item No. 8	The quantities are per the BOQ. The 74,300 Cum is only a portion of the total excavation in the BOQ. The total excavation quantity exceeds the restoration quantity.
C6	Section VI A Sub section 10	10.2.2 Page 4 of 16	Disposal of surplus excavated material	Kindly inform the lands available with GMDA for disposal for surplus earth and provide the lead details for the same.	The distance is within 10 km (refer to Addendum No.1).

Sl. No.	Volume / Section / Sub-section	Clause No. / Page No.	As per Original Bidding Document	Revised Version (to be read as)
1	Part -2 Section VIA Subsection 3	Clause 3.6.3 Pg. 5 of 8	"Disposal of building/construction rubbish by mechanical transportation up to 1 km including loading and unloading complete work."	"Disposal of building/construction rubbish by mechanical transport up to 10 Km. including loading and unloading complete work."
2	Part -2 Section VIA Subsection 4	Clause 4.1, Third paragraph, Pg. 1 of 25	-	Add to last line : "Maximum distance of the Departmental Stores from where DI Pipes are to be lifted by the contractor from the proposed distribution network site is 15 km from package boundary."
3	Part -2 Section VIA Subsection 6	Clause 6.7.4.1, Pg. 7 of 22		Add to last line : "In the opinion of Engineer if the bed level (or bedding level) is not suitable for pipe laying due to presence of unsuitable material or earth, the contractor shall remove that material or earth upto maximum depth of 750mm beyond the bedding level and replace it by filling as per specification with selected fill material as directed by Engineer. No payment will be made for removing the unsuitable material and is deemed to be included in contract amount. Filling by suitable filling material will be paid as per Backfilling item of BOQ."
4	Part -2 Section VIA Subsection 10	Clause 10.2.2, Pg. 4 of 16	Last paragraph : "The Contractor shall identify disposal area(s) for surplus excavated material and dispose of materials in compliance with the ESMAP and shall avoid haphazard or scattered dumping of debris."	Last paragraph : "The Contractor shall identify disposal area(s), duly approved by Employer, for surplus excavated material and dispose of materials in compliance with the ESMAP and shall avoid haphazard or scattered dumping of debris within 10 Km of the excavation site."
5.	Part -1 Section	ITB 7.1 Pg.	The Employer will respond in writing to any request for clarification, provided that such request is received no later than twenty- eight (28) days prior to the deadline for submission of	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 bids.

Sl. No.	Volume / Section / Sub-section	Clause No. / Page No.	As per Original Bidding Document	Revised Version (to be read as)
			bids.	
6.	Part -1 Section IV A Bidding Forms	Form PER 1 & 2		Add: Accident Prevention Officer
7.a	Part 1 Section VIII PC Annexure 2	Price Adjustment Sample Price Adjustment Formula and Adjustment Data	-	Refer to attachment-1
7.b	Part 1 Section VIII PC Annexure 2	Price Adjustment Schedule of Adjustment Data	-	Refer to attachment -2
8.a	Part 1 Section IV B Bidding Forms	Bill of Quantities Item No. 3.1	Supplying spirally welded MS pipe with internal lining and external coating as per the specification of the following internal diameters and	Internal diameters shall be read as nominal diameters Size of pipes indicated as ID shall be read as ND
8.b	Part 1 Section IV B Bidding Forms	Bill of Quantities Item No. 3.3, 3.5,		Size of pipes indicated as ID shall be read as ND

Part -1, section VIII PC
Annexure 2, Price Adjustment
Sample Price Adjustment Formula and Data

Clauses	Original	Addendum
Section VIII PC Annexure 2 Price Adjustment Sample Price Adjustment Formula	Pricefollowing formula PI = In which: P₁ = adjustment amount payable to the Contractor	Pricefollowing formula PI = In which” P₁ = adjustment amount made every six (6) months, or part thereof, payable to the Contractor
Section VIII PC Annexure 2 Price Adjustment Schedule of Adjustment Data	For costs incurred in India and/or paid in Indian Rupees: <ul style="list-style-type: none"> • Cost Index for Materials, other than steel M/A: The average wholesale price index for all commodities for the month in which the adjustment data falls, as published by the Reserve Bank of India for India (Base year: 1993-94 = 100)	For costs incurred in India and/or paid in Indian Rupees: <ul style="list-style-type: none"> • Cost Index for Materials, other than steel M/A: The average wholesale price indexes for the following major materials for the month in which the adjustment data falls, as published by the Reserve Bank of India for India (Base year: 1993-94 = 100): Concrete Work: Cement, Stone Aggregate Road Work: Stone Aggregate, Bitumen Masonry work: Brick Plastic Pipes: HDPE

Part -1, section VIII PC
Annexure 2, Price Adjustment
Schedule of Adjustment Factor

1) Schedule of Adjustment Factor

Replace Schedule of Data form (Table A. Local Currency) of Section IVB: Bidding Forms with the attached form.

2) Non Adjustable Schedules

No price adjustment is applied for the following schedules of BOQ:

Schedule 1: Survey and Investigation Work

Schedule 9: Testing, Trial Run and Commissioning

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
2.0	EARTHWORK						
2.1	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, etc. in all kinds of ordinary soils such as murum, sand, sandy silt, clay, kankar etc. or in combination. Excavation shall include the removal of WBM roadway surfaces, brick surfacing, including dressing, compaction of the bottoms of the excavation, shoring and strutting wherever required, dewatering whenever required, removal of the excavated soil, stockpiling and disposal of surplus excavated soil off-site as directed by the Employer's Representative.						
	Excavation will be paid for in the following segments:						
(a)	0 to 1.5 m from GL		25%	20%		40%	15%
(b)	above 1.5 m to 3.0 m depth from GL		25%	20%		40%	15%
(c)	above 3.0 m to 4.5 m depth from GL		25%	20%		40%	15%
2.2	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, masonry work, etc. in all kinds of ordinary rock, Excavation shall include the removal of asphalt and concrete road surfacing, including dressing, compaction of the bottoms, shoring and strutting wherever required, dewatering whenever required, removal of the excavated rock, stockpiling and disposal of surplus excavated rock off-site as directed by the Employer's Representative.						
	Excavation will be paid for in the following segments:						
(a)	0 to 1.5 m from GL		25%	20%		40%	15%
(b)	above 1.5m to 3.0 m depth from GL		25%	20%		40%	15%
(c)	above 3.0 m to 4.5 m depth from GL		25%	20%		40%	15%

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
2.3	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, etc. in all kinds of hard rock requiring blasting, Excavation shall include dressing, compaction of the bottoms, shoring and strutting wherever required, dewatering whenever required, removal of the excavated rock, stockpiling and disposal of surplus excavated rock off-site as directed by the Employer's Representative.						
	Excavation will be paid for in the following segments:						
(a)	0 to 1.5 m from GL		25%	20%		40%	15%
(b)	above 1.5m to 3.0 m depth from GL		25%	20%		40%	15%
(c)	above 3.0 m to 4.5 m depth from GL		25%	20%		40%	15%
2.4	Earth work for excavation of foundations, pipe trenches, valve chambers, thrust blocks, etc. in all kinds of hard rock (blasting prohibited), Excavation shall include dressing, compaction of the bottoms, shoring and strutting wherever required, dewatering whenever required, removal of the excavated rock, stockpiling and disposal of surplus excavated rock off-site as directed by the Employer's Representative.						
	Excavation will be paid for in the following segments:						
(a)	0 to 1.5 m from GL		25%	20%		40%	15%
(b)	above 1.5m to 3.0 m depth from GL		25%	20%		40%	15%
(c)	above 3.0 m to 4.5 m depth from GL		25%	20%		40%	15%
2.5	Backfilling of pipe trenches, foundations, etc. with approved graded excavated soil (excluding rock), including placing in layers not exceeding 20 cm in depth each, and compacting each layer, complete as per the specification and as directed by the Employer's Representative.		25%	20%		40%	15%

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
2.6	Backfilling of pipe trenches, foundations, etc. with approved graded sand, including placing in layers not exceeding 20 cm in depth each, and compacting each layer, complete as per the specification and as directed by the Employer's Representative.		25%	20%		40%	15%
2.7	Backfilling of pipe trenches, foundations, etc. with approved graded gravel, including placing in layers not exceeding 20 cm in depth each, and compacting each layer, complete as per the specification and standard drawings and as directed by the Employer's Representative.		25%	20%		40%	15%
Subtotal							
3.0	PIPELINES, SPECIALS AND APPURTENANCES						
3.1	Supplying spirally welded MS pipe with internal lining and external coating as per the specification of the following nominal diameters and wall thicknesses. The rate shall include third party inspection, transportation, freight charges, loading, unloading and stacking at the project site, with the cost of all labor, material, taxes and duties.						
(a)	300 mm ND 6 mm thick (at NH crossing)		25%	3.75%	63.75%	0%	7.5%
(b)	400 mm ND 20 mm thick (for trenchless pipe laying)		25%	3.75%	63.75%	0%	7.5%
(c)	500 mm ND 20 mm thick (for trenchless pipe laying)		25%	3.75%	63.75%	0%	7.5%
(d)	700 mm ND 6 mm thick		25%	3.75%	63.75%	0%	7.5%
(e)	700 mm ND 20 mm thick (at NH crossing)		25%	3.75%	63.75%	0%	7.5%
(f)	1000 mm ND 8 mm thick		25%	3.75%	63.75%	0%	7.5%

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
3.2	Supplying all types of MS Specials plain ended, socket ended and flanged as required with internal lining and external coating as per the specification, such as bends, tees, tapers, spool pieces, blind flanges, pieces for pipe connection, valve connections, dismantling joints, anchor bolts, straps, air vent pipe, etc. of different diameters, manufactured from Fe 410 grade steel. This item includes loading, transportation to the project site, unloading and stacking, etc. complete with cost of third party inspection, material, labor, taxes and duties.		25%	3.75%	63.75%	0%	7.5%
3.3	Handling, aligning, laying and jointing MS pipes and specials to correct line and level in trenches. The item includes transportation of pipes and specials from the storeyard to the project site, stacking of pipe as per BIS requirements, loading, unloading, hoisting, lowering, marginal cutting and grinding wherever necessary, assembling, jointing, providing temporary supports, lining and coating at joints etc. for pipe of the following diameters and thicknesses. The rate also shall include radiography of field joints, field testing, etc. as specified and shown on the drawings and specification.						
(a)	300 mm ND 6 mm thick (at NH crossing)		25%	20%		40%	15%
(b)	700 mm 6 mm thick		25%	20%		40%	15%
(c)	700 mm ND 20 mm thick (at NH crossing)		25%	20%		40%	15%
(d)	1000 mm 8 mm thick		25%	20%		40%	15%

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
3.4	Supplying DI Specials and fittings with plain, double socket, socket & flanged and double flanged end connections as required, with lining and coating as per the specification, and IS 9523 with EPDM rubber gaskets as per IS 5382 as required for successful completion of the work. This item includes third party inspection, transportation, freight, loading and unloading, stacking etc. all complete for various sizes of DI specials and fittings as noted with the following end connections.						
(a)	Tee's, Socket, collar, tail pieces, flanged tapers, socketed tapers, flanged spigot short pipes, flanged socket short piece, all bends, end caps, barrel piece, dismantling joints etc. required for suitable completion of the works.		25%	3.75%	63.75%	0%	7.5%
(b)	Double flanged pipe pieces, required for suitable completion of works.		25%	3.75%	63.75%	0%	7.5%
3.5	Handling, aligning, laying and jointing of K-9 DI pipe (Push-on Joint) to other pipe at fittings and specials, with EPDM rubber O-rings (as per IS 5382) and flange gaskets (as per IS 12288) as per specifications. This item includes transportation of pipes, specials and fittings from the storeyard to the project site, stacking of pipe and fittings as per BIS requirements, loading, unloading, hoisting, lowering, marginal cutting and grinding wherever necessary, assembling, jointing, providing temporary supports etc., all complete with approved equipment, for pipe of the following diameters.						
(a)	100 mm DN DI - K9 pipe		25%	20%		40%	15%
(b)	150 mm DN DI - K9 pipe		25%	20%		40%	15%
(c)	200 mm DN DI - K9 pipe		25%	20%		40%	15%
(d)	250 mm DN DI - K9 pipe		25%	20%		40%	15%
(e)	300 mm DN DI - K9 pipe		25%	20%		40%	15%
(f)	400 mm DN DI - K9 pipe		25%	20%		40%	15%
(g)	500 mm DN DI - K9 pipe		25%	20%		40%	15%
(h)	600 mm DN DI - K9 pipe		25%	20%		40%	15%

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Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
3.6	Supplying of HDPE (PE80) pipe including all specials confirming to IS 4984 and the specifications, including third party inspection, all taxes and duties, transportation, freight charges, loading and unloading, conveyance to the project site and stacking with cost of all labor and material for following pipe diameters.						
(a)	110 mm OD HDPE PE-80 PN6		25%	3.75%	0%	63.75%	7.5%
(b)	160 mm OD HDPE PE-80 PN6		25%	3.75%	0%	63.75%	7.5%
(c)	110 mm OD HDPE PE-80 PN10		25%	3.75%	0%	63.75%	7.5%
(d)	160 mm OD HDPE PE-80 PN10		25%	3.75%	0%	63.75%	7.5%
(e)	225 mm OD HDPE PE-80 PN10		25%	3.75%	0%	63.75%	7.5%
(f)	250 mm OD HDPE PE80 PN 10		25%	3.75%	0%	63.75%	7.5%
(g)	315 mm OD HDPE PE80 PN 10		25%	3.75%	0%	63.75%	7.5%
(h)	355 mm OD HDPE PE80 PN 10		25%	3.75%	0%	63.75%	7.5%
3.7	Handling, aligning, laying and jointing of HDPE (PE80) pipes with specials by butt welding / spigot joints confirming to IS and specifications. The item includes transportation of pipes and specials from store yard to site, stacking of pipe as per BIS, loading, unloading, hoisting, lowering, cutting and grinding wherever necessary, assembling, jointing, providing temporary supports etc., all complete with approved equipment, for pipes of following diameters.						
(a)	110 mm OD HDPE PE-80 PN6		25%	20%		40%	15%
(b)	160 mm OD HDPE PE-80 PN6		25%	20%		40%	15%
(c)	110 mm OD HDPE PE-80 PN10		25%	20%		40%	15%
(d)	160 mm OD HDPE PE-80 PN10		25%	20%		40%	15%
(e)	225 mm OD HDPE PE-80 PN10		25%	20%		40%	15%
Subtotal							

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Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
4	TRENCHLESS TECHNOLOGY						
4.1	Pipe jack for National Highway/Railway crossing with Jacking and Pushing method. The item include pushing jointing following diameter MS pipe of required length, construction of Receiving and Jacking pit with suitable shoring and strutting (if required), including installation of jacking platform, thrust resistant arrangement of required capacity including , hydraulic jacking with required accessories, required excavation inside the jacking pipe and disposal the same, etc. all complete as per drawing, specification and as directed.						
(a)	Jacking and pushing of 700 mm ID 20 mm thick MS pipe		25%	3%	64.00%	0%	8.0%
4.2	Laying of pipe and jointing by trenchless technology including						
(a)	110 mm OD HDPE PE80 PN10		25%	3%	64.00%	0%	8.0%
(b)	160 mm OD HDPE PE80 PN 10		25%	3%	64.00%	0%	8.0%
(c)	225 mm OD HDPE PE80 PN 10		25%	3%	64.00%	0%	8.0%
(d)	250 mm OD HDPE PE80 PN 10		25%	3%	64.00%	0%	8.0%
(e)	315 mm OD HDPE PE80 PN 10		25%	3%	64.00%	0%	8.0%
(f)	355 mm OD HDPE PE80 PN 10		25%	3%	64.00%	0%	8.0%
(g)	400 mm ID MS Pipe		25%	3%	64.00%	0%	8.0%
(h)	500 mm ID MS Pipe		25%	3%	64.00%	0%	8.0%
	Subtotal						

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
5.0	VALVES AND APPURTENANCES						
5.1	Supplying of following diameters Cast iron double flanged ends Sluice valve as per IS 14864 with end cap and all accessories required for fixing and jointing, and shall include anti-corrosive painting etc. all complete. The rate shall include all local and central taxes, third party inspection, transportation, freight charges, loading and unloading, conveyance to storeyard and stacking the same, with cost of all labour and material. The item shall be as per specification, drawing and as directed.						
(a)	80 mm dia (for Fire hydrant) PN1.0		25%	3.75%	63.75%	0%	7.5%
(b)	100 mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(c)	150 mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(d)	200 mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(e)	250 mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(f)	300 mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(g)	80 mm dia (for Fire hydrant) PN1.6		25%	3.75%	63.75%	0%	7.5%
(h)	100 mm dia PN1.6		25%	3.75%	63.75%	0%	7.5%
(i)	150 mm dia PN1.6		25%	3.75%	63.75%	0%	7.5%
(j)	200 mm dia PN1.6		25%	3.75%	63.75%	0%	7.5%
(k)	250 mm dia PN1.6		25%	3.75%	63.75%	0%	7.5%
(l)	300 mm dia PN1.6		25%	3.75%	63.75%	0%	7.5%

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
5.2	Handling, aligning and installing in true to line and level cast iron double flanged Sluice Valves (IS 14864) of the following diameters. This item includes transportation of valves and accessories from the storeyard to the project site, loading, unloading, hoisting, lowering, assembling and jointing including the cost of all jointing materials such as rubber gaskets, nuts, bolts, etc., and providing temporary supports, as per the specifications and drawings.						
(a)	80 mm dia (for Fire hydrant) PN1.0		25%	20%		40%	15%
(b)	100 mm dia PN1.0		25%	20%		40%	15%
(c)	150 mm dia PN1.0		25%	20%		40%	15%
(d)	200 mm dia PN1.0		25%	20%		40%	15%
(e)	250 mm dia PN1.0		25%	20%		40%	15%
(f)	300 mm dia PN1.0		25%	20%		40%	15%
(g)	80 mm dia (for Fire hydrant) PN1.6		25%	20%		40%	15%
(h)	100 mm dia PN1.6		25%	20%		40%	15%
(i)	150 mm dia PN1.6		25%	20%		40%	15%
(j)	200 mm dia PN1.6		25%	20%		40%	15%
(k)	250 mm dia PN1.6		25%	20%		40%	15%
(l)	300 mm dia PN1.6		25%	20%		40%	15%

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
5.3	Supplying of following diameters double flanged Butterfly valves (manually operated) as per IS 13095 with all accessories, including approved anti-corrosive painting. The rate shall include all local and central taxes, third party inspection, transportation, freight charges, loading, unloading, conveyance to storeyard and stacking the same, with cost of all labour, and material. The item shall be as per specification, drawing and as directed.						
(a)	400 mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(b)	500 mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(c)	400 mm dia PN1.6		25%	3.75%	63.75%	0%	7.5%
(d)	500 mm dia PN1.6		25%	3.75%	63.75%	0%	7.5%
5.4	Handling, aligning, and fixing in true to line and level following diameters and rating double flanged Butterfly valves PN 1.6 (manually operated as per IS 13095) including cost of required jointing material such as rubber packing, nuts bolts etc. The item includes transportation of valves and accessories from store yard to site, loading, unloading, hoisting, lowering, grinding wherever necessary, assembling and jointing, providing temporary supports etc., all complete with approved equipment, for valves of following diameters, for all lead and lift. The item shall be as per specification, drawing and as directed.						
(a)	400 mm diameter PN1.0		25%	20%		40%	15%
(b)	500 mm diameter PN1.0		25%	20%		40%	15%
(c)	400 mm diameter PN1.6		25%	20%		40%	15%
(d)	500 mm diameter PN1.6		25%	20%		40%	15%

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
5.5	Supplying of following diameters of Double chamber Air valves with in built sluice valve with flanged ends as per IS 14845, with all accessories required, including anti-corrosive painting etc. all complete. The rate shall include all local and central taxes, third party inspection, transportation, freight charges, loading and unloading, conveyance to store yard and stacking the same, with cost of all labour, and material. The item shall be as per specification, drawing and as directed.						
(a)	80 mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(b)	100 mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(c)	150 mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(d)	80 mm dia PN1.6		25%	3.75%	63.75%	0%	7.5%
(e)	100 mm dia PN1.6		25%	3.75%	63.75%	0%	7.5%
(f)	150 mm dia PN1.6		25%	3.75%	63.75%	0%	7.5%
5.6	Handling, aligning, and installing in true to line and level following diameters Double chamber Air valves with in built sluice valve with all accessories and as per specifications and drawings. This item includes transportation of valves and accessories from the storeyard to the project site, loading, unloading, hoisting, assembling and jointing, including the cost of jointing materials such as rubber packing, nuts, bolts, etc., as per the specifications and drawings.						
(a)	80 mm diameter PN1.0		25%	20%		40%	15%
(b)	100 mm diameter PN1.0		25%	20%		40%	15%
(c)	150 mm diameter PN1.0		25%	20%		40%	15%
(d)	80 mm diameter PN1.6		25%	20%		40%	15%
(e)	100 mm diameter PN1.6		25%	20%		40%	15%
(f)	150 mm diameter PN1.6		25%	20%		40%	15%

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
5.7	Supplying of following diameters Pressure Reducing valve with double flanged ends and shall including anti-corrosive painting etc. all complete. The rate shall include all local and central taxes, third party inspection, transportation, freight charges, loading and unloading, conveyance to storeyard and stacking the same, with cost of all labour, and material. The item shall be as per specification, drawing and as directed.						
(a)	100mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(b)	150mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(c)	200mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(d)	250mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(e)	300mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(f)	400mm dia PN1.0		25%	3.75%	63.75%	0%	7.5%
(g)	300mm dia PN1.6		25%	3.75%	63.75%	0%	7.5%
(h)	400mm dia PN1.6		25%	3.75%	63.75%	0%	7.5%

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
5.8	Handling, aligning, and fixing in true to line and level following diameters Pressure Reducing valve double flanged ends . The item includes transportation of valves and accessories from store yard to site, loading, unloading, hoisting, lowering, grinding wherever necessary, assembling and jointing, including cost of jointing materials such as rubber packing, nuts bolts etc., providing temporary supports, all complete with approved equipment, for all leads and lifts. The item shall be as per specification, drawing and as directed.						
(a)	100mm dia PN1.0		25%	20%		40%	15%
(b)	150mm dia PN1.0		25%	20%		40%	15%
(c)	200mm dia PN1.0		25%	20%		40%	15%
(d)	250mm dia PN1.0		25%	20%		40%	15%
(e)	300mm dia PN1.0		25%	20%		40%	15%
(f)	400mm dia PN1.0		25%	20%		40%	15%
(g)	300mm dia PN1.6		25%	20%		40%	15%
(h)	400mm dia PN1.6		25%	20%		40%	15%
5.9	Providing and supplying Fire hydrants as per IS 909, consisting single flanged outlet oblique type hydrant valve, and shall include cost of anti-corrosive painting etc. all complete. The rate shall include all local and central taxes, third party inspection, transportation, freight charges, loading and unloading, conveyance to site and stacking the same, with cost of all labour, and material. The item shall be as per specification, drawing and as directed.						
(a)	80 mm dia PN1.0		25%	20%		40%	15%
(b)	80 mm dia PN1.6		25%	20%		40%	15%

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Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
5.1	Handling, aligning, and fixing Fire hydrants true to line and level. The item includes transportation of valves and accessories from store yard to site, loading, unloading, hoisting, lowering, grinding wherever necessary, assembling and jointing with cost of jointing material such as rubber packing, nuts bolts, providing temporary supports etc., all complete with approved equipment, for all leads and lifts. The item shall be as per specification, drawing and as directed.						
(a)	80 mm dia PN1.0		25%	20%		40%	15%
(b)	80 mm dia PN1.6		25%	20%		40%	15%
Subtotal							

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
6.0	VALVE CHAMBERS						
6.1	Construction of RCC and Brick masonry chambers for valves, hydrants, flow meters etc. including cost of PCC and RCC work, cost of supply and bending and binding of steel with required shuttering, cost of brick work with plaster from inside and outside, cost of precast slabs and supply and installation of SFRC frame and covers wherever required, including all the miscellaneous items of work, but excluding the supply and installation of pipes and specials, valves etc. The item shall be as per specification, drawing and as directed.						
(a)	Chamber for Sluice valve TYPE S1		25%	20%	20%	20%	15%
(b)	Chamber for Sluice valve TYPE S2		25%	20%	20%	20%	15%
(c)	Chamber for Wash out valve TYPE W1		25%	20%	20%	20%	15%
(d)	Chamber for Wash out valve TYPE W2		25%	20%	20%	20%	15%
(e)	Chamber for Butterfly valve TYPE B1		25%	20%	20%	20%	15%
(f)	Chamber for Butterfly valve TYPE B2		25%	20%	20%	20%	15%
(g)	Chamber for Butterfly valve TYPE B3						
(h)	Chamber for Air valve TYPE A1		25%	20%	20%	20%	15%
(i)	Chamber for Air valve TYPE A2		25%	20%	20%	20%	15%
(j)	Chamber for Air valve TYPE A3		25%	20%	20%	20%	15%
(k)	Chamber for Fire hydrant TYPE F1		25%	20%	20%	20%	15%
(l)	Chamber for Pressure reducing valve/ Flowmeter TYPE P1		25%	20%	20%	20%	15%
(m)	Chamber for Pressure reducing valve/ Flowmeter TYPE P2		25%	20%	20%	20%	15%
(n)	Chamber for Pressure reducing valve/ Flowmeter TYPE P3		25%	20%	20%	20%	15%
(o)	Chamber for Pressure reducing valve and flow meter TYPE P4		25%	20%	20%	20%	15%
(p)	Chamber for Pressure reducing valve and flow meter TYPE P5		25%	20%	20%	20%	15%
(q)	Chamber for Pressure reducing valve and flow meter TYPE P6		25%	20%	20%	20%	15%
	Subtotal						

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
7.0	MISCELLENEOUS CIVIL WORK						
7.1	Plain Cement Concrete Work						
	Providing and placing plain cement concrete (PCC) of one of the following grades for thrust blocks, anchor blocks, floatation blocks, etc. with 20-40mm stone aggregate (crusher broken) including finishing the surface, shuttering and staging, curing etc. as per the specifications and drawings and as directed by the Employer's Representative. This is Work not included in Item 6.						
(a)	Grade M15 concrete		25%	20%	0%	40%	15%
(b)	Grade M20 concrete		25%	20%	0%	40%	15%
7.2	Reinforced Cement Concrete Work						
	Providing and placing reinforced cement concrete (RCC) of one of the following grades with 10-20 mm stone aggregate (crusher broken) including shuttering and staging, curing etc. as per the specifications and drawings and as directed by the Employer's Representative. This is Work not included in Item 6.						
(a)	Grade M20 concrete		25%	20%	0%	40%	15%
(b)	Grade M25 concrete		25%	20%	0%	40%	15%
7.3	Concrete Reinforcement						
	Providing and fabricating steel reinforcement with Fe 415 grade steel for RCC work including straightening, cutting, bending, placing in position and tying (including cost of tie wire) ,taxes and duties, transportation etc. all complete, as per specifications and drawings and as directed by the Employer's Representative. This is Work not included in Item 6.		25%	20%	40%	0%	15%

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Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
7.4	Brick Masonry Work						
	Construction of Brick Masonry for sub/superstructure of 230/350 mm thick walls using cement mortar with a cement to sand ratio of 1:6. This item includes the cost of transportation of all materials, labor, scaffolding, curing etc. as per specifications and drawings and as directed by the Employer's Representative. This is Work not included in Item 6.		25%	20%	0%	40%	15%
7.5	Plastering Work						
(a)	Providing and applying cement sand plaster 12 mm thick in a single coat using cement mortar with a cement to sand ratio of 1:4 without neeru finish to concrete or brick surfaces including scaffolding and curing as directed by the Employer's Representative. This is Work not included in Item 6.		25%	20%	0%	40%	15%
(b)	Providing and applying cement sand plaster 20 mm thick in a single coat using cement mortar with a cement to sand ratio of 1:4 without neeru finish to concrete or brick surfaces including scaffolding and curing as directed by the Employer's Representative. This is Work not included in Item 6.		25%	20%	0%	40%	15%
7.6	Providing and laying boulder soling with boulders 100-200mm size in foundation, packing with locally available mooram and sand, including watering, dressing and leveling, all complete as per drawing and specification and as directed.		25%	20%	0%	40%	15%
7.7	Providing and laying 100 mm thick brick soling for foundations and under flooring with best quality jhama brick, sand packed and laid to level after preparing the subgrade including all labor and materials and dewatering if necessary, complete and as per the specifications and drawings and as directed by the Employer's Representative. This is Work not included in Item 6.		25%	20%	0%	40%	15%

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
7.8	Structural Steel Work						
	Providing and fabricating structural steel work in rolled sections including joists, channels, angles, beams, etc. including cutting, fabricating, grinding, hoisting, erecting, fixing in position making bolted/welded connections, applying coatings etc., as per the specifications and drawings and as directed by the Employer's Representative.		25%	20%	40%	0%	15%
	Subtotal						
8.0	ROAD RESTORATION						
8.1	Reconstruction of Bituminous Asphalt Roads						
a)	Providing and laying of Granular sub base (GSB), as per specification drawing and as directed		25%	20%	0%	40%	15%
b)	Providing and laying of Prime coat, as per specification drawing and as directed		25%	20%	0%	40%	15%
c)	Providing and laying of Wet mix macadam (WMM) , as per specification drawing and as directed		25%	20%	0%	40%	15%
d)	Providing and laying of Dense graded bituminous macadam (DBM), as per specification drawing and as directed		25%	20%	0%	40%	15%
e)	Providing and laying of Semi dense bituminous concrete (SDBC), as per specification drawing and as directed		25%	20%	0%	40%	15%
f)	Providing and laying of Tack coat (TC), as per specification drawing and as directed		25%	20%	0%	40%	15%
g)	Providing and laying of Bituminous macadam (BM), as per specification drawing and as directed		25%	20%	0%	40%	15%
h)	Providing and laying of Premix carpet (PC), as per specification drawing and as directed		25%	20%	0%	40%	15%

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder

Part -1, Section VIII PC, Annexure 2, Price Adjustment, Schedule of Adjustment Factors

Bill of Quantities							
Item No.	Description	Basic Amount in INR	Non-adjustable	Labour portion (L)	Steel (MS)	Other Materials (MA)	Equipment operation (E)
			a	b	c1	c2	d
8.2	Reconstruction of WBM Roads						
a)	Providing , laying ,spreading and compacting stone aggregates of specific sizes as per specification and drawing to water bound macadam including spreading in uniform thickness, hand packing, rolling with vibratory roller 8-10 tonnes in stages to proper grade and camber, applying and brooming requisite type of stone screenings & binding material, and completer as per specification drawing and as directed		25%	20%	0%	40%	15%
8.3	Reconstruction of Concrete Roads						
	Providing, placing and finishing Cement Concrete roads to match the existing roadway which was removed, if directed by the Employer's Representative . Grade M20 concrete shall be used and placed to the same depth as the existing roadway surface. A screeded finish shall be applied.		25%	20%	0%	40%	15%
8.4	Reconstruction of Brick Roads						
	Providing and laying of bricks on edge for road restoration on earth subgrade. The bricks shall be on edge, diagonally placed, and gap filled up with sand, all complete, as per specification and drawings.		25%	20%	0%	40%	15%
Subtotal							
TOTAL							

Weight of non-adjustable portion (a) is fixed by the Employer. Weight of other adjustment factors are shown as example and purely indicative, which are to be set by the bidder