

(ISPRL/VSP/PR-08/17-18/SECURITY BUILDING/ T10 dated 09.03.2018)



SECTION III

SPECIAL CONDITIONS OF CONTRACT (S.C.C)

COVER PAGE

BIDDING DOCUMENT FOR CONSTRUCTION OF SECURITY BUILDING

At

**Indian Strategic Petroleum Reserves Limited
Strategic Crude Oil Storage Facilities
Lova gardens, Behind HSL fabrication Yard
Post Box No.999, Gandhigram Post
VISAKHAPATNAM-530005**



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NAME OF WORK : CONSTRUCTION OF SECURITY BUILDING ALONG WITH SUPPLY AND INSTALLATION OF AMINITIES AT INDIAN STRATEGIC PETROLEUM RESERVES LIMITED (ISPRL), VISAKHAPATNAM – 530 005.

TENDER DOC NO. : ISPRL/VSP/PR-08/17-18/SECURITY BUILDING/ T10 dated 09.03.2018

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SPECIAL CONDITIONS OF CONTRACT

1.0 GENERAL

- 1.1 Special Conditions of Contract (SCC) shall be read in conjunction with the General Conditions of Contract (GCC). Schedule of Rates, specifications of work, drawings and any other document forming part of this Contract ~~where~~ the context so requires.
- 1.2 Notwithstanding the sub-division of the document into these separate sections and volumes, every part of each shall be deemed to be supplementary of every other part and shall be read with and into the Contract so far as it may be practicable to do so.
- 1.3 Where any portion of the GCC is repugnant to or at variance with any provisions of the Special Conditions of Contract, then unless a different intention appears, the provision(s) of the Special Conditions of Contract shall be deemed to override the provision(s) of GCC only to the extent that such repugnancies of variations in the Special Conditions of Contract are not possible of being reconciled with the provisions of GCC.
- 1.4 Wherever it is stated in this Bidding Document that such and such a supply is to be effected or such and such a work is to be carried out, it shall be understood that the same shall be effected / carried out by the Contractor at his own cost, unless a different intention is specifically and expressly stated herein or otherwise explicit from the context. Contract value (also referred to as Contract Price) shall be deemed to have included such cost.
- 1.5 In case of irreconcilable conflict between relevant Indian standards, GCC, Special Conditions of Contract, Specifications, Drawings and Schedule of Rates, the following shall prevail to the extent of such irreconcilable conflict, in order of precedence:
- i) Detailed Letter of Acceptance (along with Statement of Agreed Variations, if any) and its enclosures such as Schedule of Rates, Labour Rates, etc.
 - ii) Letter / Fax of Acceptance
 - iii) Special Conditions of Contract
 - iv) General Conditions of Contract
 - v) Scope of work / Job / Particular Specifications
 - vi) Drawings
 - vii) Technical/Material Specifications
 - viii) Indian Standards
- 1.6 The Pre Qualification Criteria (PQC) is given here with:

Bidders must submit following documents as minimum pre-qualifying criteria for this tender. All such documents must be valid on the closing date of tender.

Sr. No.	Criteria	PQC Document to be uploaded
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i.	Minimum annual turnover (60% of annualized estimated value of work)	The Bidder shall have a minimum annual turnover of Rs. 80 Lacs in any of the last three preceding financial years ending Mar’ 2017. (Please upload copies of Annual Report and Audited Balance sheets and Profit & Loss Account with complete schedules for the last three years. However, if the tenderer is not required to get its accounts audited under Section 44AB of The Income Tax Act, 1961, certificate from a Practicing Chartered Accountant towards the turnover of the tenderer along with copies of its Income Tax Return should be obtained. In case of non availability of audited balance sheets (Profit a loss Account Statement)/ published accounts for the year 2016-17, the audited balance sheet (profit and loss Statement)/ published account of 4th preceding financial year shall also be acceptable).						
ii.	Work orders of similar nature of works	<p>The bidder must have executed work order/s of similar nature of works (as explained under) of the following value in last five years till 31.12.2017.The amount of executed similar works for those work orders which are continuing and are for long period more than an year shall be considered for evaluating the work experience criteria.</p> <table><tr><td>One Work Order of executed work (50% of annualized estimated value of work).</td><td>Rs.64 Lakhs or</td></tr><tr><td>Two Work Orders of executed work (each work order of 40% of annualized estimated value of work).</td><td>Rs.51 Lakhs or</td></tr><tr><td>Three Work Orders of executed work (each work order of 30% of annualized estimated value of work).</td><td>Rs.37.89 Lakhs or</td></tr></table> <p>The cost as indicated above shall be inclusive of Service Tax or GST. The completion certificate, submitted by the bidder shall indicate the total value of completed job, inclusive of Service Tax also</p>	One Work Order of executed work (50% of annualized estimated value of work).	Rs.64 Lakhs or	Two Work Orders of executed work (each work order of 40% of annualized estimated value of work).	Rs.51 Lakhs or	Three Work Orders of executed work (each work order of 30% of annualized estimated value of work).	Rs.37.89 Lakhs or
One Work Order of executed work (50% of annualized estimated value of work).	Rs.64 Lakhs or							
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Three Work Orders of executed work (each work order of 30% of annualized estimated value of work).	Rs.37.89 Lakhs or							
		In case Service Tax amount / component is not included in the indicated total value of completed job as submitted completion certificate, a separate certificate from the respective client, mentioning the service tax amount if any, paid separately extra over and above the value of completed job under consideration, should be submitted by the bidder. This amount needs to be added to the value of completed job mentioned in the completion certificate to arrive at the value of the completed job inclusive of service tax						

Definition of Similar Works:

Experience of having successfully completion of Civil work at Hydro-Carbon Installation in hazardous area shall be



considered as similar work for the purpose of qualification. Similar works should have been successfully completed in a single work order of qualifying amount as given above. For this, copy of work order, Completion certificate /Final SES and payment details duly certified by owner or his authorized representative can be submitted by respective parties for arriving at the value of job executed against single work order. In case of Sub contract the WO /Completion certificate copy dully verified /endorsed by original owner for whom the work was carried out, has to be submitted.

Note:

- i. However mere submission of the relevant information and meeting the qualifying criteria would not entitle the Bidder for technical qualification. In the event document/information submitted by the Bidder is found to be incorrect, the contract with such Bidder shall be terminated at any stage and EMD or SD submitted shall be forfeited. Such Bidder may also be blacklisted/ put on Holiday List.
- ii. Notwithstanding any other condition/ provision in the tender documents, in case of ambiguity or incomplete documents pertaining to PQC, bidders shall be given only one opportunity with a fixed deadline of one week after bid opening to provide complete & unambiguous documents in support of meeting the PQ criteria through e-portal. In case the bidder fails to submit any documents or submits incomplete documents within the given time, the bidders tender will be rejected.

- 21.3 Bidder must submit their experience details inline with the requirement of the clause in first instance only, strictly along with relevant documentary evidence and the copies of work orders and completion certificates in support of their experience
- 21.4 ISPRL reserves the right to use in-house information for assessment of capability of Bidder and their performance on jobs completed/ in progress for evaluation purpose.

2.0 DETAILS OF WORK

2.1 Scope of Work

The Scope of Work shall be as described in [Appendix-I to SCC](#).

2.2 Scope of Supply

The Scope of Supply shall be as described in [Appendix-II to SCC](#).

2.3 Time Schedule

- 2.3.1 The Work shall be executed strictly as per time schedule, i.e., as per the requirement as and when the need arises. The same will be informed by ISPRL and the time frame shall be decided based on mutually agreed basis. The period of completion given includes the time required for mobilization as well as testing, rectifications, if any, retesting, demobilization and completion in all respects to the satisfaction of ISPRL.
- 2.3.2 A joint programme /schedule of execution of work will be prepared by the Engineer-in-Charge and Contractor. This programme will take into account at the time of completion mentioned in 2.3.1 above.
- 2.3.3 Daily / Monthly / weekly execution programme will be drawn up by ISPRL as per the requirement if any. The Contractor shall scrupulously adhere to the Targets / Programme by deploying adequate personnel, Equipment, Tools and Tackles and also by timely supply of required materials coming within his scope of supply as per Contract.
- 2.3.4 Contractor shall give every day category-wise labour and equipment deployment report along with the progress of work done in the Proforma prescribed by ISPRL.



2.4 Water, Power Supply and Land for contractors site office / Labour amenities.

Water and power shall be provided by ISPRL from the nearest available source for which the contractor has to make his own arrangements for using these resources. Contractors site office, Labour amenities will be the responsibility of the contractor.

2.5 Billing and Terms of Payment

The Contractor shall submit the Bills / invoice, in quadruplicate, for the work done once in a month. The Contractor shall submit all relevant documents, if specifically asked by ISPRL, for certification of invoice.

ISPRL shall release the payments **within 30 days** from the date of receipt of Bills, if found in order. No advance shall be paid.

2.6 On Account Payments

- a. Monthly Running Account Bills
- b. Payments will be made against Running Accounts Bill certified by ISPRL within 15 days from the date of receipt of the certified bill by ISPRL.
- c. Running Account bills and the Final Bill shall be submitted by the Contractor together with the duly signed measurement sheet / MIS Reports to ISPRL in quadruplicate for certification.
- d. All running account payments shall be regarded as on account payment (s) to be finally adjusted against the final bill payment.
- e. The final bill shall be submitted by the Contractor within one month of the date of completion of the work fully and completely in all respects.
- f. Payment of final bill shall be made within 30 days from the date of receipt of the certified bill by the Disbursement Section of the owner.
- g. Payment shall be made only through e-Payment mode through any of the designated banks to ensure that timely payments are processed. The agency shall necessarily fill requisite formats and complete all formalities for the same before submission of first bill. Due to non-fulfilment of e-Payment requirements, ISPRL shall not be responsible for any delay in the payments. Owner reserves the right to make payment in any alternate mode also.

2.7 Firm Price

The quoted price shall be FIRM and no escalation in price on any account shall be admissible to the Contractor till the work is completed in all respects. However, if there is any change in minimum wages during the contract period, the same will be considered for payment on the item no.1 and 5 of SOR.

2.8 Quality Assurance System

- 2.8.1 Owner's representative shall reserve the right to inspect / witness, review any or all stages of work at shop / site as deemed necessary for quality assurance.



2.8.2 In case CONTRACTOR fails to follow the instructions of ISPRL with respect to above clauses, next payment due to him shall not be released unless until he complies with the instructions to the full satisfaction of ISPRL.

2.9 Working Hours

Depending upon additional specific requirements and upon ISPRL advice, the works may have to be started earlier or beyond normal working hours and on holidays also for which no additional charges (OT) claim shall be entertained. Normal working hours will be 9.00 am to 5.30 pm with half an hour lunch break.

3.0 DEPOSITS

3.1 SECURITY DEPOSIT

This is with reference to GCC at point no.4 under head Deposits, for Security Deposit, the contractor shall within 15 (Fifteen) days of receipt of the notification of acceptance of the tender or letter of intent, shall remit the security deposit of amount equivalent to 10% of the Contract value to ISPRL. The security deposit shall be in the form of Bank Draft/Pay Order/Bank Guarantee from a Scheduled Bank / Nationalized Bank valid upto Three (3) months after defect liability period and the same shall be released after Three months from the date of completion of defect liability period.

Bank Guarantee shall be provided as per the enclosed format. Contractor may note that payment towards running bill shall not be paid unless & until SECURITY DEPOSIT is paid to ISPRL.

Owner reserves the right to deduct any amount from the Security Deposit at the time of expiry of Contract / Termination of Contract.

3.2 RETENTION MONEY/PBG:

No retention money for the services carried out, however there shall be a retention money of 10% on the items supplied under this tender. This is with reference to GCC at point no.4 under head Deposits, for Retention Money (R.M), 10% of the total value of the Running Account bill shall be deducted and the same shall be released after Defect liability period.

3.2.1 DEFECT LIABILITY PERIOD

The defect liability period will be One year from the date of supply/completion/ any other liability period which will be mutually agreed before start of some specified jobs. Any defects related to manufacturing found if any are to be replaced with no addition cost by the contractor after receiving the information from ISPRL. If the problem not attended with the given time frame, the rectification job will be done by ISPRL and the Double the cost will be recovered from the vendor from the available Security deposit.

4.0 PENALTY CLAUSE

Owner shall reserve the right to impose cash penalty on the contractor and deduct such amount from his bills or Security Deposit in case Owner is put to any inconvenience due to non-performance or financial loss of any nature whatsoever, directly or indirectly by any of the contractor's personnel or by the contractor.



The penalty for breach of safety during execution of works shall be levied by ISPRL as below:

- a. Violation of applicable safety, health and environment related norm, a penalty of Rs.5000/- per occasion.
- b. Violation as above resulting in any physical injury, a penalty of 0.5% of the contract value (max. of Rs. 2 lacs) per injury in addition to Rs. 5000/- as mentioned above.
- c. Fatal accident, a penalty of 1% of the contract value (max of Rs.10 lacs) per fatality in addition to Rs.5000/- as mentioned above.
- d. ISPRL reserves the right to cancel the LOI in case of delay and in that case the Bank guarantee shall be revoked / Security Deposit shall be forfeited by ISPRL towards compensation. Also work order may be placed on an alternate Bidder at the risk and cost of the Original Vendor.
- e. Applicable GST will also be recovered from the vendor on the amount of Penal charges, if any.

5.0 WORKS CONTRACT TAX/GST

Every contractor who works for Owner should obtain an exemption certificate from the Commissioner of Sale Tax (works contract/GST) otherwise Owner shall deduct the amount of TDS in accordance with the provisions of this Act. If at any stage the contractor's establishment gets an exemption certificate, he shall apply for refund to the Sales Tax Commissioner. Owner will furnish only a TDS certificate for the amount deducted and deposited with the Commissioner.

6.0 INCOME TAX

Income tax deduction shall be made from the gross amount billed as per the rules and regulations in force in accordance with income tax act prevailing from time to time.

7.0 CONTRACTOR'S OBLIGATIONS/ RESPONSIBILITIES

7.1 OBLIGATIONS:

The Contractor shall also be bound to discharge obligations as provided under various statutory enactments including the Employees Provident Fund Act, 1952, Employees Pension Scheme, 1995, ESI Act 1948, Contract Labour (Regulation and abolition) Act, 1970, Minimum Wages Act 1948, Payment of Wages Act 1936, Payment of Bonus Act, 1965, Payment of Gratuity Act, 1972, Workmen's compensation Act 1923, Works Contract Act 1999 and other relevant Acts, Rules and Regulations in force and as amended from time to time and are in force in the State where the subject work under this Contract are executed.

7.2 RESPONSIBILITIES:

- 7.2.1 It shall be the responsibility of the CONTRACTOR to obtain the approval for any revision and/or modifications decided by the CONTRACTOR from the OWNER/ Engineer-in-Charge before implementation. Also such revisions and/ or modifications if accepted/ approved by the OWNER/ Engineer-in-Charge shall be carried out at no extra cost to the OWNER.
- 7.2.2 All expenses towards mobilization at site and demobilization including bringing in equipment, work force, materials, dismantling the equipment, clearing the site etc. shall be deemed to be included in the prices quoted and no separate payments on account of



such expenses shall be entertained.

7.2.3 It shall be responsibility of the CONTRACTOR to provide, operate and maintain all necessary construction equipment, steel scaffoldings and safety gadgets, and lifting tackles, tools and appliances to perform the work in a workman like and efficient manner and complete all the jobs as per time schedules without any extra cost to the OWNER.

7.2.4 The CONTRACTOR shall be responsible for procurement and supply in sequence and at the appropriate time of all equipment / materials and consumables and his rates for execution of work will include of supply of all these items.

8.0 PAYMENT OF TAXES, DUTIES, CESS & OTHER LEVIES

The contractor shall be fully and exclusively responsible for the payment (and liable for all consequences in the event of default) of any and all taxes, duties, octroi, & other levies including service tax now or hereafter imposed, increased or modified from time to time in respect of the above job. The change in service tax if any after the award of contract shall be to ISPRL a/c.

9.0 INSURANCE POLICIES

The Contractor shall at his own cost and initiative take out and maintain at all times until the close out of the Contract, insurance policies as mentioned in General Conditions of Contract and also in respect of workmen engaged by him for providing services under this Contract, in order to keep himself as well OWNER fully indemnified from and against all claims whatsoever including but not limited to those arising out of the provisions contained in Workmen's Compensation Act, 1923. Should the Contractor fail to take out and/or keep afoot insurance as provided for in the foregoing paragraph, OWNER shall be entitled (but without any obligation to do so) to take out and/or keep afoot such insurance at the cost and expense of the Contractor and without prejudice to any other rights or remedies of OWNER in this behalf, to deduct the sum(s) incurred thereof from any amounts due to the Contractor.

10.0 GOVERNING LAWS & JURISDICTION

The terms and provisions of this Contract shall be governed and interpreted in accordance with the laws of India in force and is subjected to and referred to the court of law located at New Delhi which shall have exclusive jurisdiction.

11.0 CONTRACT AGREEMENT

The successful Bidder shall be required to execute a Contract Agreement with ISPRL as per proforma issued by ISPRL to the agreement. Document on the non-judicial stamp paper of appropriate value (**Minimum Rs. 100/-**) to be purchased from Delhi/Visakhapatnam. The cost of stamp paper shall be borne by successful Bidder.

12.0 ROUNDING OFF

All payments to and recoveries from the Contractor shall be rounded off to the nearest rupee. Wherever the amount to be paid / recovered consists of a fraction of a rupee (paise), the amount shall be rounded off to the next higher rupee if the fraction consists of 50 (fifty) paise or more and if the fraction of a rupee is less than 50 (fifty) paise, the same shall be ignored.

13.0 HEALTH, SAFETY AND ENVIRONMENT (HSE) MANAGEMENT

13.1 The Contractor shall adhere to the Health, Safety (HSE) management system as per our HSE
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management at our construction site.

- 13.2 The CONTRACTOR shall establish document and maintain an effective Health, Safety and Environment (HSE) management system.
- 13.3 In case CONTRACTOR fails to follow the instructions of Engineer-in-charge with respect to HSE, next payment due to him shall not be released till CONTRACTOR complies with the HSE systems to the full satisfaction of Engineer-in-charge.

14.0 TESTS AND INSPECTION

- 14.1 Acceptance of material shall be subject to inspection at ISPRL site, approval and release by Inspection Agency/ISPRL.
- 14.2 The contractor shall carry on the various tests, required as per relevant Indian Standards specifications and our technical specifications stated in the tender. The technical documents will be furnished by him during the performance of the work.
- 14.3 All the tests either on the field or at approved test houses/outside laboratories concerning the execution of the work and supply of materials by the contractor shall be carried out by the contractor at his own cost.
- 14.4 The work is subject to inspection at all times by the Site engineer and/or by a Third Party Inspection agency. The contractor shall carry out all instructions given during inspection and shall ensure that the work is being carried out according to the technical specifications of this tender, the technical documents that will be furnished by him during the performance of the work and the relevant codes of practices.
- 14.5 The contractor shall provide, for purposes of inspection by ISPRL or by Third Party Inspection Agency access ladders, lighting and necessary instruments at his own cost.
- 14.6 Any work not conforming to the approved execution drawings, specification and codes shall be rejected forthwith and the contractor shall carry out the rectifications / replacement at his own cost.
- 14.7 All results of inspection and tests will be recorded in the inspection reports, proforma of which will be approved by the site-engineer. These reports shall form part of the contract and shall be submitted to ISPRL, periodically and for obtaining payment as per payment schedule.
- 14.8 Inspection and acceptance of the work by Site Engineer or Third Party Inspection Agency shall not relieve the contractor from any of his responsibilities under this contract.
- 14.9 Providing and operating necessary measuring and testing devices (including all consumables). Therefore, no separate payment for testing shall be made which are required to ensure achievement of specified quality.
- 14.10 The contractor shall also at his cost make all arrangements and shall provide all such facilities as the site engineer may require for collecting, preparing, and if required, forwarding the required number of samples for tests and for analysis as per the frequency of the tests considered necessary by the site engineer at such time and to such places as directed by him at the expense of the Contractor.
- 14.11 Testing of material shall be done as per Quality Assurance Plan (QAP). All materials to be used



in the work to give finished work complete in all respects shall comply with the requirements of ISPRL specifications and shall pass all the tests and analysis as per QAP.

- 14.12 The enclosed Soil Investigation reports are for information purposes only. Successful bidder shall have to undertake their own soil investigation as per technical specifications for which payment shall be released as per SOR

15.0 COMPLETION DOCUMENTS

The following documents shall also be submitted by the Contractor in triplicate as a part of completion documents:

- a) Material test reports for all supply items in the Scope of Contractor.
- b) Other documents as mentioned in Technical Specification.
- c) As built drawings, if asked by Engineer- in-Charge

16.0 STATUTORY REQUIREMENTS

The approval from any authority required as per statutory rules and regulations of Central/State Government shall be the contractor's responsibility unless otherwise specified in the Bidding Document. The application on behalf of the Owner for submission to relevant authorities along with copies of required certificates complete in all respects shall be prepared and submitted by the contractor well ahead of time so that the actual construction/commissioning of the work is not delayed for want of the approval /inspection by concerned authorities. The inspection of the works by the authorities shall be arranged by the contractor and necessary coordination and liaison work in this respect shall be the responsibility of the Contractor.

Bidder has to submit the following documents:-

- 1. Firm registration, PF and ESI registration certificates, Labour, service tax, PAN, GST details.
- 2. Last three years IT returns and last three years and Service tax returns
- 3. Turn over certificate from the auditor
- 4. Bidder should submit the last One year challans and ECR copies of PF and ESI .
- 5. If the GST number is not available at the time of participation of this tender, an undertaking to be given mentioning that the GST will be submitted with in one month from the date of award of contract.

17.0 SITE ORGANISATION

The Contractor shall submit the details of organization proposed by him at site of work for the implementation of the works under the Contract, together with bio data of the key personnel. The Contractor shall however without prejudice to his overall responsibility to execute and complete the works as per specifications and time schedule progressively deploy adequate qualified and experienced personnel and augment the same as decided by Engineer-in-Charge depending on the exigencies of work to suit the work schedule without any additional cost to Owner.

18.0 SITE CLEANING

The CONTRACTOR shall clean and keep clean the work site from time to time to the satisfaction of the Engineer- in-Charge for easy access to work site and to ensure safe passage, movement and working. The Contractor shall also clean the work site to the satisfaction of Engineer-in-Charge before handing over. No extra payment shall be paid on this account. The rates quoted in SOR are deemed to be inclusive of all the costs towards all the above activities as well.



19.0 ISPRL

Where ever ISPRL is stipulated, it shall be construed as ISPRL's authorized representative for this work.

20.0 ROYALTY

The quoted rates/price shall be inclusive of all royalties, if any, which the Contractor may have to pay to the statutory bodies/Govt.

21.0 SCHEDULE OF RATES

The Schedule or Rates (SOR) shall be read in conjunction with Special Conditions of Contract, General Conditions of Contract, Technical Specifications, Drawings and any other Document forming a part of this Contract. The quantities shown against the various items are only approximate and subject to any variations as per the stipulation made in General Conditions of Contract.

The Owner reserves the right to interpolate or extrapolate the rates for any new item of work not covered in Schedule of Rates from the similar items already available in Schedule of Rates. All the works item wise, shall be measured upon completion and paid for the contracted rates. In case any activity though specifically not covered in Schedule of Rates, description but the same is covered under Scope of Work / Specification / Drawings etc., no extra claim on this account shall be entertained, since SOR is to be read in conjunction with other documents forming part of the Contract. All items of work in the Schedule of Rates shall be carried out as per the Specification, drawings and instructions of the Engineer-in-Charge and the Rates are inclusive of all materials, consumables, labour, supervision, tools and tackles, as well as preparatory, incidental, intermediate / auxiliary / ancillary or enabling works.

22.0 LIST OF RECOMMENDED MAKE/MANUFACTURESRS

CIVIL

LIST OF APPROVED VENDORS		
S.No	Description of Item	Standard make / brand names
1	Chlorpyriphos (For anti-termite treatment)	Sahakar of M/s.Karnataka Co-op. Marketing Fed. Ltd., Termisac of M/s.Bayer India Ltd , Bhagiradha Chemicals Ltd , Hyderabad
	Reticulate Antitermite with Imidacloprid	Itemsecure – Ivory terrace, Alkapuri Baroda, Gujarat
2	Water proofing compound	Pidilite Industries, CICO No. 1, SCOTT No.1, Accoproof, Fosroc chemicals; Sikka
3	Cement	ACC, Birla cements , L&T, Ultra Tech Cement, Ambuja
4	Ready Mix Cement Concrete (RMC)	Ultra Tech Concrete, ACC Concrete, L&T Concrete /approved equivalent
5	Reinforcement Steel	TISCO, SAIL, RINL
6	Flush door shutter	Kutty Flush doors, Chennai / KSFC, Bangalore / Anand Wood Crafts, Hyderabad /Anchor flush doors
7	Hydraulic door closers	Dorma, Hafle/approved equivalent



8	Structural Steel, MS pipes	TISCO, SAIL, RINL (For Misc requirement like railings, grills etc procurement can be made from local market if the materials are not available with main producers as decided by the Engineer in Charge)
9	Aluminium sections	Hindalco, Jindal/approved equivalent
10	Glazing	Modi glass, AIS glass, Saint Gobain
11	Floor springs	Dorma, Hafle
12	Silicon sealants	Dow corning. Other Brand if any shall be as per advice of the consultant.
13	Wall putty	Birla putty, JK putty, Asian putty
14	Spider fittings	Dorma, Nexus, Hafle
15	UPVC Windows	Fenesta, Sintex, Wintech
16	GI plaster mesh	Arpitha Building products, Bangalore , National Wire Products, Pune
17	Automatic sliding door	Dorma, Gandhi Automation Pvt Ltd, Mumbai
18	Laminated glass	AIS Glass/saint gobain /approved equivalent. Other Brand if any shall be as per advice of the consultant.
19	Frosted film	Garware films, 3 M films
20	Epoxy leveling topping	Epoxy.com, Arcoy Industries, MRF
21	LOW VOC paints	Asian Paints, Nerolac paints, Alconoble(ICI)
22	Adhesives	Pidilite Industries, Fosroc chemicals, Sika India Ltd

FOR PHE WORKS		
1	Wash basin	Hind ware, Parryware, jaquar
2	Indian type water closets	Hind ware, Parryware,jaquar
3	European type water closets	Hind ware, Parryware,jaquar
4	Flushing cisterns	Hind ware, Parryware,Jaquar
5	Urinals	Hind ware, Parryware, Jaquar
6	Pillar cock, health faucets, angle cocks, bib cocks, Toilet paper holders, Towel rings and other fixtures	Jaguar, Kohler
7	Valves	Leader, HAWA, Globe, Zoloto
8	Stainless Steel kitchen Sink	Franke, Futura
9	Automatic hand dryer	Euronics Industries, Bangalore, Kimberly clark/approved equivalent
10	UPVC pipes,	Finolex, Supreme, Prince,Kissan
11	CPVC pipes	Ashirwad Flow Guard, Prince, Astral
12	Cast Iron Manhole covers	Bengal Iron Corpn (BIS), NECO, Zenith
13	Pumps	Kirloskar, Suguna, Texmo

Other than above, any item not mentioned in the list, the contract has to take prior permission for using that item from the engineer-in charge of ISPRL



APPENDIX TO SPECIAL CONDITIONS OF CONTRACT

SCOPE OF WORK : APPENDIX- I

SCOPE OF WORK

1.1 GENERAL

- 1.1.1 The scope of work covered in this tender shall be as specified in the Technical Section of the Bidding Document. It is, however, explicitly understood and confirmed by the Contractor that the scope as described in the Bidding Document is not limiting, in so far as the responsibilities of the Contractor shall include, inter-alia, carrying out any and all works and providing any and all facilities those are required in completing the work in all respects and satisfying all performance and guarantee requirements stated or implied from the contents of the Bidding Document.

The scope includes construction of Security building cum rest room complete in all respects so that all the facilities are functional and operational & acceptable to the owner/consultant and various authorities identified elsewhere and meets all the relevant statutory approvals/prevaling codes. The details of the facilities are identified in various drawings furnished for bidder's guidance.

Bidders to note that their scope includes residual design, construction, fabrication and erection of all civil structures as per design drawing and specification including supply of all materials, labour etc as required and installation of all facilities meeting the quality assurance parameters defined elsewhere.

1.2 INTRODUCTION

ISPRL has now envisaged augmentation of Security building with in the premises near main entrance gate. The approximate built-up area is 417.55 sq m consists of Ground Floor and First Floor. The area shown here is a tentative and this may increase/decrease during the execution of work.

Various drawings were enclosed showing the details on ground floor, first floor plan, elevation, section along with electrical and other design details. Although maximum permissible information would be indicated in the drawings, the successful bidder to ensure that the construction of civil structure and building conform to high standard of engineering and workmanship in all respects and capable of performing continuous satisfactory operation and acceptable to the Owner. In case of any violation of the above the owner/purchaser reserves the right to change/reject/modify the any materials, building/structure during the execution stage of the contract. The bidder has to submit all the relevant drawings as per the construction to ISPRL after completion of the complete facility along with the necessary furniture and equipment fully ready for functional and operational with all relevant statutory approvals, prevailing code, detail drawing, design & specification and as per the scope of work defined elsewhere.

However it would be the responsibility of the successful bidder for this package to check the formed levels, layout of the facility maintaining safety clearance and getting the same cleared by the engineer-in-charge prior to commencing construction.

The responsibility of correctness of layout rests with the successful bidder. Any wrong construction, deviation from the specification and bad quality of workmanship will be rectified to the satisfaction to the satisfaction of Engineer-in-charge without any additional cost.

Wherever material or article is specified or described by the name of particular brand, manufacturer or vendor, the specific item mentioned shall be understood as established type, function and quality desired. Other manufacturer's product shall not be accepted unless they have been approved by the owner/purchases prior to award of the contract.

1.3 SPECIFIC INSTRUCTION TO BIDDER

- 1.3.1 Bidder should have experience in designing and construction of civil structural buildings. If the bidder not having the designing experience, he has to take desired designing services at his own cost. The drawings



would be approved by ISPRL or any other reputed agency approved by ISPRL.

- 1.3.2 All surplus material shall be taken back by the successful bidder/contractor after handing over the building to the owner/purchases and as such the successful bidder should dispatch material to site accordingly.

1.4 MODALITY OF IMPLEMENTATION

- 1.4.1 KICK-OFF METING will be held at site within fifteen days of award of the job to be attended among ISPRL, Successful bidder/contractor.
- 1.4.2 The successful bidder/contractor **will develop detailed drawings** (based on tender design & drawing) and obtain approval from ISPRL for construction.
- 1.4.3 The approved document/drawing shall be the basis of inspection by THIRD PARTY INSPECTION AGENCY from the following agencies who would be responsible for quality assurance both at work shop and site:
- a) M/s Bureau Veritas
 - b) M/s PDIL
 - c) M/s Lloyd (LIRS)
 - d) M/s Engineers India Ltd.,
 - e) M/s Indian Register of Shipping
 - f) M/s VCS Quality Control Pvt. Ltd.
 - g) M/s Det Norske Veritas (DNV)
 - h) M/s SGS

All cost for TPIA shall be borne by the Successful Bidder/Contractor.

1.5 SCOPE OF WORK

The civil and structural work comprises of Residual Design and Drawing for fabrication of structure, construction, fabrication and erection of Civil facilities for setting up a fully functional structure with all materials, labour, supervision, plant and equipment, tools and tackles, consumables, scaffolding, enabling work etc. including all incidental items not specifically mentioned but implied for successful completion of the work in accordance with drawings and detailed specifications. Supply and installation of items like AC's, Furniture, DG set etc as given in the SOR are to be strictly adhered.

The detailed specifications and scope of work are defined in subsequent sections and tender drawings. However the summary of scope of work is appended below for bidder's guidance.

However considering Safety & Security and detailed Programme of the each facility, the sequence of activities shall be finalized during "KICK OFF MEETING" at site between the owner and successful bidder/contractor.



SCOPE OF SUPPLY : APPENDIX-II



APPENDIX-II

SCOPE OF SUPPLY

1.0 The scope of supply is as mentioned in Job Specifications/Technical Specifications, Schedule of Rates etc. of Bidding Document. All materials, equipments, labour and consumables required for successful completion of work as per the description of item in Schedule of Rates shall be supplied by the Contractor and the cost of such supply shall be deemed to be included in the quoted rates without any additional liability on the part of the Owner except for the material specifically covered under Owner's Scope of Supply.



TIME SCHEDULE : APPENDIX- III



APPENDIX-III TO SCC

TIME SCHEDULE

DESCRIPTION OF WORK	TIME FOR COMPLETION
Construction of Security cabin, Labour rest room building with associated amenities at main entrance of ISPRL, Visakhapatnam	6 months

Notes :

- Time for completion shall be reckoned from date of issue of Fax/ Letter of Acceptance , whichever is issued earlier.
- The time indicated for completing all works in all respects including submission of all reports as per specifications, codes, drawings and instructions of Engineer-in-Charge.
- It should be noted that the period completion of all works given above includes the time required for Mobilization at site, carrying out the works as per the requirements of Contract documents, demobilization, preparation of all reports in requisite quantities as mentioned in the Bidding Document, rectification's, if any, rework etc., complete in all respects to the entire satisfaction of Owner/ Engineer-in-Charge and direction of Engineer-in-charge.

(SIGNATURE OF BIDDER)



MEASUREMENT OF WORKS : APPENDIX-IV



APPENDIX - IV

MEASUREMENT OF WORKS

1.0 GENERAL

1. The mode of measurement shall be as mentioned in technical specification.
2. Payment will be made on the basis of joint measurements taken by Contractor and certified by ISPRL. Measurement shall be based on "Approved for Construction" drawings, to the extent that the work conforms to the drawings and details are adequate.
3. Wherever work is executed based on instructions of Engineer-in-Charge or details are not adequate in the drawings, physical measurements shall be taken by Contractor in the presence of Engineer-in-Charge.
4. No other payment either for temporary works connected with this Contract shall be made. Such items shall be deemed to have been included for in the rates quoted.
5. Measurements will be made for various items under schedule of rates on the following basis as indicated in the unit column.

i) Weights	MT or Kg
ii) Length	M (Metre)
iii) Number	No.
iv) Volume	Cu.M
v) Area	Sq.M
6. Wherever the unit of items has been indicated as lump sum, the payment shall be made on lump sum basis on completion & no mode of measurement shall be applicable.
7. All further mode of measurements not covered in above clauses shall be measured in accordance with relevant BIS codes/ Schedule of Rates/ Specifications etc. and/ or as decided by ISPRL.

(STAMP & SIGNATURE OF BIDDER)



TERMS OF PAYMENT : APPENDIX- V



TERMS OF PAYMENT

APPENDIX-V

1.0 **SECURED ADVANCE :-**

No Secured advance shall be paid.

2.0 **ON ACCOUNT PAYMENTS :-**

- a. The payment shall be made on stage wise completion of individual item/work on pro rata monthly running account bills. This payment shall be based on the joint measurements in the following manner after deduction of necessary dues such as income tax, other recoveries payable by contractor to the Owner in accordance with various provisions made elsewhere in this bid document.

Progress Payments shall be released to Contractor against monthly running account bills duly certified by Engineer-in-charge after affecting the necessary deductions. The basis for payment against various items shall be below:

b. **CIVIL Works**

- 95% progressively on completion of work on pro-rata basis.
- 5% after completion of all works in all respects and acceptance thereof.

c. **For any other items not mentioned above**

- 95% progressively on completion of individual items of work.
- 5% on completion of all works in all respects and acceptance thereof.

(STAMP & SIGNATURE OF BIDDER)



PLANNING, SCHEDULING, MONITORING : APPENDIX- VI

1.0 PROJECT, SCHEDULING & MONITORING

The following Schedules/documents/reports shall be prepared and submitted by the Contractor for review / approval at various stages of the contract.

1.1 ALONGWITH BID

A. Time Schedule

The Bidder is required to submit a Project -Time Schedule in Bar Chart form along with the Bid. The Schedule shall cover all activities as per scope of work within the completion time indicated in the Tender Document. The Owner interface activities shall be clearly identified with their latest required dates. Owner reserves the right to disqualify the Bidder if the above Schedule submitted by the Bidder is not in line with the overall project requirement.

B. Scheduling & Monitoring System

The Bidders should describe their system of Project Scheduling and monitoring, the extent of computerisation, level of detailing, tracking methodology etc. with the name of computer packages and sample outputs.

C. Project execution plan:

Bidder shall indicate in his bid clearly the detailed execution plan to achieve the completion of the project as indicated in the tender.

1.2 OVERALL PROJECT SCHEDULE

The Contractor shall submit within 1 week of Fax of Acceptance, a sufficiently detailed overall project schedule in the activity network form clearly indicating the major milestones, inter-relationship / interdependence between various activities together with analysis of critical path and floats.

The Schedule will be reviewed and approved by Engineer-In-Charge and the comments if any, shall be incorporated in the schedule before issuing the same for implementation. The schedule thus finalised shall form part of the contract document and the same shall not be revised without the prior permission from Engineer-In-Charge during the entire period of contract.

1.3 PROGRESS MEASUREMENT METHODOLOGY

The Contractor is required to submit within one week of award of work, the methodology of progress measurement of delivery, sub-contracting, construction works and the basis of computation of overall services/physical progress informed. The weightages shall be fixed in consultation with the Owner. Owner reserves the right to modify the methodology in part or in full.

1.4 FUNCTIONAL SCHEDULES

The Contractor should prepare detailed functional schedule in line with overall schedule for functional monitoring and control and submit scheduled progress curves for each function.

1.5 PROJECT REVIEW MEETINGS

The Contractor shall present the programme and status of various review meetings as required.

A. Weekly Review Meeting



Level of Participation : Contractor's / ISPRL's Site-Incharge and Job Engineers.

Agenda	a)	Weekly programme v/s actual achieved in the past week and programme for next week.
	b)	Remedial Actions and hold-up analysis.
	c)	query/approval.
Venue	:	Site Office

B. Monthly Review Meeting

Level of Participation: Engineer-in –charge of ISPRL and Contractor.

Agenda	a)	Progress Status/Statistics
	b)	Completion Outlook
	c)	Major hold-ups/slippages
	d)	Corrective actions if any
	e)	Critical issues
	f)	Client query/approval
Venue	:	Site Office

1.6 PROGRESS REPORTS

A. Over all Monthly Progress Report

This report shall be submitted on a monthly basis on the first of every month and shall be submitted based on the progress achieved as on 25th day of every month which will be taken as cut-off date, covering overall scenario of the work as under:

- Overall progress Summary in terms of Percentages actual v/s planned.
- Major activities executed/ achieved during the month.
- Area of concern/ problem/ holdings, impact and action plan.
- Resources deployment status.
- List of project mile stones and their status.

The report shall be submitted in 2 sets to ISPRL through Engineer-in- charge.

(B) Weekly Report

This report (2 copies) will be prepared and submitted by the Contractor on weekly basis and will cover following items:-

- Activities programmed and completed during the week.
- Resource deployed man and machine.
- Qty. achieved against target in construction.
- Record of Mondays lost.
- Construction percentage progress, scheduled & actual.
- Week's highlights, major milestone achieved



QUALITY MANAGEMENT SYSTEM : APPENDIX VII

All civil works shall be carried out as per design/drawings standardized by the Consultant / Owner and the specification provided by the Consultant / Owner. All standard drawings are enclosed with the tender documents. In case any item is not covered under specification then the same shall be carried out as per CPWD specification and applicable Standards and Codes. Any item for which specification is not provided herein and is not covered under CPWD specification shall be executed as per manufacturer guidelines. All materials shall be of best quality conforming to relevant Indian Standards and Codes. In case of any conflict between Standards/ Code and Technical Specification, the provisions of Technical Specification shall prevail, and the Architect's decision on interpretation shall be final.



- 1.0) The contractor will be responsible for ensuring quality of construction carried out by the contractor / their approved Sub-contractors in accordance with the approved QA/QC procedures and management of material testing laboratory.
- 2.0) Requirement for Construction Quality Management / Quality Control are given in Technical Specification.
- 3.0) Contractor will carryout inspection, non-destructive tests and analyzes and certifies acceptability of all welds, materials and works in accordance with specified technical standards/ International Standards and carryout inspection and testing of incoming materials as per agreed procedures.
- 4.0) A procedure for identification and boxing-up of flange joints not subjected to hydrostatic tests at site, which shall be strictly followed by the Contractor.
- 5.0) Contractor is required to prepare and submit documents as evidence of the tests performed and quality of works to Owner/PMC as per the contract.
- 6.0) All inspections and QA/QC Test records are to be kept up to date and in first rate condition by the Contractor and shall be made available to Owner/PMC, whenever requested. These documents shall be handed over to Owner by the Contractor on completion of the commissioning.
- 7.0) All works/services to be performed by the Contractor under this contract shall be specified / approved quality and the Contractor shall have a Quality Assurance / Quality Control (QA/QC) system during the performance of various activities at construction site.
- 8.0) Review/approval of the activities by Owner/PMC shall not dilute the responsibility of the Contractor for maintaining quality.
- 9.0) Please refer Annexure-I for details of QAP



QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
1.0	CONCRETINGWORK						
1.1	COARSE AGGREGATE FOR CONCRETE AND FILTERS						
1.1.1	Particle Size Shape analysis, flakiness index, elongation index including visual inspection.	Sieves(confirming toIS-460-1962), balance, Oven, Thickness gauge, Length Gauge, Metal Scoop etc.	Physical	onetestper100cum/ change of source whichever is earlier	IS:2386Part-I,(for test procedure), S.383(for permissible value)/TS	SR/LB	Results should be as per request of design mix subjected to verification within the limits specified in relevant IS code.
1.1.2	Deleterious materials & organic impurities	Balance, Sieve (confirming toIS-460-1962)etc.	Lab analysis & Physical	To be done twice per source. Once at the starting ,another in the middle	IS:2386Part-II,(for test procedure), IS:383(for permissible value)/TS	SR/LB/ Test Report	Within the limits specified n relevant IS code Test will be carried out while establishing mix design.
1.1.3	Determination of specific gravity, water absorption, bulk density and voids	Balance, Sieve (confirming toIS-460-1962)etc., Oven, Jar.	Physical, Lab Test	Once in twelve weeks / 500 cum or change of source whichever is earlier	IS:2386Part-III,(for test procedure), IS:383(for permissible value)/TS	SR/LB/ Test Report	These tests shall be carried out while establishing design mix.
1.1.4	Determination of Crushing value, Determination of impact value	Standard Apparatus for these test shall be used	Physical	To be done twice per source. Once at the starting, another in the middle	IS:2386Part-IV,(for test procedure), IS:383(for permissible value)/TS	SR/LB/ Test Report	These tests shall be carried out while establishing design mix & results be intimated.
1.1.5	Moisture content	Balance, Sieve(confirming toIS-460-1962)and Oven etc.	Physical	Onceforeachstackof100C u.M.orpartthereofExceptd uringmonsoon when this has to be done every day be for start of concreting	IS:2386 part-III IS:456 IS:383/TS	SR/LB	Accordingly water content of the concrete will be adjusted. These tests shall be carried out while establishing design mix & Results are intimated.

QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
1.1.6	Soundness	Reagents (sodium Sulphate or Magnesium Sulphate)	Chemical/ Physical	To be done twice per source. Once at the starting, another in the middle.	IS:2386Part-V,(for test procedure), IS:383(for permissible value) / TS	SR/LB/ Test Report	These tests shall be carried out while establishing design mix & results be intimated.
1.2	FINE AGGREGATE						
1.2.1	Bulkage, bulk density, surface moisture & water absorption	As per IS Code	Physical	Bulkage & surface moisture to be done every day before starting the work. Bulk density & water absorption to be done once in twelve weeks / 500cumorchange of source whichever is earlier	IS:2386(Part III), IS:383/TS	SR/LB/TR	Volume of sand and weight of water shall be adjusted as per bulk and moisture content
1.2.2	Mortar making properties	As per IS Code	Physical	Once per source & one for every change of source	IS:2386(Part VI), IS:383/TS	SR/LB/TR	Should be as per requirement of design mix
1.2.3	Silt, Clay content and organic impurities and deleterious materials	Balance, Sieve (confirming toIS-460-1962)etc.	Physical	To be done twice per source. Once at the starting, another in the middle	IS:2386Part II, (for test procedure), IS:383(for permissible value)/TS	SR/LB/ Test Report	Should be as per requirement of design mix
1.2.4	Sieve Analysis, particle shape & size	Set of sieves, Weight Balance	Physical (Routine)	One test per 200 cum/ change of source whichever is earlier	IS:2386(Part-I),IS:383/TS	SR/LB/TR	Should be as per requirement of design mix subject to variation specified in relevant IS codes.
1.2.5	Soundness	Reagents (sodium Sulphate or Magnesium Sulphate) Sieve, Scales, Drying Oven	Chemical/ Physical	To be done twice per source. Once at the starting, another in the middle	IS:2386Part-V,(for test procedure), IS:383(for permissible value)	SR/LB/ Test Report	These tests shall be carried out while establishing design mix & results be intimated.



QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
1.3	WATER						
1.3.1	Tests for PH Value	PH meter / PH paper	Test in gat lab	One per month for each source. PH value shall be Less than 6	IS:3025,IS:456	SR/LB/TR	do
1.3.2	Test For Ascertaining limits of Solid	Once each source of Supply	Measurement	Lab Test	IS:3026 and Soil Investigation Records		During Mix Design Stage.
1.4	CEMENT						
1.4.1	Ensure that cement is stored in weather tight covered storage on raised platform.		Visual	100%coveredstorage		SR/LB	Manufacturers Certificate to be furnished
1.4.2	Fineness	As required for each consignment of 100 T or (Part thereof)	Physical, Lab Test	Oneper200MT	IS:4031/ 1489/269/455/TS	SR/LB	Do
1.4.3	Initial & Final Setting time	As required for each consignment of 100 T or (Part thereof)	Physical,, Lab Test	do	IS:4031/TS, IS 269, IS1489, IS 456	SR/LB	Do
1.4.4	Soundness	As required for each consignment of 100 T or (Part thereof)	Physical, Lab Test	do	IS:4031/TS, IS 269, IS1489, IS 456	SR/LB	Do
1.4.5	Specific Gravity	As required for each consignment of 100 T or (Part thereof)	Physical, Lab Test	do	IS:4031/TS, IS 269, IS1489, IS 456	SR/LB	Do
1.4.6	Compressive Strength	As required for each consignment of 100 T or (Part thereof)	Physical, Lab Test	do	IS:4031/TS	SR/LB	Do

QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
1.5	STAGING, SHUTTERINGANDFORMS						
1.5.1	Materials and accessories	As required	Visual	100%	IS4014	SR	Proper care should be taken in order to combat corrosion. Proper care should be taken while cleaning, moving and stacking the scaffolds. It should be ensured that they are free from warped, broken or damaged edge soruneven surface before putting the mon works. Cleaning and oiling is to be done. To check for loose connections if any.
1.5.2	Steel plate/Plywood for concrete shuttering work	As required	Visual	100%	IS4990:1993, IS1734;(Part1-11)/TS		Relevant documents & recommended method of use & loading etc.
1.5.3	Durability, Strength & Soundness of staging, joists, shuttering and scaffolding	As required	Visual	Once	As per technical specification, manufacturer's spec. AndIS: 3696,4014, 4990	SR	To be checked by Site Engineer before & after placement of concrete
1.5.4	Connection between individual scaffolding units and safe slenderness ratio. Two independent safety measures against collapse	As required	Visual	Fortnightly	As per relevant IS Codes	SR	Site engineer to check



QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
1.5.5	Alignment / Shape	As required	Measurement	Each member & before each lift of shuttering or before next stage	As per approved drawings	SR/LB	Length, breadth, depth, shape, level, plumb line to be checked. Diagonal bracings are to be checked.
1.5.6	Check form's seam marks and water tightness	As required	Physical	Random	As per approved drawings	SR/LB	Site engineer to check
1.6	MIX DESIGN						
1.6.1	Mix Design	As required	Physical	Once for every change in mix materials source.	IS:516&IS:456, IS:10262		Mix Design Report
1.6.2	Trial mix (Cubes compressive strength) of the Mix Design	As required	Physical	Min.3 Trial Mixes with admixtures (if any) and Without admixtures	IS:516&IS:456, IS:10262/		SR/LB/ Test Report
1.6.3	Crushing strength of trial mix cubes	As required for 7 & 28 days strength test. Note: One set of 6 cubes of 150 mm size per 35 cubic meter of concrete or part thereof for each grade of concrete/ 8 hrs. of work or portion thereof.	Physical	As per IS 456, IS 1199, Specification Client	IS:516&IS:456, IS:10262		SR/LB Three Specimen Shall be tested at 7 days and remaining at 28 days and Mandatory site test.
1.7	CONCRETE CONVEYING, PLACING AND COMPACTION						
1.7.1	Mixing of concrete	Mixing of concrete shall be done in a approved mixer/ weigh batcher/ batching plant such as to produce a homogenous mix	Physical	To be calibrated at the time of starting and as desired by Engineer-in - charge	Review of calibration chart/ Certificate, IS456/ TS		Time of mixing will be as given in Technical specification / IS 456 Min. time of mixing should be 2 minutes for mixer

QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
							capacity 2 cum or less Min. time of mixing should be 3
1.7.2	Compacting	As required	Physical	100%	Check for segregation as per IS456	SR	Bleeding or segregation etc. is to be avoided as far as possible. Accumulated water is to be removed and shall not be covered with concrete, or dry concrete
1.7.3	Curing	As required minimum 7 days	Physical	100%	Check for period Of curing as per IS 456	SR	Exposed concrete surface shall be protected against heating and drying for at least 72 hrs after placement
1.8	TESTS ON GREEN CONCRETE						
1.8.1	Workability :-Slump test	Standard apparatus for different method used for measuring workability, slump cone one day for each batching / mixing plant	Physical	One samples every 2hrs. from every mixing plant/ IS456	IS:456, IS:1199-1959 Client Specification IS-1199	SR/LB/TR	Slump test for medium & high workability. Mandatory site test. NOTE: Degree of workability adopted depending on the type of structure and type of compaction equipment.
1.8.2	Crushing strength (works Tests cubes)	As required for 7 & 28 days	Physical	As per IS456	IS:516,IS:456,	SR/LB/ Test report	Site engineer to do the test



QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
1.8.3	Water cement ratio (Cement Content And Water Content)	As required At random at the time of batching.	Physical	At random at the time of batching.	As per IS: 1199 and approved design mix.	SR/LB	As per mix design
1.8.4	Check for cement content		Physical	At random at the time of batching.	As per IS: 3026, IS:456.	SR/LB	do
1.9 REINFORCEMENT STEEL							
1.9.1	Physical and Chemical Properties as per relevant IS codes	As required /agreed	Review of TCs	In 100MT or part thereof	IS 1786/456/TS	MTC	Approved brands are SAIL / TATA TISCO / RINL / IISCO
1.9.2	Tolerance	As required /agreed	Physical	At random	IS:1786	SR/LB	To be checked at site
1.9.3	Freedom from defects	As required /agreed	Visual	Random before and during placement	As per technical specifications & IS:456	SR	Any of the bars selected for use shall be free from cracks, surface flaws, laminations and rough jagged and imperfect edges. Steel issued should be free from excessive rust. To be stored diameter wise in such a place so as to permit easy approach for inspection & identification. It should be cleaned of excessive rust before use with annealed wire. Water accumulation & distortion to be avoided.
1.9.4	Placement	As required / agreed	Visual	100%	As per approved drawings and approved Bar Bending schedule / IS 456/TS	SR/LB/ Pourcard	as per Bar Bending Schedule (BBS) and as per relevant code provision

QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
1.9.5	Cutting to clearance	As required/agreed	Physical Measurement	100%	Approved drawings & checklist.	SR	Tolerance as per specifications
1.9.6	Tensile strength	Every 20T or every consignment purchased by Package Contractor For procurement of quantity less than 20T. Instrument: Universal Testing Machine	Measurement		IS : 1608 IS : 2062 IS : 1786		Manufacturer test certificate must be submitted Copy of Manufacturer's Test Certificate & Certificate No. to be mentioned in the invoice.
1.9.7	Bend Strength	do	do		IS : 1599		do
1.9.8	Surface cracks, Rusts etc.	Random Instrument : Visual	Visual		IS : 73		Lab Test Report shall be submitted.
2.0 BRICKMASONRY, SHEETING & ALLIED WORKS							
2.0 TEST ON BRICKS							
2.0.1	Soundness	As required	Physical	As per relevant IS Code/ One Sample for 10,000 Nos. or part thereof	IS:1077, IS: 3495, IS:2691, Tech. Specification	SR/LB	To be checked at site as per frequency stipulated in specification & guideline.
2.0.2	Colour	-	Visual	One for each stack	Do IS : 3495	do	Deep cherry red copper colour / Mandatory site test.
2.0.3	Compressive strength Note: For designation 100, every 50,000 or part thereof for designation upto 75, every 100,000 or part thereof	As required.	Physical	As per relevant IS Code/ One Sample for 10,000 Nos. or part thereof	IS: 1077, IS: 3495 (part), IS: 2891, Tech. Specification	do	To be checked at site as per frequency stipulated in specification & guideline.

QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
2.0.4	Water Absorption/ Efflorescence.	As required One test for each source of material and every lot of 200,000 no of brick.	Physical	As per relevant IS Code/ One Sample for 200,000 and change of source Nos. or part thereof	IS:1077,IS:3496 (part),IS:2891, Tech. Water absorption: 1. After 24 hrs. not less than 20% by weight. 2. After 6 hrs. not less than 10% by weight. 3. Moderate degree of efflorescence.	do	Lab Test report will be submitted by contractor.
2.0.5	Visual & Dimension	Visual Measurement	Measurement	Random	IS:1077 & tech. Spcfn.	do	do
2.0.6	Warpage	Straight edge & scale	Measurement	Per 1000 Nos.	IS:1077	do	Do
3.0 STRUCTURAL STEEL WORK							
3.0.1	Round bar		Visual, Dimensional, Mechanical and chemical test	1-Visual 100% 2-Dim- one sample lot 4,5-review of MTC 100%	IS:2062 GR-E250 A/B R or equivalent Free from surface Defects i.e. pitting, Dents, rust etc	LB	35- Lab Report every out of 10 heats and every size
3.0.2	HR Steel Plates		Visual, Dimensional, Mechanical and chemical test, Ultra	1-visual 100% 2-Dim- one sample every heat, every size	ASTM A572 GR-50/ 345 Mpa, IS 2062 GR-E350 A/B R, IS:1852 or equivalent Free from surface Defects i.e. Pitting,	LB	Lab report one sample out of 10 Heats every size. Visual – 100% Ultrasonic Test – 50% For Plates

QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
			Sonic Test		Dents, rust etc		20mm and above Dimensional – One sample Every heat and every size
3.0.3	HR steel sheet in Coils or cut to lengths		Visual, Dimensional, Mechanical and chemical test	1-visual 100% 2-Dim- one sample every heat, every size	ASTM A1011 GR 50, ASTM 570 GR50 or equivalent Free from surface Defects i.e. Pitting, Dents, rust etc	LB	-Lab report one sample out of 10 Heats and every size. Visual – 100% Dimensional- one sample Every heat and size
3.0.4	Cutting of steel Plates/sheets		Visual, Dimensional	1-visual 100% 2-Dim- Every Sample	As per Fabrication drawing IS:7215	SR	In process Check by QC Inspector (Random)
3.0.5	Welding Qualification		1. Welder's Qualification, WPS, PQR, 2. Weld appearance & weld size	Every Welding	AWS D1.1H or IS Codes	LR	WPS, PQR Should be submitted for review before starting fabrication.
3.0.6	Welding back Grinding of butt joints on flange to Flange & web to web		Visual	Every Welding	AWS D1.1 & as per WPS, PQR & Drawings	SR	free from crack, inclusion, porosity etc (100%)
3.0.7	Flange to web fit-up And welding		Dimensional	Random	as per AWS D1.1 WPS/WI & Fabrication drawings	SR	free from crack In process check by QC Inspector



QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
3.0.8	C-forming & Z-forming		Visual, Dimensional		Material as per ASTM A1011 Gr.50, ASTM A570, GR-50 & IS 1852 Orequivalent AsperApproved GA /Fabricationdrawing s /MBMA	SR/LR	(Random). AS per ASTM 1011 Gr.50 Visual-100% Dimensional-One sample every size Lab Report one sample out of 1 heat for every size.
3.0.4	Roofing&Cladding		Visual, Dimensional		ASTMA792/AS 1397/ASTM/A653or Equivalent	SR	shouldbefree Fromblackspot, Scratch &rust
3.0.5	Columns, rafters, Bracing truts,sagRods, connectionPlate,flangeAngles, builtup accessories		Visual, Dimensional, Mechanical and chemical test Ultrasonic Test, Radiography Test, Penetration Test	Random	Asperapproved GADrgs&FabricationDrgs,MBMAIS:20 62, IS:1852 IS:1161,ASTM A572Gr.50 Orequivalent, IS 7215	SR/LR	As per IS Visual-100% Dimension-Random, Lab Report for every each size Ultrasonic Test -50% of Plate above 20mm thick Random Review-Following Test.
3.0.6	Purlins,Girts&cold Formsections		Visual, Dimensional, Mechanic	Random	Asperapproved GADrgs&FabricationDrgs,MBMAIS:20 62	SR/LR	As per IS , Random, Lab Report.

QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
			al and chemical test		IS:1852 ASTM1011 Orequivalent		
	4. Galvanized Steel Roof						
4.0.1	Galvalume steel			Onceatthe starting	As per IS Code: 277 and as per ASTM A446	LB	As per IS
	5.Bitumen Mastie Wearing Course						
5.0.1	Bitumen		Penetration, softening point, ductility, Loss of heating,	Onceatthe starting,	IS 1203-1978, IS 1205-1978,IS 1208-1978,IS 1212-1978	LB	As per IS Code
	6. M S Reinforcement						
6.0.1	Mild Steel	Chemical test	Carbon, manganese, silicon, sulphur phosphorus	Once at the starting	As per IS 2062-1999	LB	As per IS Code
6.0.2	Tensile strength			Once at the starting	As per IS : 1608 , Table no.2	LB	As per IS Code
6.0.2	Impact test	For dia more than 12mm		Once at the starting	As per IS : 1757	LB	AS per IS Code



QUALITY ASSURANCE PLAN							
Sl. No.	Activity and Operation	Characteristics/ instruments	Type of check	Quantum Of check	Reference Doc./ Acceptance Norms	Format of Record	Remarks/ Precautions
1	2	3	4	5	6	7	8
	Third Party Inspection Agency: TPIA will give their report based on audit at random visit at site for Civil and fabrication work.						

LEGEND		Doc No:	Rev
SR= SiteRegister, TR= TestReport, MfrTC= Manufacturer's Test Certificate , duly correlated			
For CLIENT (stamp & signature)		For CONTRACTOR	
		QAP NO.:	
		Sheet No. Of	

N.B. : EVERY NECESSARY TEST SHALL BE PERFORMED AS PER REQUIREMENT AND RESPECTIVE TEST REPORT SHALL BE SUBMITTED BY THE CONTRACTOR.



SAFETY REQUIREMENTS FOR CONTRACTORS : APPENDIX VIII

(Refer our HSE management at our construction site specifications)



KEY PERSONNEL : APPENDIX-IX



Project Management

- a.** In order to achieve timely completion of work, to monitor daily/ weekly work progress, to maintain record at site, to achieve desired quality standard in works, effective supervision, planning of work at site, adequate number of qualified & experienced Project Engineer, QC/ QA/ & Planning Engineer & HSE Manager are to be positioned at site by the contractor as per detail given in the Table below.
- b.** If contractor failed to provide required number of qualified & experienced Project Engineer, QC/QA/ & Planning Engineer & HSE Manager at site, recovery for non deployment shall be done per month from contractor bill @ given in Table below.
- c.** In case Engineer concerned is holding Diploma Qualification instead of Engineering Graduation, the requirement of site experience would go up by minimum two years.

Table as per Nature & Quantum of Work for Requirement of Project Engineer, QC/QA/ & HSE

Table as per Nature & Quantum of Work for Requirement of Project Engineer, QC/QA & HSE							
Sr. No.	Nature of Work	Project Manager	QC/ QA/ Planning Engineer	HSE Engineer	Recovery for Non-deployment per Month (in Rs.)		
					Project Manager	QC/ QA Engineer	HSE Engineer
1.	Civil work including Structural, Mechanical and painting works	One Engineer with 3 Years of Experience			30,000/-		
2.	Electrical Works	One Engineer with 5 Years of Experience	One Engineer with 3 Years of Experience	One Engineer with Two Years of Experience	50,000/-	35,000/-	25,000/-