



बामर लॉरी एंड क. लिमिटेड

(भारत सरकार का एक उधम)

BALMER LAWRIE & CO. LTD.

(A Government of India Enterprise)

Multi-Modal Logistics Hub (MMLH)

SBU – Logistics

30-15-154/4F2, 5th Floor, GKP Heavenu,

Dabagardens Main Road, Visakhapatnam - 530020

TENDER DOCUMENT

for

**Supply, Installation, Testing & Commissioning of Fire
Protection System**

for

Multi-Modal Logistics Hub at Visakhapatnam, Andhra Pradesh

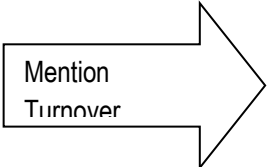
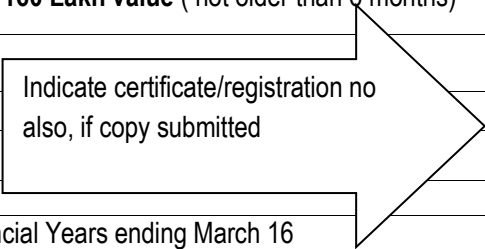
Tender No. MMLH / FPS/ PT/25

Date: 30.12.2017

Due Date: 16.01.2018, 16:00 Hrs

PART – I (UN-PRICED)

TENDERER'S CHECKLIST POINTS (Tenderer must fill in the table below appropriately):

Sl. No.	Check list points	Bidder's /Submission	Confirmation (Yes / No)
<u>PQ Criteria</u>			
1	Demand Draft for Tender Fees of Rs 5,000/- in favour of Visakhapatnam Port Logistics Park Ltd.		
2	Demand Draft or Bank Guarantee for Earnest Money Deposit of Rs 2,00,000/- in favour of Visakhapatnam Port Logistics Park Ltd.		
3	Attested/Notarized copy of valid NSIC certificate or "Micro and Small" industry certificate (In case of "Micro & Small" industries), if SC/ST please specify		
4	Audited Annual Reports for Last 3 financial years ending 31 st March,2017		
4.1	Turnover in FY 2014-15 Turnover in FY 2015-16 Turnover in FY 2016-17	
			
5	Documents showing Tie ups with Tank Fabricators along with their credentials		
6	Work Orders with detailed Schedule of Work/BOQ and Completion Certificates for similar work as per required pre-qualification criteria		
7	Original Solvency certificate of 160 Lakh value (not older than 6 months)		
8	PAN		
9	GST Registration Certificate		
10	Provident Fund Registration		
11	ESI Registration		
12	IT Return for Last Three Financial Years ending March 16		
			
13	HSE Compliance as per Appendix-A & B under HSE Compliance		
14	Original Power of Attorney of the Signatory signing the tender document duly notarized		
<u>Other Conditions</u>			
15	List of Work Executed for the past 7 years as per Attachment –VI under General Conditions of Contract		
16	List of Work in Progress as per Attachment –VII under General Conditions of Contract		
17	Organization Structure of the bidder		
18	Proposed site organogram for Installation, Testing & Commissioning Work		
19	Confirmation on Time of Completion of job within 6 (Six) months		

20	Confirmation on inclusion of Building Labour Welfare Cess in the quoted price for Installation (as applicable)	
21	Stamped and Signed Tender Document along with addendum/corrigendum	
22	Confirmation of ' NO DEVIATION' from Tender	
23	Confirmation of Bid Validity of 90 days	
24	Whether the tenderer is a relative of any of the Directors of Balmer Lawrie & Co. Ltd. If the tenderer is a firm, is any of BL's Directors or any of their relatives partners in the tenderer's firm. If the tenderer is a company registered under company's Act, 1956, whether any of BL's Directors is a member of Director of the company.	

Hard copies (2 sets in hard bound/spiral bound- 1 original +1 photocopy with Index/Table of Contents and page nos) of the above confirmatory documents (UNPRICED BID ONLY) must be sent before or on due date of submission of online tenders failing which the bid may be rejected.

LIST OF CONTENT:**UN-PRICED PART (PART I)**

1.	NOTICE INVITING TENDER.....	5
2.	GENERAL CONDITIONS OF CONTRACT.....	14
3.	SPECIAL CONDITIONS OF CONTRACT.....	65
4.	HSE COMPLIANCE.....	72
5.	DESIGN BASIS REPORT..... (9 pages)	80
6.	TECHNICAL SPECIFICATION.....	81
7.	TECHNICAL DATA SHEETS..... (24 Data Sheets)	91
8.	TENDER DRAWING..... (2 Drawings)	93

PRICED PART (PART II)

1.	SCHEDULE OF WORK.....	96
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NOTICE INVITING TENDER

1.0	TENDER INVITATION	6
2.0	SCOPE OF WORK	6
3.0	COMPLETION PERIOD	6
4.0	TENDER FEE	7
5.0	EARNEST MONEY DEPOSIT	7
6.0	PRE-QUALIFICATION CRITERIA	7
7.0	PRE- BID QUERIES	9
8.0	TENDER DOCUMENTS	9
9.0	TENDER SUBMISSION	9
10.0	ADDRESS FOR SUBMISSION OF HARD COPIES OF THE TENDER (UNPRICED : PART-I)	10
11.0	SUPPLY OF MATERIAL	11
12.0	TERMS OF PAYMENT	11
13.0	TAXES & DUTIES	11
14.0	NON-CONFORMANCE	11
15.0	VALIDITY OF OFFER	12
16.0	QUANTITY VARIATION	12
17.0	FIRM PRICE	12
18.0	RATES AND OTHER ENTRIES	12
19.0	LANGUAGE OF BIDS	12
20.0	LATE BIDS	12
21.0	BID REJECTION CRITERIA	12
22.0	OPENING OF BIDS	13
23.0	DEVIATIONS	13
24.0	RIGHT TO ACCEPT OR REJECT TENDER	13
25.0	CONTACT DETAILS	13

Tender No. MMLH /FPS/ PT/ 25**1.0 TENDER INVITATION**

Balmer Lawrie & Co. Ltd. (BL) invite ONLINE BIDS from experienced, competent and resourceful contractors with sound technical and financial capabilities for **Supply, Installation, Testing & Commissioning (SITC) of Fire Protection System for Multi-modal Logistics Hub at Visakhapatnam, Andhra Pradesh** being set up by Visakhapatnam Port Logistics Park Limited (VPLPL), a Joint Venture Company between Balmer Lawrie & Co. Ltd. and Visakhapatnam Port Trust in India and having its registered office at 21, Netaji Subhas Road, Kolkata - 700 001.

The prospective bidders must note that BL is involved only to the extent of tendering & finalization of the order. The order on the successful bidder would be placed by Visakhapatnam Port Logistics Park Limited, having its registered office at 21, Netaji Subhas Road, Kolkata -700001 and Correspondence address at 30-15-154/4F2, 5th Floor, GKP Heavenu, Dabagardens Main Road, Visakhapatnam - 530020, India, Tel: + 91 891 2564933.

The intending bidders shall be deemed to have visited the site and familiarise thoroughly with the prevailing site conditions before submission of the tender. Non familiarity with the site conditions and non- visit to site will not be considered reason either for extra claim or for not carrying out the work in strict conformity with the drawing, specification and time schedule.

2.0 SCOPE OF WORK

The scope of the tender covers Supply, Installation, Testing & Commissioning of Fire Protection System inside the premises of Multi Modal Logistics Hub at Visakhapatnam as mentioned in Schedule of Work, General Conditions of Contract, Special Conditions of Contract, Technical Specifications, Data Sheets and Drawings.

2.1 The successful bidder shall prepare detailed fabrication drawings and Bill of Material of Fire Water Tank based on enclosed Tender Drawing and obtain owner's approval.

2.2 Quantities mentioned in the Schedule of Work are estimated only. Successful bidder need to submit Layout of Hydrant System, Layout of Pump House, Layout of Individual Buildings/Warehouses indicating Sprinklers, detectors, Manual Call Points etc. along with quantities of equipment/item for owner's approval.

3.0 COMPLETION PERIOD

Time is the essence of the contract. Supply, Installation, Testing and Commissioning of Fire Protection System shall be completed with **6 (Six) months** (subject to handing over of site for installation of sprinklers and Fire Detection System by owner) as per following schedule:

3.1 Hydrant System (complete with MS tanks, Pumping System etc.) and Hand Appliances shall be completed within **4 (Four) months** from the date of LOI/Order whichever is earlier.

3.2 Balance equipment /appliances/system such as Sprinklers, Fire Detection and Alarm System etc. shall be completed within **subsequent 2 months** or **within 1 month** of handing over of last facility for installation whichever is later.

4.0 TENDER FEE

Tender fee of **Rs 5,000/- (Rupees Five Thousand Only)**, which is non-refundable, by means of a demand draft drawn in favour of M/s Visakhapatnam Port Logistics Park Ltd. on any Scheduled Bank payable at par at Kolkata should be submitted by the tenderer along with the un-priced part (Part-I) of the tender.

5.0 EARNEST MONEY DEPOSIT

- 5.1 Unpriced Part of the Bid should be accompanied by a Demand Draft or Bank Guarantee of **Rs 2,00,000.00 (Rupees Two Lakh Only)** towards Earnest Money Deposit (EMD) executed by any scheduled bank drawn in favour of M/s Visakhapatnam Port Logistics Park Ltd. payable at Kolkata as per format enclosed. EMD submitted by way of Bank Guarantee should be valid for a minimum period of **120 days** after the due date of tender submission.
- 5.2 Earnest Money deposit (EMD) and Tender fee are exempted for bidders registered under NSIC or coming under the definition of Micro and Small Industries and holding valid registration certificates covering the tendered items/services. However, attested/Notarized copy of valid NSIC certificate or "Micro and Small" industry certificate must be submitted along with the tender. The certificate must cover the scope/supply/services for which the Tender is invited.
- 5.3 For the successful bidder, the EMD will be refunded only after they submit the necessary Security Deposit against the work order placed on them.
- 5.4 For the unsuccessful bidders, the EMD will be refunded only after the successful bidder has accepted the Purchase order and the acknowledgment of the same has been received by BL.
- 5.5 EMD is liable to forfeiture in the event of:
- Withdrawal of offers during validity period of the offer
 - Non acceptance of orders by the bidder within the stipulated time after placement of order.
 - Any unilateral revision made by the bidder during the validity period of the offer.
 - Non submission of Security Deposit.
 - Bidders submitting false/fabricated/bogus documents in support of their credentials

6.0 PRE-QUALIFICATION CRITERIA

The prospective tenderers shall fulfill the following pre-qualification criterion -

6.1 Tender Fee, EMD or NSIC/MSME Registration Certificate

Submission of Tender Fee & EMD or Original Notarized Copy of valid NSIC/MSME Certificate along with the Unpriced Bid as mentioned above. Tender Fee & EMD in original shall reach to our office on or before the due date of submission of offer failing which bid will be rejected.

6.2 Turnover Criteria

Average annual turnover of the tenderer shall be minimum of **Rs 240 Lakh** during last 3 (three) financial years ending 31st March, 2017. Audited Annual Reports for Last 3 financial years ending 31st March, 2017 shall be submitted in support of that.

6.3 Past experience

6.3.1 The tenderer should have successfully executed similar job of Fire Protection System of the following minimum values during past seven (7) years ending last day of month previous to the one in which tenders are invited:-

- a. 3 jobs each of value not less than **Rs 160 Lakh** or
- b. 2 jobs each of value not less than **Rs 200 Lakh** or
- c. 1 job of value not less than **Rs 320 Lakh**

Copy of work orders and satisfactory completion certificates from the owner or from their consultant should be enclosed as supportive documents. In the event the consultant issued completion certificate on owners' behalf for a particular job, copy of order issued by the owner to the consultant shall also require to be furnished. In case of non-availability of completion certificate the bidder shall submit bank statement on release of payment towards final bill.

6.3.2 The bidder shall also have prior experience of carrying out residual engineering, supply, fabrication, testing, commissioning of Steel Tank of minimum capacity of 150 KL. Copy of work order along with completion certificate shall be submitted as supportive documents. However, if the bidder does not have any such experience, they may tie-up with other tank fabricator and participate against the tender. Necessary declaration/agreement from the tank fabricator (specifically for participating in this tender) along with copy of work order and completion certificates executed for tank job (150 KL or above) must be submitted.

6.4 Solvency Certificate

The tenderer must submit along with the unpriced Bid **Original Solvency Certificate** for **Rs 160 Lakh** from any Scheduled Bank not older than 6 (six) months from the date of opening of bid. Solvency Certificate addressed to third party will not be accepted. If photocopy of Solvency submitted along with the bid, the bidder shall produce the original for verification.

6.5 PAN, GST Registration, ESI & PF Registration

Tenderers are required to submit attested photocopies of PAN, GST Regn., ESI Registration, Provident Fund registration along with Un-priced part of their offer, failing which their offer may be liable to be rejected. The tenderer shall necessarily submit GST registration of Andhra Pradesh. Tenderers with GST registration of other states shall submit declaration stating if owner/VPLPL fails to get Input Tax Credit, same amount shall be recovered from their bill.

6.6 Income Tax Return

Tenderers are required to submit Income Tax Return for Last 3 financial years ending March 2016.

6.7 Compliance with HSE Standards

Tenderers are required to comply HSE standards as mentioned in **Appendix – A & Appendix – B** of this tender document. Compliance of HSE shall be considered as one of the pre-qualification criteria of the bidder.

6.8 Power of Attorney

The Power of Attorney or authorisation letter or any other document consisting of adequate proof of the ability of the signatory to bind the bidder, in original, when the Power of Attorney or authorisation or any other document is issued relating to the specific tender of Balmer Lawrie & Co. Ltd only. However, a notarized true copy of the 'Power of Attorney' shall also be accepted in lieu of the original, if the Power of Attorney is a general "Power of Attorney". But photocopy of such notarized true copy shall not be accepted.

7.0 PRE- BID QUERIES

To understand the scope of work and to get clarifications on the queries, if any, tenderers are requested to send communication to **Mr. Sk Abu Jafor (Landline no. 08912564933, e-mail : jafor.a@balmerlawrie.com)**. However, the prospective bidders are requested to follow our website for clarifications / updates.

8.0 TENDER DOCUMENTS

Tender Documents comprises two parts viz. Part-I (Un-priced) and Part-II (Priced).

The Un-priced Part consists of Notice Inviting Tender, General & Special Conditions of Contract, and Technical Specification & Drawings. The Priced Part consists of Priced Schedule.

Bidders are requested to download the tender document and read all the terms and conditions mentioned therein and seek clarification, if any, from **Sk Abu Jafor**

9.0 TENDER SUBMISSION

The bidder would be required to register on the e-procurement site <https://balmerlawrie.eproc.in> and submit their bids online.

For registration and online bid submission tenderer may contact the following officials at the HELP DESK of M/s C1 India on browsing to the website <https://balmerlawrie.eproc.in> during business hours (10:00 a.m. to 06:30 p.m.) from Monday to Friday (Excluding holidays of the Company):

Name	E-mails	Phone Numbers
1. Mr. Tirtha Das(Kolkata)	tirtha[dot]das[at]c1india[dot]com	+91-9163254290
2. Mr. Tuhin Ghosh(Kolkata)	tuhin[dot]ghosh[at]c1india[dot]com	+91-8981165071
3. Mr. Partha Ghosh(Kolkata)	partha[dot]ghosh[at]c1india[dot]com	+91-8811093299
4. Mr. CH.Mani Sankar (Chennai)	chikkavarapu[dot]manisankar[at]c1india[dot]com	+91-8939284159
5. Ms. Ujwala Shimpi (Mumbai)	ujwala[dot]shimpi[at]c1india[dot]com	+91-022- 66865608

The tenderer shall authenticate the bid with his Digital Certificate for submitting the bid electronically on e-procurement platform and the bids not authenticated by digital certificate of the tenderer will not be accepted on the e-procurement platform. All the tenderers who do not have digital certificates need to obtain Digital Certificate (with both Signing and Encryption Components). They may contact help desk of M/s C1 India.

The tenderer shall invariably furnish the original Demand Draft in case of Tender fee and Demand Draft /BG for EMD and other relevant documents to the tender inviting authority so as to reach on or before the due date and time of the Tender either personally or through courier or by post and the receipt of the same within the stipulated time shall be the responsibility of tenderer. The Company shall not take any responsibility for any delay or non-receipt. **If any of the documents furnished by the tenderer is found to be false/fabricated/bogus, the tenderer is liable for black listing, forfeiture of the EMD, cancellation of work and criminal prosecution.** The tenderer is requested to get a confirmed acknowledgement from the Tender Inviting Authority as a proof of hardcopies submission to avoid any discrepancy.

The bidders found defaulting in submission of hard copies of original Demand Draft in case of Tender fees and Demand Draft / BG for EMD and other documents to the Tender Inviting Authority on or before the stipulated time in the Tender will not be permitted to participate in the Tender.

The bidder is requested to download the tender document and read all the terms and conditions mentioned therein and seek clarification if in doubt from **Sk Abu Jafor**.

The bidder must keep track of the Addendum / Corrigendum / Amendment/Time Extension, if any, issued by the Tender Inviting Authority by visiting the Company's website (www.balmerlawrie.com) and e-procurement site (<https://balmerlawrie.eproc.in>) from time to time. No separate newspaper advertisement shall be published for such Addendum / Corrigendum / Amendment etc. The Company shall not be responsible for any claims/problems arising out of this.

The tenderer should complete all the processes and steps required for bid submission. The successful bid submission can be ascertained once acknowledgement is given by the system through bid submission number after completing all the process and steps. **M/s C1 India is not responsible for incomplete bid submission by bidders.** Tenderers may also note that the incomplete bids will not be saved by the system and are not available for the Tender Inviting Authority for processing. Tenderers are advised to upload their documents and price bid well in time to avoid last minute rush on the server or complications in uploading.

Neither the Company (Balmer Lawrie & Co. Ltd.) nor the service provider (M/s C1 India) is responsible for any failure or non-submission of bids due to failure of internet or other connectivity problems or system problems of bidder or reasons thereof.

10.0 ADDRESS FOR SUBMISSION OF HARD COPIES OF THE TENDER (UNPRICED : PART-I)

The hardcopies (**2 sets in hardbound/spiral bound/box file, 1 Original + 1 Photocopy**) as explained above and also defined in clause no. 3.05 of GCC under sealed envelope should reach our office located at 30-15-154 / 4F2, 5th Floor, GKP Heavenuue, Dabagarden Main Road, Visakhapatnam 530020. Loose papers/documents shall be avoided. The bid document shall have Index/Table of Contents with page nos of items/sections for ease of identification. The Bidders who are submitting the Bids in person are requested to drop the same in our tender box located at the entrance of 5th floor at the above address during business hours (between 9.30 am and 6.30 pm). **The price bid in .xls format shall be downloaded from the website, bidders to fill in their rates & amounts, print ,stamp, sign, scan and upload the same. Total Contract Price with GST shall be entered as 'Project Contract Total' while uploading price bid. Hard copy of price bid shall not be submitted. Submission of Price Bid in hardcopy by any bidder will lead to cancellation of their bid.** Any hardcopy of unpriced bid submitted to any other office of Balmer Lawrie other than above mentioned address shall not be considered under any circumstances.

11.0 SUPPLY OF MATERIAL

All materials required for the work shall be supplied by the contractor.

12.0 TERMS OF PAYMENT

12.1 No advance shall be paid.

12.2 **65%** of running account bill shall be paid after supply of materials required for completion of individual items of schedule & installation and verification/certification by engineer-in-charge.

12.3 **25%** of running account bill shall be paid after fabrication, erection /installation upon certification by engineer-in-charge.

12.4 **5%** of running account bill shall be paid after testing, commissioning & handing over to owner and also after obtaining Final approval/No Objection Certificate from Conferenced Department upon certification by engineer-in-charge.

12.4 On each running account bill **10% of basic bill value** will be withheld as retention money. The Contractor shall, within fifteen (15) days, submit to the Owner/VPLPL Initial Security Deposit equivalent to **5%** of the total contract value. During payment of monthly running account bills, the initial security deposit will be adjusted first against 'Retention Money', but in no case total retention including initial security deposit shall exceed 10% of the executed value of work at any stage. The retention money will be released after completion and acceptance of work against issue of Bank Guarantee of the equal amount for defect liability and performance maintenance period, which shall be twelve (12) months from the date of completion of job or eighteen (18) months from the date of site delivery, whichever is earlier. Performance Bank Guarantee shall be issued by any Nationalized /Scheduled Bank on basic value of material supplied and shall remain valid for above guarantee period.

During Performance Guarantee period regular check-up of the system shall be done once in a month by the contractor. The quoted rates shall include the said service. The above schedule excludes emergency requirement for attending any problem/ failure of the system during Performance Guarantee period. Every call shall be attended within 24Hrs of the call-booking through written communication / e-mail etc. during this period & afterwards.

12.04 PAYMENT FOR ANNUAL MAINTENANCE CONTRACT (AMC): For AMC, payment shall be released annually after completion of AMC period for the year. AMC shall be enforced after the performance Guarantee period of one year from the date of commissioning.

13.0 TAXES & DUTIES

GST (IGST or CGST & SGST, as applicable) as indicated in the Schedule of Work shall be mentioned while submitting Price Bids. The bidders must pass on 'Input Tax Credit' to VPLPL. Any other taxes except GST shall be included in the basic rate.

14.0 NON-CONFORMANCE

Tenders not conforming to the above mentioned requirements are liable to be rejected.

15.0 VALIDITY OF OFFER

Tendered shall keep their offer valid for a period of **90 days** from the date of opening of Unpriced bid.

16.0 QUANTITY VARIATION

The quantity as mentioned in the Schedule of Work/ Price Bid is indicative. The selected bidder/Contractor shall however ascertain the exact quantity required at site and supply and install accordingly. As the work progresses, it is possible that there will be quantity variations to any extent & omission of items. Under all such circumstances, the rates should be firm.

17.0 FIRM PRICE

The price should be firm and irrevocable and not subject to any change till the completion of Scope of Work.

18.0 RATES AND OTHER ENTRIES

- (a) The tenderer should quote for all items in the Schedule of Work. If there is any discrepancy between unit rate and total amount, the unit rate will prevail. If the tenderer do not quote for any item of price schedule, it will be considered that cost/rate of that item is loaded in some other items. The tenderer shall execute that item (where they have not quoted) without any extra cost to owner.
- (b) The rates should be quoted in the same units as mentioned in the tender schedule of quantities.
- (c) All entries in the tender documents should be in ink / type. Corrections if any should be attested by full signature of the tenderer.
- (d) Every page of the tender document including annexures / enclosures shall be stamped and signed by the tenderer or his authorized representative thereby indicating that each and every page has been read and the points noted.

19.0 LANGUAGE OF BIDS

The Bid prepared by the bidder, all documents attached to and/or relating to the bid and all correspondence exchanged by the Bidder and BL shall be written in English language only. Any printed literature furnished by the bidder may be written in any other language provided that this literature is accompanied by an authenticated English translation, in which case, for purpose of interpreting the Bid, the English translation shall govern.

20.0 LATE BIDS

Bids received after the due date shall not be accepted under any circumstances, bidders are requested to send their bids considering the holidays. Office of Balmer Lawrie is closed on Sunday and national holidays as per the company policy.

21.0 BID REJECTION CRITERIA

A bid may be rejected

- 21.1 If the bidder fails to send the Earnest Money Deposit (EMD) and Tender Fee amount along with the Unpriced Bid within the due date.
- 21.2 If the bidder does not meet the pre-qualification / technical criteria and /or non-submission of documents specified. Bids of those bidders who are not meeting the pre-qualification criteria will not be considered for further techno-commercial evaluation.

- 21.3 The deviations from the terms mentioned in the document is likely to affect in any way the scope, quality and performance of the work.
- 21.4 If the bidder submit price bid in hardcopy.
- 21.5 If a conflict of interest between the bidder and the company is detected at any stage.
- 21.6 If the bidders fails to produce all the original documents/credentials, photo copy of which has been submitted along with bid.
- 21.7 BL /VPLPL reserves the right to verify the particulars furnished by the bidder independently and to obtain feedback from clients/ other concerned agencies. Falsification/suppression of information shall lead to disqualification of the bidder / cancellation of contract even after award of work during the contract.

However, BL/VPLPL reserves the right to accept or reject any tender either in part or in full without assigning any reason whatsoever.

22.0 OPENING OF BIDS

The bids will be opened online only in E-procurement portal <https://balmerlawrie.eproc.in>.

23.0 DEVIATIONS

It is expected that bidders will submit their bid strictly based on the terms and conditions and specifications contained in the bidding documents and will not stipulate any deviations. Should it, however, become unavoidable, deviations (in the form of Deviation Sheet) should be submitted along with the Bid.

24.0 RIGHT TO ACCEPT OR REJECT TENDER

The bidders qualifying as per Pre-Qualification Criteria will be qualified for opening of their price bids and qualified bidder based on over all L-1 value (landed cost to BL/VPLPL i.e. net of Input tax Credit) for Price Bid shall be considered as successful bidder. In the event of receipt of lowest price from more than one (1) bidders, fresh price bids shall be invited from the lowest bidders only to determine final lowest bidder for placement of order.

25.0 CONTACT DETAILS

For any Technical clarifications / queries Tenderers are requested to contact **Sk Abu Jafor (Landline no. 08912564933, e-mail: jafor.a@balmerlawrie.com)** (from 10.00AM to 06.00PM Monday – Friday and Saturday 10.00 AM 3.30 PM).

For **Balmer Lawrie & Co. Ltd.**

M K GANGULY
COO (L)

GENERAL CONDITIONS OF CONTRACT

Article I DEFINITIONS**Article II INTERPRETATION OF GENERAL CONDITIONS OF CONTRACT**

- 2.00 General
- 2.01 Discrepancy in Tender Document
- 2.02 Headings / Titles
- 2.03 Singular and Plural

Article III GENERAL INSTRUCTIONS TO TENDERERS

- 3.01 Non-transferability of Tender Documents
- 3.02 Tenderers responsibility to collect all required data
- 3.03 Complete & Competitive Offer
- 3.04 Submission of tender
- 3.05 Details to be submitted along with the tender
- 3.06 Rates and other entries
- 3.07 Right to accept or reject tender
- 3.08 Contract agreement
- 3.09 Earnest Money
- 3.10 Security deposit
- 3.11 Validity of offer
- 3.12 Time for completion of work

Article IV GENERAL INFORMATION

- 4.01 Site information, climatic condition etc.
- 4.02 Construction water
- 4.03 Construction power
- 4.04 Accommodation for labour & supervisory staff
- 4.05 Deployment of Workmen
- 4.06 Contractor's field office, godown and stores
- 4.07 Temporary roads and drains
- 4.08 Issuing Gate Pass

Article V GENERAL OBLIGATION AND PERFORMANCE OF WORK

- 5.01 Execution of work
- 5.02 Co-ordination and inspection of work
- 5.03 General conditions for construction and erection work
- 5.04 Work in Monsoon & Summer
- 5.05 Drawing to be supplied by the Owner
- 5.06 Drawings to be supplied by the Contractor
- 5.07 Setting out work
- 5.08 Reports & Records
- 5.09 Issue of materials
- 5.10 Storage
- 5.11 Audit
- 5.12 Damage to Property
- 5.13 Articles of value found
- 5.14 Discrepancies between instructions

- 5.15 Liquidated Damage
- 5.16 Force Majeure
- 5.17 Period of liability
- 5.18 Right of owner to terminate the contract
- 5.19 Sub-letting of work
- 5.20 Patents and royalties
- 5.21 Performance guarantee & warranty
- 5.22 Contractor's responsibility with other agencies
- 5.23 Arbitration

Article VI INSPECTION, CERTIFICATION AND PAYMENT

- 6.01 Inspection & testing
- 6.02 Schedule of rates and payments
- 6.03 Procedure for measurement/billing of work in progress
- 6.04 Secured Advance
- 6.05 Notice of claim for additional payment
- 6.06 Completion certificate
- 6.07 Final Certificate
- 6.08 Certificate and payments on evidence of completion

Article VII RULES, REGULATIONS & INSURANCE COVERAGE

- 7.01 Observance of rules/acts in force
- 7.02 Taxes, duties & other statutory payments
- 7.03 Labour Laws
- 7.04 Implementation of Apprentice Act 1964
- 7.05 Insurance

Article VIII SAFETY CODES & PRACTICES

- 8.01 General
- 8.02 First aid and Industrial injuries
- 8.03 General Rules
- 8.04 Contractors barricades
- 8.05 Safety equipment
- 8.06 Hoisting equipment
- 8.07 Electrical equipment

ATTACHMENTS

		<u>No. of pages</u>
I	Agreement	4
II	BG Verification Check List	2
Ila	BG for Earnest Money Deposit	2
III	BG against Performance	2
IV	BG for Security Deposit	2
V	Information about Tenderer	1
VI	Details of Experience	1
VII	Concurrent Commitment	1
VIII	Indemnity Bond	3

ARTICLE – I
DEFINITIONS

1.00 **GENERAL**

The following expressions hereunder and elsewhere in the contract documents used shall have the following meanings hereunder respectively assigned to them except where the context otherwise requires:

- 1.01 The "Owner / "Purchaser"/ "Employer" shall mean Visakhapatnam Port Logistics Park Limited (VPLPL)., a Joint Venture Company between Balmer Lawrie & Co Ltd and Visakhapatnam Port Trust in India and having its registered office at 21, Netaji Subhas Road, Kolkata - 700 001 and shall include its successors and assigns.
- 1.02 "Tenderers" or "Bidders" shall mean such parties who have been issued Tender Document by the Owner and those parties who have submitted these offers to the Owner in response to the Tender Document issued to them.
- 1.03 "Tender Document" shall mean the Tender Documents comprising Part I (Un-priced Bid) –Notice inviting tender, General Conditions of contract, Special Conditions of Contract, Technical Specification, Schedule of Quantities, Drawings / Sketches, Data Sheets, Addenda / Corrigenda to the tender document issued by the Owner, Form of Tender and Part II (Priced Bid) - Price Schedule.
- 1.04 The "Contractor / Successful tenderer/Supplier" shall mean the tenderer selected by the Owner for the performance of the work and shall include the successors and Owner permitted assigns of the Contractor.
- 1.05 The "Sub-contractor" shall mean any person or firm or company (other than the Contractor) to whom any part of work has been entrusted by the Contractor with the written consent of the Engineer-in-Charge, and the legal representatives, Successors and permitted assigns of such person, firm or company.
- 1.06 **The "Project" shall mean Supply, Installation, Testing & Commissioning of Fire Protection System for Multi Modal Logistics Hub at Visakhapatnam, Andhra Pradesh.**
- 1.07 The "Project Manager" shall mean the Officer nominated by Owner to co-ordinate and supervise all the activities connected with the implementation of project on their behalf. "Project Manager" may at his discretion depute Owner's officers to co-ordinate / supervise the work of Contractor / Consultants at site.
- 1.08 The "Engineer-in-Charge" shall mean the Engineer/Agency authorised by the Owner for the purpose of the Contract for overall supervision and co-ordination of site activity and certification of billing.
- 1.09 The "Project Management Consultant (PMC) or Consultant" shall mean M/s. Aarvee Associates, Architects, Engineers & Consultants Pvt Ltd, having it's registered office at Ravula Residency, Srinagar Colony main Road, Hyderabad – 82.
- 1.10 "Site" shall mean all such land, waters and other places on, under, in or through which the works for the Project are to be performed under the Contract.

- 1.11 The "Site Engineer" shall mean the Engineer(s) for the time being deputed by the Engineer-in-Charge as Site Engineer for the work to be performed by the Contractor at any and/or all job sites and to co-ordinate all activities of all parties at site.
- 1.12 "Inspecting Authority" means Third Party Inspection Agency (TPIA) as specified by the Owner/Consultant or Owner's authorised representative or Consultant's representative.
- 1.13 The "Work" and "Scope of Work" shall mean the totality of the work by expression or implication envisaged in the contract and shall include all material, equipment and labour required for or relative or incidental to or in connection with the commencement, performance or completion of any work and/or for incorporation in the work.
- 1.14 The "Works" shall mean the product(s) of the work and shall include all extras, additions, alterations or substitution as required for the purpose of the contract.
- 1.15 The "Works Contract" or "Contract" shall mean the totality of the agreements between the parties as derived from the Contract Documents for the entire work.
- 1.16 The "Contract Documents" shall mean collectively Tender Documents and the Contract Documents as laid out in the Owner's Standard Contract Format which is based on the General & Special Conditions of Contract.
- 1.17 The "Specification(s)" shall mean the various specifications as set out in the specifications forming part of the tender documents and as referred to and derived from the contract and any order(s) or instruction(s) thereunder, and the absence of any specifications as aforesaid covering any particular work or part of portion thereof, shall mean the relevant Indian Standard Institution Specifications for or relative to the particular work or part thereof, and in the absence of any Indian Standard Institution Specifications covering the relative work or part or portion thereof, shall mean the standards or specifications of any other country applied in India as a matter of standard engineering practice and approved in writing by the Engineer-in-Charge or Site Engineer with or without modifications.
- 1.18 "Order" and "Instruction" shall respectively mean any written Order or Instruction given by the Engineer-in-Charge or Site Engineer within the scope of their respective powers in terms of the Contract and shall include alteration / variation order to effect additions to or deletion from and / or alteration in the work detailed in the contract.
- 1.19 "Plans" and "Drawings" shall mean maps, plans, drawings, sketches, tracings and prints forming part of the tender documents and any details or working drawings, amendments and/or modifications thereof approved in writing by the Engineer-in-Charge, Site Engineer or any agency notified by the Engineer-in-Charge to the Contractor for the purpose and shall include any other drawings or plans in connection with the work as may from time to time be furnished by or approved in writing by the Engineer-in-Charge or Site Engineer or any other agency nominated by the Engineer-in-Charge on his behalf in connection with the work.
- 1.20 "Temporary Work" / "Enabling Work" shall mean all such works which are required in or about the execution, completion or maintenance of the work and if not provided for specifically in the Schedule of rates shall be deemed to be done by the Contractor at his own cost in fulfilment of the contract.

- 1.21 "Constructional Plant" shall mean all such Plant & Machineries, appliances, aids or things of whatsoever nature other than materials intended to form part of the permanent works which are required in or about the execution, completion for maintenance of temporary and permanent work.
- 1.22 "Completion Certificate" shall mean the Certificate to be issued by the Engineer-in-Charge after the work has been completed to his satisfaction.
- 1.23 "The Final Certificate" in relation to the work shall mean the certificate to be issued after the period of liability is over by the Owner regarding satisfactory compliance of various provisions of the contract by the contractor.
- 1.24 "Period of Liability" or "Defect Liability Period" refers to the specified period from the date of completion of the entire work as indicated in the completion certificate up to the date of issue of Final Certificate during which the contractor is responsible for rectifying all defects "free of cost" to the satisfaction of Owner.
- 1.25 "Schedule of Rates"/ "Schedule of Quantities" shall mean the schedule of rates incorporated in the contract and shall also include supply rates for labour, material etc. as well as payments for all such work determined in accordance with the contract conditions.
- 1.26 "Running Account Bill" shall mean a Bill for the payment of "On Account" to the Contractor.
- 1.27 "Agreed Variation" shall mean the statement of Agreed Variation annexed to the Acceptance of Tender or a further Amendment to the Contract forming part thereof.
- 1.28 "Acceptance of Tender" shall mean the Acceptance of Tender issued by the Owner to the Contractor.
- 1.29 The "Total Contract Value" means the value of original work order (without GST) issued and duly accepted by the Contractor. The remuneration due to the Contractor in terms of the Contract on successful completion of the work shall mean the value of job actually executed by the Contractor within the original time schedule or within the approved extended time.
- 1.30 "Written Notice" or "Notice" in writing shall mean all hand written, typed / printed /e_mail form sent (unless delivered personally) or proved to have been received by registered post to the last known address / private / business or registered office, of the contractor and shall be deemed to have been received in the ordinary course of post it would have been delivered.
- 1.31 "Letter of Intent" shall mean intimation by a letter to the successful tenderer that the tender has been accepted in accordance with the provisions contained therein.
- 1.32 "Progress Schedule" shall mean the time schedule of Progress of Work.
- 1.33 The "Alteration Order or Variation Order" means Order given in writing by the Owner to effect additions to or deletions from and alterations in the work.
- 1.34 "Measurement book(s) / Sheet(s)" shall mean the register preserved by the Engineer-in-Charge, where all measurements taken at site are neatly recorded by the Engineer-in-Charge or his authorised representative and signed in token of acceptance by the Contractor or his authorised representative.

ARTICLE - II**INTERPRETATION OF GENERAL CONDITIONS OF CONTRACT****2.00 GENERAL**

The following general conditions shall be read in conjunction with the other conditions of contract, special conditions of contract, Technical Specifications etc. and shall be considered as an extension and not in limitation of the obligations of the Contractor. In case of discrepancy, if any, between these conditions the precedence shall be as stated elsewhere in the special conditions of contract.

2.01 DISCREPANCY IN TENDER DOCUMENT

Should there be any discrepancy, inconsistency, error or omission in the Tender Documents, the Tenderer shall bring it to the notice of the Owner / Engineer-in-Charge for necessary clarification / action. In the event such matters are referred to later the decision of the Owner / Engineer-in-Charge directing the manner in which the work is to be carried out shall be final & conclusive and the contractor shall carry out work in accordance with this decision.

2.02 HEADINGS / TITLES

All headings & Titles/Notices to the clauses, specifications /drawings are solely for the purpose of indicative reference and not as summary of the contents and thus shall not be deemed to be part of the clauses of the contract.

2.03 SINGULAR AND PLURAL

Unless otherwise stated or repugnant to the context the singular shall include plural and vice-versa.

ARTICLE - III**GENERAL INSTRUCTIONS TO TENDERERS****3.01 NON-TRANSFERABILITY OF TENDER DOCUMENTS**

Tender documents shall remain the property of the Owner and if obtained by one intending tenderer, shall not be utilisable by another without the consent of the Owner.

3.02 TENDERERS RESPONSIBILITY TO COLLECT ALL REQUIRED DATA

- (i) The tenderer should study all tender documents, carefully, understand the condition / drawing / specification etc. before quoting. If there are any doubts about tender conditions he should obtain clarification from **Sk Abu Jafor** (from 10.00 a.m. to 06.00 PM Monday – Friday and Saturday till 3.30 PM). This shall not be the justification for late submission or extension, compensating date or time to the tender. All tender documents shall govern the contract, shall form part of the contract and shall be binding during the execution till completion of work.
- (ii) The tenderer should visit the site and acquaint himself with the site conditions, all factors which are likely to be relevant for the works, availability and rates for various things including construction materials as per specification, shelter for staff etc. since these are to be provided / arranged by the tenderer (unless otherwise specified) at his own cost. In any case it will be deemed that tenderer as done so and no claim

whatsoever will be entertained on the plea of ignorance of any factor or difficulties involved in fulfilling the tender conditions.

- (iii) Under no circumstances, Tenders may be withdrawn or modified after its submission to the Owner. Negligence on the part of the Tenderer in preparing his tender confers no right for withdrawal or modification of his tender after the tender has been opened.

3.03 COMPLETE & COMPETITIVE OFFER

- (i) Tenderers are required to make the lowest offer for the work as per the enclosed specification and details available therein. The estimated quantities given in the schedule of Quantities are approximate. As the work progresses, it is possible that there are variations & omission of items.
- (ii) The rates quoted should be inclusive of all materials, labour, incidental expenses, equipment, Tools / Tackles, Transportation of materials and Labour, all taxes except GST. All materials are to be supplied by the Tenderer unless otherwise stated.
- (iii) Incomplete / Conditional tender quotation or those received late and / or not conforming to the terms and conditions in the tender documents will be liable to get rejected.
- (iv) It is in the Tenderer's interest to adhere to the Owner's tender conditions, specifications and Tender Schedule. However, if the tenderer considers it unavoidable, deviations should be clearly spelt out with reference to tender conditions. Owner reserves the right to determine / evaluate financial implication of such deviations without any reference to the tenderer or at his discretion consider such tenders liable for disqualification.
- (v) After "Un-priced" bids are evaluated, tenderers whose bids are found acceptable may be invited for discussions for exchange of clarifications, if any, required. At that stage, depending on the merits of the case, opportunity may be given to amend the "Priced" bids already received along with the un-priced bids, but not opened until then. Such amendments or revisions would need to be submitted in similar sealed envelopes generally not later than 7 days after the date of such discussions. Tenders indicating counter proposals or deviations are liable to be rejected.
- (vi) Tenderers are expected to quote rate for each item after careful analysis of cost involved for the performance of the completed item considering all Specifications and conditions of Contract. This will avoid loss of profit or gain in case of curtailment or change of Specification for any item. In case it is noticed that the rates quoted by the Tenderer for any item are unusually high or unusually low it will be sufficient cause for the rejection of the Tender unless the Owner is convinced about the reasonableness of the rates on scrutiny of the analysis for such rate to be furnished by the Tenderer on demand.

3.04 SUBMISSION OF TENDER

The mode of tender submission shall be strictly as defined in the Notice Inviting Tender.

3.05 DETAILS TO BE SUBMITTED ALONG WITH THE TENDER

The tenderer shall submit the following along with the following:

- (i) Hard copy **(1 set original and 1 set photocopy, total 2 sets)** of Un-priced Tender Document duly filled in, stamped and signed by the Tenderer as prescribed in different clauses of Tender documents. **No hard copy of priced bid shall be submitted.**
- (ii) Stipulated Tender Fee & Earnest Money Deposit
- (iii) The Power of Attorney or authorisation letter or any other document consisting of adequate proof of the ability of the signatory to bind the bidder, in original, when the Power of Attorney or authorisation or any other document is issued relating to the specific tender of Balmer Lawrie & Co. Ltd only. However, a notarized true copy of the 'Power of Attorney' shall also be accepted in lieu of the original, if the Power of Attorney is a general "Power of Attorney". But photocopy of such notarized true copy shall not be accepted.
- (iv) Details in proforma wherever prescribed regarding the following:
 - a) Similar work done in past seven years by the tenderer.
 - b) Work in progress and booked along with details of original schedule of completion progress status, likely completion etc.
 - c) Proposed site organization chart
 - d) Solvency certificate, Income Tax Returns for the last 3 years, PF,ESI, GST registration, Annual Reports for the last 3 years, etc.
 - e) Any other documents required in terms of this tender.

3.06 RATES AND OTHER ENTRIES

- (i) The tenderer should quote for all items in the Schedule of Rates. The rate should be expressed in English both in figures and words. Where discrepancy exists between the two, the rates expressed in words will prevail. Similarly if there is any discrepancy between unit rate and total amount, the unit rate will prevail.
- (ii) The rates should be quoted in the same units as mentioned in the tender schedule of quantities.
- (iii) All entries in the tender documents should be in ink / typed Corrections if any should be attested by full signature of the tenderer.
- (iv) Every page of the tender document including annexure / enclosures shall be stamped and signed by the tenderer or his authorised representative thereby indicating that each and every page has been read and the points noted.

3.07 RIGHT TO ACCEPT OR REJECT TENDER

The Owner reserves the right to accept or reject any or every tender without assigning any reason whatsoever / or to negotiate with the tenderer(s) in the manner the Owner considers suitable. The work may be split up amongst two or more tenderers if considered expedient.

3.08 CONTRACT AGREEMENT

The successful tenderer shall within **15 days** of the Owner's communication to him of the Acceptance of the Tender, execute formal agreement with the Owner in the proforma attached to the Tender Document.

In the event of failure on the part of the successful Tenderer to sign the agreement within the stipulated time period, the Earnest Money Deposit will be forfeited and the Acceptance of the Tender shall be considered as cancelled.

3.09 EARNEST MONEY DEPOSIT

- (i) The Tenderer shall be required to submit an Earnest Money of **specified value as mentioned in NIT** along with the un-priced part of the tender and the same shall be returned to the unsuccessful tenderers after acceptance of order by the successful tenderer. Earnest money of successful bidder shall be released after submission of initial security deposit by them

The permissible forms of deposit are:

- a) Bank draft drawn in favour of M/s Visakhapatnam Port Logistics Park Limited on a Kolkata branch of any Scheduled Bank
- b) Bank Guarantee executed by any Scheduled Bank as per proforma enclosed and shall be valid for a minimum period of **120 days** after the due date of tender submission.
- (ii) If the successful tenderer is unable to accept or execute orders when placed upon him or fails to deposit the Initial Security Deposit or withdraws / revises his quoted prices and quantities offered, within the validity period of the tender or after placement of the Order / Letter of Acceptance, the his Earnest Money Deposit shall be forfeited.
- (iii) No interest is payable against Earnest Money Deposit.

3.10 SECURITY DEPOSIT

- (i) On acceptance of the Bid, Contractor shall within **fifteen (15) days**, deposit with Owner an initial Security Deposit of **5% of the Contract value** and the same shall be in any of the following:
- a) Bank draft drawn on a Kolkata Branch of any Schedule Bank in favour of M/s Visakhapatnam Port Logistics Park Limited.
- b) Bank Guarantee executed by any Scheduled Bank as per proforma enclosed and shall be valid at least 60 days after completion of work.
- (ii) If Contractor fails to provide the Security Deposit within the period specified, such failure will constitute a breach of the Contract and Owner shall be entitled to award the Work elsewhere at Contractor's risk and cost. The EMD of the bidder to whom Contract was awarded shall be forfeited.
- (iii) No interest shall be payable against Security Deposit.
- (iv) As and by way of additional security, from every progress bill of Contractor, Security Deposit in the form of Retention Money (interest free) at the rate of 10% of the Gross value of such bill as determined before payment shall be retained by the Owner. At any point of time such deduction shall not exceed 10% of

executed value. Owner can permit Contractor to replace the Security Deposit / Retention Money so retained by Bank Guarantee at his discretion after successful completion of the work.

- (v) Wherever the Security Deposit / Retention Money is furnished by Contractor in any form other than in cash or Demand Draft, Contractor shall be entirely responsible to keep such form of security deposit enforceable by extending the validity thereof before one month of date of expiry and keep them enforceable, until released by Owner after the Defect Liability Period.
- (vi) The Security Deposit / Retention Money shall remain at the entire disposal of Owner as a security for satisfactory execution and completion of the Work(s). Owner shall be at liberty to deduct and appropriate from the Security Deposit / Retention Money such damages (liquidated or otherwise) and other dues and recoveries from Contractor under this Contract and the amount by which Security Deposit / Retention Money is reduced by such appropriations, will be made by further deductions from Contractor's subsequent bills to that extent as to make up the Security Deposit / Retention Money.
- (vii) Notwithstanding anything to contrary, in as much as the Security Deposit is to be in cash with Owner, Owner shall be entitled to enforce any of the approved forms of Security Deposit furnished by Contractor at any time and realise cash thereof irrespective of whether or not Contractor disputes such right. However, if Contractor obtains the extension of the time limit, if any, for the enforceability of such form of Security Deposit and intimates Owner of such extension within one month before expiry, Owner may not enforce such form of Security Deposit, unless it has otherwise become enforceable.
- (viii) On due and satisfactory performance of all the obligations of Contractor under this Contract including completion of work in all respects, carrying out the obligations of Contractor during Defect Liability Period, Retention Money shall be released by Owner subject to recoveries, deductions and retentions therefrom as provided under the Contract.

3.11 VALIDITY OF OFFER

The validity of the tender shall be 90 days from the date of opening of Un-priced tender or any date later than it that may be proposed by the Owner and agreed to by the tenderer. During this period, tenderer shall not be entitled to modify, revoke or cancel his tender without the consent of Owner in writing. In case of successful tenderer only, validity shall be until the work is completed to the satisfaction of the Owner and so certified in writing by the Owner or their accredited representative.

3.12 Time for Completion of Work

Time is the essence of the contract. The tenderer shall submit their plan to complete the whole work according to the overall time allowed for the execution of work as given in the Tender Documents and NIT. **The allowed time for completion of the work as per the NIT includes contract agreement signing and mobilisation of manpower and equipment at site.**

- 3.12.1 The Contractor shall complete in all respects in accordance with the Contract, the entire work at each job site within the time specified in this behalf in the Time Schedule.
- 3.12.2 It is the contractor's responsibility to prepare and submit to the Owner / EIC, a Progress Schedule the dates of progress as fixed by the Engineer in Charge being final and binding upon the contractor except as herein otherwise expressed provided and shall then be the Approved Progress Schedule.

- 3.12.3 The application for extension of time made by the Contractor to the Engineer in Charge should contain full details of
- a. The activity for the Progress Schedule affected.
 - b. The bottlenecks or obstructions perceived/ experienced, and the reasons therefor,
 - c. Extension required/ necessitated on account of above
 - d. Extension required/ necessitated on account of reasons attributable to the Owner,
 - e. Extension required/ necessitated on account of force majeure reasons, and
 - f. The total extension of time if any required/ necessitated for completion, taking the above into account and after eliminating all overlaps.
 - g. The contractor must maintain Hindrance Register at site which shall be updated regularly by Contractor and approved by EIC.
- 3.12.4 The opinion/ decision of the Engineer in Charge in this behalf and as to the extension of time necessary shall be final.
- 3.12.5 The term "Force Majeure" as employed in this contract shall mean wars declared or undeclared or revolutions, civil wars, tidal waves, fires, major floods, earthquakes, epidemics, quarantine restrictions and freight embargoes and transporters strikes affecting the country as a whole.

4.0 GENERAL INFORMATION

4.01 Site Information, Climatic Condition Etc.

The details relating to above are given separately to the best of Owners knowledge. The tenderer shall be deemed to have satisfied themselves regarding site condition, access, communication facilities, local conditions, climatic conditions including wind, monsoon period, rainfall, temperatures etc. and shall be deemed to have included the impact of these factors within their quoted rates.

Contractor should visit the site and familiarise themselves thoroughly before submitting the tender. For the purpose the contractors are required to contact **Sk Abu Jafor**.

4.02 Construction Water

The contractor has to make his own arrangement for both construction water and drinking water. The Owner does not undertake to supply water to the contractor. The contractor shall not dig any wells on owners land without specific permission on writing from Engineer-in-Charge of Owner. Ground water in and around the project site is contaminate and is not suitable for construction purpose.

All temporary arrangements for distribution of construction water shall be removed forthwith after completion of the work or if there is any hindrance caused to the other works, the contractor will re-route or remove the temporary lines at his own cost in a manner so as to continue his (contractor's) work in an uninterrupted manner.

4.03 Construction Power

The contractor has to make his own arrangement for construction power.

All temporary arrangements for distribution of construction power shall be removed forthwith after completion of the work or if there is any hindrance caused to the other works, the contractor will re-route or remove the temporary lines at his own cost in a manner so as to continue his (contractor's) work in an uninterrupted manner.

4.04 Accommodation for Labour & Supervisory Staff

The Contractor shall make his own arrangements for accommodation of his labour and supervisory personnel. No accommodation for labour & supervisory staff shall be provided within the site premises.

4.05 Deployment of Workmen

The workers of the contractor must require proper identification and permission; otherwise they will not be allowed to enter the premises. Necessary assistance in this regard may please be obtained from local administration department.

4.06 Contractor's Field Office, Godown and Workshop

Owner will at his own discretion and convenience and for the duration of the execution of the work make available near the Site, land for construction of Contractor's field office, godowns, stores, workshops and assembly yard required for the execution of the Contract. The Contractor shall at his own cost construct all temporary buildings and provide suitable water supply and sanitary arrangement approved by the Engineer-in-Charge.

4.07 Temporary Roads & Drains

Contractor shall provide service road/roads for movement of materials as per direction of Engineer-in-Charge. Contractor shall also maintain these service roads in safe and fit conditions at his own cost. He shall however have no authority to prevent use of such roads by Owner and other bonafide contractors working at site. Contractor shall also construct temporary drain as may be required while construction.

4.08 Issuing Gate Pass

The contractor will have to submit the details of the persons to be employed at site (before starting of the work) in a specified format along with photocopy of valid photo identity card based on which gate pass will be issued for each person. Before issue of gate pass, the contractor shall ensure for PPE, health check-up & safety induction training of the persons to be deployed at site. No person will be allowed to work without valid gate pass. The contractor shall surrender to the Pass Issuing authority all the gate passes issued for a particular job after completion of the job.

5.0 GENERAL OBLIGATION AND PERFORMANCE OF WORK**5.01 Execution of Work**

All the work shall be executed in strict conformity with the provisions of the Contract Document and with such explanatory detailed Drawings, Specifications and Instructions as may be furnished from time to time to the Contractor by the Engineer-in-Charge, whether mentioned in the Contract or not. The

Contractor shall be responsible for ensuring that Work throughout are executed in the most substantial proper and workmanlike manner with the quality of material and workmanship in strict accordance with the Specifications and to the entire satisfaction of the Engineer-in-Charge.

5.02 Co-ordination and Inspection of Work

- (i) The co-ordination and inspection of the day-to-day Work under the Contract shall be the responsibility of the Engineer-in-Charge but this will not detract the contractor's full responsibility. The written instructions regarding any particular work will normally be passed by the Engineer-in-Charge or his Authorised Representative. A work order book will be maintained by the Contractor for each sector in which the aforesaid written instructions will be entered. These will be signed by the Contractor or his authorised representative by way of acknowledgement within Twelve (12) hours. The pages in the work order book shall be machine numbered.
- (ii) The Engineer-in-Charge will have full power and authority to inspect the Work at any time wherever in progress either on the Site or at the Contractor's Premises / Workshops wherever situated, Premises / Workshops of any person, firm or corporation where work in connection with the Contract may be in hand or where materials are being or are to be supplied, and Contractor shall afford or procure for the Engineer-in-Charge, every facility and assistance to carry out such inspection. Contractor shall, at all time during the usual working hours and all other times at which reasonable notice of the intention of the Engineer-in-Charge or his representative to visit the Work shall have been given to Contractor, either himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for the purpose.

5.03 General Conditions for Construction Work

- (i) The working time is forty eight (48) hours per week per person. Overtime of work is permitted in cases of need and the Contractor will compensate the same. Shift working at two (2) or three shifts per day will become necessary and the contractor should take this aspect into consideration for formulating his rates for quotation. No extra claims will be entertained by the Owner on this account.
- (ii) For carrying out work on Sundays, and Holidays, the Contractor will approach the Engineer-in-Charge or representative and obtain prior permission in writing.
- (iii) The Contractor must arrange for the placement of workers in such a way that the delayed completion of the Work or any part thereof for any reason whatsoever will not affect their proper employment. The Owner will not entertain any claim for idle labour payment whatsoever.
- (iv) The Contractor shall submit to the Owner reports at regular intervals regarding the state and progress of work. The details and proforma of the report will mutually be agreed after the award of Contract.
- (v) The Contractor shall arrange for required number of competent Engineer Supervisor to be present at site at all times during the progress of the work, who shall be duly authorised to take instructions and execute them on his behalf.

5.04 Work in Monsoon & Summer

The completion of the work may entail working in the monsoon also. The Contractor must maintain a minimum labour force as may be required for the Work and plan and execute the construction and erection

according to the prescribed schedule. No extra payment will be considered for such work in monsoon. During monsoon and other period, it shall be the responsibility of the Contractor to keep the construction work site free from water at his own cost.

Adequate precautions have to be taken while working in summer. The working hours for the workers may be rescheduled so as to avoid work during heat hours in the noon. Effective arrangements for supply of sufficient cold drinking water shall be made available and maintained at suitable points conveniently located for use by all workers employed and the water points be legibly marked as "DRINKING WATER". Rest room/Shed to be provided wherever & must be functionally for taking tiffin's/meals and rest by the workers. Oral re-hydration solution should be supplied to all workers during heat hours.

5.05 Drawing to be Supplied by the Owner

- (i) Where drawings are attached with Tender, these shall be for the general guidance of the Contractor to enable him to visualise the type of Work contemplated and Scope of Work involved. The Contractor will be deemed to have studied the Drawings and formed an idea about the work involved.
- (ii) Detailed working drawings on the basis of which actual execution of work is to proceed, shall be prepared by the contractor and same shall be approved by the Owner. Contractor shall be deemed to have gone through the Drawings supplied to him thoroughly and carefully and in conjunction with all other connected drawings and bring to the notice of the Engineer-in-Charge, discrepancies if any, therein before actually carrying out the work.
- (iii) Copies of all detailed working drawing relating to Work shall be kept at the Contractor's office at the Site and shall be made available to the Engineer-in-Charge at any time during the Contract. The drawings and other documents issued by the Owner shall be returned to the Owner on completion of the Work.

5.06 Drawings to be Supplied by the Contractor

- (i) Where drawings/Data are to be furnished by the Contractor, they shall be as enumerated in the special conditions of the Contract, and shall be furnished within the specified time.
- (ii) Where approval of Drawings for Manufacture/Construction/ Fabrication has been specified, it shall be Contractor's responsibility to have these drawings prepared as per the directions of Engineer-in-Charge and got approved before proceeding with Manufacture/Construction/Fabrication as the case may be. Any changes that may have become necessary in these drawings during the execution of work shall have to be carried out by the Contractor to the satisfaction of Engineer-in-Charge at no extra cost. All final drawings shall bear certification stamp as duly signed by the Engineer-in-Charge.
- (iii) The contractor shall require obtaining necessary approval from Engineer-in-Charge for Bar Bending Schedule prepared for reinforcement detail in RCC work before casting.

5.07 Setting out Work

- (i) Contractor shall establish and clearly mark a reference base line at the site and will establish bench marks at regular interval and other points, lines, elevations, etc. as he may require for the proper execution of the work from reference pillars indicated by Engineer-in-Charge

- (ii) Contractor shall be responsible for the true and proper setting out of the works and for the correctness of the positions, levels, dimensions and alignments of all the parts of the works and for the provisions of all necessary instruments, appliances and labour in connection therewith. If at any time during the progress of the works, any error appears or arises in the position, levels, dimensions or alignments of any part of the works, Contractor, on being required to do so by Engineer-in-Charge, shall, at his own expense, rectify such error to the satisfaction of Engineer-in-Charge unless such error is based on incorrect data supplied in writing by Engineer-in-Charge / Owner. The checking of any setting out or any line or level by Engineer-in-Charge shall not in any way relieve Contractor of his responsibility for the correctness thereof and Contractor shall carefully protect and preserve all the bench marks, side rails, pegs and other things used in setting out of the work.

5.08 Reports and Records

- (i) Within fifteen (15) days of the Award, Contractor shall submit to Engineer-in-Charge the detailed programme, the content and form of which shall be satisfactory to Engineer-in-Charge showing the order to procedure and method in which he proposes to carry out the work and the time limit and sequence of carrying out the work and shall, whenever required by Engineer-in-Charge, furnish for his information particulars in writing of Contractor's arrangements for the carrying out of the work and of constructional plant and temporary works which contractor intends to supply, use or construct as the case may be. The approval by Engineer-in-Charge of such programme or the furnishing of such particulars shall not relieve Contractor of any of his duties or responsibilities under this Contract.
- (ii) Contractor shall submit to Engineer-in-Charge by the fifth (5th) day of each month for each part of his work under this Contract and in summary.
- a) A month by month forecast and a historical record up to completion of his requirements and actual use of:
- Manpower by craft, type and position or other description.
 - Materials and supplies including quantity on hand and delivery status.
 - Construction equipment and plant furnished by Contractor.
- b) A month by month forecast up to completion of the amount of Work done and the amount remaining to be completed and all historical record of the Work performed.
- c) Such other reports as Engineer-in-Charge may from time to time specify.

5.09 Issue of Materials

- (i) All materials required for the work shall be supplied by the contractor. Payment shall be made against finished items of work as specified in the schedule.
- (ii) All material, as required to complete the work in all respects according to the contract rates shall be inclusive of all freights, sales tax and other taxes, duties, royalties, loading, unloading, transporting, handling and storage charges etc.
- (iii) Contractor shall bear all incidental charges for the storage and safe custody of materials at Site.

- (iv) Contractor shall construct suitable godowns at Site for storing his own materials, safe against damage by rain, dampness, fire, theft etc. He shall also employ necessary watch and ward establishment for the purpose.
- (v) It shall be the responsibility of Contractor to arrange in time all materials required for Work. If, however, in the opinion of the Engineer-in-Charge the execution of Work is likely to be delayed due to Contractor's inability to make arrangements for supply of materials which normally he has to arrange for, the Engineer-in-Charge shall have the right at his own discretion to issue such materials if available with Owner or procure the materials from the market or elsewhere and Contractor will be bound to take such materials at the rates decided by the Engineer-in-Charge. This, however, does not in any way absolve Contractor from his responsibility of making arrangements for the supply of such materials in part or in full should such a situation occur nor shall this constitute reason for the delay in the execution of Work.
- (vi) In the event of Materials / Equipment supplied by Owner, the same shall not be utilised for other purpose(s) than issued for.

5.10 Storage

Contractor shall provide or cause to be provided all storage yards, transit sheds and warehouses necessary for the performance of his work at locations approved by Engineer-in-Charge. Material supplies, equipment and plant stored by Contractor shall be effectively protected against pilferage and against damage by the elements. Contractor shall adopt all procedures, maintain all personnel and keep all records so that, at all times Contractor can account for

- Stores receipt
- Storage locations
- Inventories
- Disbursements
- Final destinations of all stored items received for Contractor's Work on the Project or any portion thereof.

5.11 Audit

- (i) Contractor's accounts, related to the Project or any portion thereof, shall be available for audit by designated representatives of Owner at all reasonable times.
- (ii) Such representatives shall at all times be afforded proper facilities for inspection of Contractor's accounts and shall have access to Contractor's premises, work and materials, records, ledgers and vouchers of every description pertaining to Contractor's performance of this Agreement.

5.12 Damage to Property

- (i) Contractor shall be responsible for making good to the satisfaction of Owner any loss of and any damage to all structures and properties belonging to Owner or being executed or procured or being procured by Owner/Owner or of other Agencies within the premises of all Work of Owner/Owner if such loss or damage is due to fault and / or the negligence or wilful acts or omission of Contractor, his employees, agents, representatives or Sub-Contractors.

- (ii) Contractor shall indemnify and keeps Owner harmless of all claims for damage to property other than Owner's property arising under or by reason of this agreement if such claims result from the fault and/or negligence or wilful acts or omissions of Contractor, his employees, agents, representative or Sub-Contractors.

5.13 Articles of Value Found

All gold, silver and other minerals of any description and all precious stones, coin, treasure, relics-antiquities and other similar things which shall be found in, under or upon Site, shall be the property of Owner and Contractor shall duly preserve the same to the satisfaction of the Engineer-in-Charge and shall from time to time deliver the same to such person or persons indicated by Owner.

5.14 Discrepancies between Instructions

Should any discrepancy occur between the various instructions furnished to Contractor, his agents or staff or any doubt arise as to the meaning of any such instructions or should there be any misunderstanding between Contractor's staff and the Engineer-in-Charge's staff, Contractor shall refer the matter immediately in writing to the Engineer-in-Charge whose decision thereon shall be final and conclusive and no claim for losses alleged to have been caused by such discrepancies between instructions, doubts, or misunderstanding shall in any event be admissible.

5.15 Liquidated Damage

- i) If the contractor is unable to complete the jobs specified in the scope of work within the period specified in NIT, it may request owner for extension of the time with unconditionally agreeing for payment of LD. Upon receipt of such a request, owner may at its discretion extend the period of completion and shall recover from the contractor's running account bill, as an ascertained and agreed Liquidated Damages, a sum equivalent to **0.5% of contract value** for each week of delay or part thereof. The LD shall be limited to **5%** of the total contract value.

The parties agree that the sum specified above is not a penalty but a genuine pre-estimate of the loss/damage which will be suffered by the owner on account of delay/ breach on the part of the CONTRACTOR and the said amount will be payable to the Owner without proof of actual loss or damage caused by such delay/breach by the Owner.

- (ii) Notwithstanding what is stated in Clause above, the Owner shall have the right to employ any other agency to complete the remaining work at the risk and cost of the Contractor, in the event of his failing to complete the work within the stipulated time or in the even progress of Contractor's work is behind schedule, as judged by the engineer-in-charge.
- (iii) Then the Engineer-in-Charge upon receiving necessary approval from competent Authority may in writing make a fair and reasonable extension of time for completion of the works as per provision of clause no. 3.12, provided further that the Contractor shall constantly use his best endeavour to the satisfaction of the Engineer-in-Charge to proceed with the works. Nothing herein shall prejudice the rights of the Contractor under clause herein above.
- (iv) The contractor may seek time extension for delay or anticipated delay for reasons not attributable to them and in such case time extension may be given without imposition of LD.

- (v) The contractor must maintain Hindrance Register at site in which delays shall be recorded and certified by Consultant/owner.

5.16 Force Majeure

Any delay in or failure of the performance of either party hereto shall not constitute default hereunder or give rise to any claims for damages, if any, to the extent such delays failure of performance is caused by occurrences such as Acts of God or the public enemy expropriation or confiscation of facilities by Government Authorities, compliance with any order or request of any Governmental Authorities, was fires, floods, riots or illegal strikes. Refer clause no 3.12 in this regard.

5.17 Period of Liability

- (i) Contractor shall be responsible for maintaining the quality of the awarded Work for a period of Twelve (12) months from the date of issue of completion certificate without any extra cost. Any damage or defect that may arise or lie undiscovered at the time of issue of completion certificate, connected in any way with the Equipment or materials supplied by him or in the workmanship shall be rectified or replaced by Contractor at his own expense as deemed necessary by the Engineer-in-Charge or in default, the Engineer-in-Charge may cause the same to be made good by other workmen and deduct expenses (of which the certificate of Engineer-in-Charge shall be final) from any sums that may be then or at any time thereafter, become due to Contractor or from his Security Deposit, or the proceeds of sale thereof, or of a sufficient portion thereof.
- (ii) If Contractor feels that any variation in work or in quality of materials or proportions would be beneficial or necessary to fulfil guarantees called for, he shall bring this to the notice of the Engineer-in-Charge in writing.
- (iii) From the commencement of completion of Work, Contractor shall take full responsibility for the care for Work including all temporary work and in case any damages, loss or injury shall happen to Work or to any part thereof or to any temporary work from any cause whatsoever, shall at his own cost repair and make good the same so that at completion Work shall be in good order and in conformity, in every respects, with the requirements of Contract and the Engineer-in-Charge's instructions.
- (iv) If at any time, before Work is taken over, the Engineer-in-Charge shall: -
- a) Decide that any work done or materials used by Contractor or any Sub-Contractor is defective or not in accordance with Contract, or that Work or any portion thereof are defective, or do not fulfil the requirements of Contract (all such materials being hereinafter, called 'Defects' in this clause), and as soon as reasonably practicable gives to Contractor notice in writing of the said decision, specifying particulars of the defects alleged to exist or to have occurred, then Contractor shall at his own expenses and with all speed make good the defects so specified.

In the case Contractor shall fail to do so, Owner may take, at the cost of Contractor, such steps as may in all circumstances, be reasonable to make good such defects. The expenditure so incurred by Owner will be recovered from the amount due to Contractor. The decision of the Engineer-in-Charge with regard to the amount to be recovered from Contractor will be final and binding on Contractor.

As soon as Work have been completed in accordance with Contract (except in minor respects that do not effect their use for the purpose for which they are intended and except for maintenance thereof provided

in the General Conditions of the Contract) and have passed the tests on completion, the Engineer-in-Charge shall issue a certificate (hereinafter called Completion Certificate) in which he shall certify the date on which Work have been so completed and have passed the said tests and Owner shall be deemed to have taken over Work on the date so certified. If Work has been divided into various groups in Contract, Owner shall be entitled to take over any group or groups before the other or others and thereupon the Engineer-in-Charge shall issue a Completion Certificate which will, however, be for such group or groups so taken over only.

- b) In order that Contractor could obtain a completion Certificate he shall make good, with all possible speed any defect arising from the defective materials supplied by Contractor or workmanship or any act or omission of Contract that may have been noticed or developed, after the Work or group of Works has been taken over, the period allowed for carrying out such Work will be normally one (1) month. If any defect be not remedied within a reasonable time. Owner may proceed to do Work at Contractor's risk and expense and deduct from the Final Bill such amount as may be decided by Owner.

If by reason of any default on the part of Contractor a completion Certificate has not been issued in respect of every portion of Work within one (1) month after the date fixed by Contract for the completion of Work, Owner shall be at liberty to use Work or any portion thereof in respect of which a Completion Certificate has been issued, provided that Work of the portion thereof so used as aforesaid shall be afforded reasonable opportunity for completing these Work for the issue of Completion Certificate.

5.18 Right of Owner to Terminate the Contract

- (i) If the Contractor being an individual or a firm commits any 'Act of Insolvency' or shall be adjudged as insolvent or being an Incorporated Company shall have an order for compulsory winding up made against it, or pass an effective resolution for winding up voluntarily or subject to the supervision of the Court or shall be unable to carry out and fulfil the contract and to give security therefore, is so required by the Engineer-in-Charge.

Or if the Contractor (whether an individual, firm or incorporated company) shall suffer execution to be issued.

Or shall suffer any payment under this Contract to be attached by or on behalf of any of the creditors of the contractor.

Or shall assign or charge, encumber or sublet this contract without the consent in writing of the Engineer-in-Charge first obtained.

Or shall charge or encumber this contract or any payments due or which may become due to the Contractor thereunder.

Or if the Engineer-in-Charge shall certify in writing to the Owner that the Contractor -

- a) has abandoned the Contract or
- b) has failed to commence the works, or has without any lawful excuse under these conditions, suspended the progress of the works for 7 days after receiving from the Engineer-in-Charge written notice to proceed or

- c) has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon or
- d) has failed to remove materials from the site or to pull down and replace work for seven days after receiving materials or work were condemned and rejected by the Engineer-in-Charge under these conditions or
- e) has used sub-standard or inferior material or materials not conforming to the specifications or has employed inferior workmanship in carrying out the works or part thereof or has not exercised due diligence in execution of the said work, or
- f) has neglected or failed persistently to observe and perform all or any of the acts, deeds, matters or things by this Contract to be observed and performed by the Contractor requiring the Contractor to observe or perform the same, or
- g) has to the detriment of good workmanship or in defiance of the Engineer-in-Charge's instructions to the contrary, sub-let or sub-contracted any part of the contract, or
- h) has failed to comply with the Engineer-in-Charge's instructions, or
- i) has in the opinion of the Engineer-in-Charge committed any breach of this Contract, then and in any of the said cases the Owner with the written consent of the Engineer-in-Charge may notwithstanding any previous waiver, after giving seven day's notice in writing to the Contractor terminate the Contract, but without hereby affecting the right of the Owner of the powers of the Engineer-in-Charge or the obligations and liabilities of the Contractor in respect of work, the contract shall continue enforce as fully as if the contract has not been so determined and the obligations of the contractor in respect of work subsequently executed shall continue as if the works subsequently executed has been executed by or on behalf of the Contractor. And further, the Owner by its agents or servants shall be entitled forthwith to enter upon and take possession of the works and all plants, tools, scaffoldings, sheds, machinery, steam and other power implements, machinery equipment and materials lying upon the site or the adjoining lands or roads and use the same as its own property and to employ the same by means of its own servants and workmen in carrying on and completing the work or by employing any other contractor and the Contractor shall not in any way interrupt or do any act, matter or things to prevent, intimidate or hinder such other contractor or other person or persons employed for completing and finishing or using the materials and plant for the work. When the works shall be completed or as soon thereafter as convenient, the Engineer-in-Charge shall give a notice in writing to the Contractor to remove his surplus materials and plant and should the Contractor fail to do so within the period of 7 days after receipt thereof by him, the Owner shall sell the same either by public auction or a private sale and shall be given credit to the contractor for the amount realised. The Engineer-in-Charge shall thereafter ascertain and certify in writing under this hand what (if anything) shall be due or payable to or by the owner, the expense or loss which the owner shall have been put to in procuring the works to be completed and the amount, if any, owing to the contractor and the amount which shall be so certified, shall thereupon be paid by the owner to the Contractor or by the Contractor to the Owner, as the case may be and the Certificate of the Engineer-in-Charge shall be final and conclusive and binding on the parties hereto. In the event of termination under this Clause, the Owner shall not be bound by any provision of this Contract to make any further payment to the Contractor until the said works are completed.
- (j) Owner shall, at any time, be entitled to determine and terminate the Contract, if in the opinion of the Owner the cessation of the Work becomes necessary owing to paucity of funds or for any other cause

whatsoever, in which case the cost of approved materials at the Site at current market rates as verified and approved by Engineer-in-Charge and of the value of the Work done to date by the Contractor shall be paid for in full at the specified in the Contract. A notice in writing from the Owner to the Contractor of such determination and termination and the reason therefore shall be the conclusive proof of the fact that the Contract has been so determined and terminated by the Owner.

- (k) Should the Contract be determined under sub-clause of this clause and the Contractor claims payment to compensate expenditure incurred by him in the expectation of completing the Work, the Owner shall consider and admit such claim as are deemed fair and reasonable and are supported by the vouchers to the satisfaction of the Engineer-in-Charge. The Owner's decision on the necessity and propriety of such expenditure shall be final and conclusive and binding on the Contractor.

5.19 Sub-Letting Of Work

- (i) No part of the Contract nor any share or interest therein shall in any manner or degree be transferred, assigned or sublet by the Contractor directly or indirectly to any person, firm, or corporation whatsoever except as provided for in the succeeding sub-clause, without the consent in writing, of the Owner.
- (ii) The Owner may give written consent to sub-contract for the execution of any part of the Work at the Site, being entered into by the Contractor provided each individual sub-contract is submitted to the Engineer-in-Charge before being entered into and is approved by him.
- (iii) Notwithstanding any sub-letting with such approval as aforesaid and notwithstanding that the Engineer-in-Charge shall have received copies of any sub-contracts, the Contractor shall be and shall remain solely responsible for the quality and proper and expeditious execution of the WORK and the performance of all the conditions of the Contract in all respects as if such sub-letting or sub-contracting had not taken place, and as if such Work had been done directly by the Contractor.
- (iv) If any Sub-Contractor engaged upon the Work at the Site executes any Work which in the opinion of the Engineer-in-Charge is not in accordance with the Contract Document, the Owner may by written notice to the Contractor request him to terminate such contract and the Contractor upon the receipt of such notice shall terminate such sub-contract and dismiss the Sub-Contractors and the latter shall forthwith leave the Work failing which the Owner shall have the right to remove such sub-contractors from the Site.
- (v) No action taken by the Owner under the clause shall relieve the Contractor of any of his liabilities under the Contract or give rise to any right to compensation, extension of time or otherwise.

5.20 Patents and Royalties

Contractor, if licensed under any patent covering, Equipment, Machinery, Materials or compositions of matter to be used or supplied or methods and process to be practiced or employed in the performance of this Contract, agrees to pay all royalties and license fees which may be due with respect thereto. If any Equipment, Machinery, Materials, Composition matters, to be used or supplied or methods and process to be practiced or employed in the performance of this Contract, is covered by a patent under which the Contractor is not licensed then the Contractor before supplying or using the Equipment, Machinery, Materials, compositions method or processes shall obtain such licenses, and pay such royalties and license fees as may be necessary for performance of the Contract. In the event the Contractor fails to pay any such royalty or obtain any such license any suit for infringement of such patents which is brought

against the Contractor or the Owner as a result of such failure will be defended by the Contractor at his own expense and the Contractor will pay any damages and costs awarded in such suit.

5.21 Performance Guarantee & Warranty

(i) Performance Guarantee:

- a) The contractor shall guarantee that the material of construction and workmanship of work done and any fittings designed / manufactured / supplied by him are as specified in the tender schedule and wherever there is nothing specifically mentioned shall correspond to the best available grade and quality as required for the application.
- b) The contractor shall also guarantee that the work done and any fittings designed, manufactured, supplied, erected shall be as per prevailing relevant standard, codes and statutory practices / stipulations.
- c) The contractor shall guarantee the work done and any fittings designed, manufactured, supplied, erected and tested by him against defective materials, poor workmanship, improper design, operation inadequacies & problems and failure from normal usage, for a period of twelve (12) months from the date of completion of job or eighteen (18) months from the date of site delivery, whichever is earlier.

(ii) Warranty:

The Contractor will repair and/or replace all defective parts, components / fittings, accessories etc. which shall be notified to him in writing within the Defect Liability Period provided that such defective parts, components, fittings, accessories etc. are promptly rectified and replaced by him free of cost. The contractor will provide similar warranty on the parts, components, fittings, accessories etc. repaired and/or replaced.

5.22 Contractor's Responsibility with Other Agencies

Without repugnance to any other condition, it shall be the responsibility of the Contractor to work in close co-operation and co-ordinate the other contractors and other Agencies or their authorised representatives if any working at the site in providing the necessary grooves, recesses, cuts and opening etc., in walls, slabs, beams and columns etc. and making good the same to the desired finish as per Specifications where required. For at the above said requirements, the Contractor before starting up the works shall in consultation with other contractors and other Agencies or their authorised representatives if any prepare and put up a joint scheme to the Engineer-in-Charge and get the approval. The Engineer-in-Charge, before communicating his approval to the scheme, with any required modifications, shall get the final agreement of all the Agencies, which shall be binding. No claim shall be entertained on account of the above.

5.23 Arbitration

Any dispute or difference arising under this Contract shall be referred for adjudication at Kolkata to a sole arbitrator to be appointed by Director, Visakhapatnam Port Logistics Park Ltd. and the provisions of Arbitration Act, 1996 including any statutory modifications or enactment thereof shall apply to the Arbitration proceedings. The fees of the arbitrator, if any, shall be paid equally by both the parties. The award shall be a speaking award stating reason therefor and is final & binding on the parties. The proceeding shall be conducted in English language and courts at Kolkata will have exclusive jurisdiction to settle any dispute arising out of this contract.

6.0 INSPECTION, CERTIFICATION AND PAYMENT

6.01 Inspection & Testing

- (i) All materials required for the execution of the work should conform to the standard specification and approved by the Engineer-in-Charge before actually put to use. Commencement of work without prior approval shall be entirely at the risk and cost of the Contractor. No delay due to non-availability of the Materials, tools, equipment etc. will be entertained by the Owner. In the case of certain Machinery / Equipment, the Engineer-in-Charge may inspect the item for approval, before they are brought to site.
- (ii) The Owner shall be entitled at all times at the risk of the Contractor to inspect and / or test by themselves or through any independent person(s) or agency (ies) appointed by the owner and/or to direct the contractor to inspect and/or test all material(s), items and components whatsoever supplied or proposed for supply, for incorporation in the work inclusive, during the course of manufacture or fabrication by the Contractor and/or at the Contractors work or otherwise, such materials or items or components. The inspection and/or test shall be conducted at the expense of the Contractor and if conducted by the Contractor may be directed by the Owner to be conducted by agency (ies) nominated by Owner and/or in the presence of witness (ess) nominated by the Owner.
- (iii) The Contractor shall furnish to the Engineer-in-Charge for approval when requested or as required by the specification or other contract documents, adequate samples of material intended for incorporation in the works. Such samples to be submitted before the work are commenced permitting sufficient time for tests, examination(s) thereto by the Engineer-in-Charge. All materials furnished and incorporated in the work shall conform to the sample(s) in all respects.
- (iv) The Engineer-in-Charge shall be entitled to reject at any time any defective materials, item or components, (including special manufactured or fabricated items or components) supplied by the Contractor for incorporation in the works.
- (v) The Contractor shall at all times ensure highest standard of workmanship, relating to the work to the satisfaction of the Engineer-in-Charge. The Engineer-in-Charge shall have the power to inspect the work as also to test or instruct the contractor to test the works or any structure, material or component thereto at the risk and cost of the Contractor, either by the Contractor or by any agency(ies) nominated by the Engineer-in-Charge or Site Engineer on his behalf.
- (vi) The Contractor shall provide all facilities, instruments material / labour and accommodation required for testing the works (including checking the set time out of work) and shall provide Engineer-in-Charge all assistance necessary to conduct the test whenever and wherever required.
- (vii) The Engineer-in-Charge on inspection or test be not satisfied with the quality or workmanship of any work, structure, material, component (decision of the Engineer-in-Charge being final in this behalf), the Contractor shall re-perform, replace, re-install and / or re-erect as the case may be such work, structure material or component, as no such rejected work, structure, material, item or component shall be re-used without the prior permission of Engineer-in-Charge.
- (viii) Notwithstanding any provided in the foregoing clauses hereto and notwithstanding the Engineer-in-Charge/ or his representative has inspected tested and/or approved any particular work, structure, material or component, such inspection, test or approval shall not absolve the Contractor of his full responsibilities under the contract inclusive or relative to the specification, performance guarantee. The

said inspection and test procedure being intended basically for satisfaction of the Owner / prima-facie erection and/or material and equipment supplied for incorporation in the work is in order.

- (ix) On no account shall the Contractor proceed with the concreting or other work in foundations and superstructure by covering up or otherwise placing beyond reach of inspection or measurement any work before necessary inspection, entries are filled in the Site Inspection Register by the Engineer-in-Charge or his authorised representative. Should the contractor do so the same shall be uncovered at the contractor's risk and expense for carrying out the inspection and measurement.
- (x) If any tests are required to be carried out in connection with the work or materials or workmanship not supplied by the Contractor, such tests shall be carried out by the Contractor as per the instructions of Engineer-in-Charge and cost of such tests shall be reimbursed by the Owner.

6.02 Schedule of Rates and Payments

- (i) The price to be paid by Owner to Contractor for the work to be done and for the performance of all the obligations undertaken by Contractor under Contract shall be ascertained by the application of the respective Schedule of Rates (there of application but not of limitation, with the succeeding sub-clause of this clause) and payment to be made accordingly for the work actually executed and approved by the Engineer-in-Charge. The sum so ascertained shall (excepting only as and to the extent expressly provided herein) constitute the sole and inclusive remuneration of Contractor under Contract and no further or other payment whatsoever shall be or become due or payable to the Contractor under Contract.
- (ii) The prices/rates quoted by Contractor shall remain firm till the issue of final certificate and shall not be subject to escalation. Schedule of Rates shall be deemed to include and cover all costs, expenses and liabilities of every description and all risks of every kind to be taken in executing, completing and handing over Work to Owner by Contractor. Contractor shall be deemed to have known the nature, scope, magnitude and the extent of Work and materials required though Contract Document may not fully and precisely furnish them. He shall make such provision in the Schedule of Rates as he may consider necessary to cover the cost of such items of Work and materials as may be reasonable and necessary to complete the Work. The opinion of the Engineer-in-Charge as to the items of work which are necessary and reasonable for completion of Work shall be final and binding on Contractor, although the same may not be shown on or described specifically in Contract Document.

Generality of this present provision shall not be deemed to cut down or limit in any way Contractor's obligation under the Contract, because in certain cases it may and in other cases it may not be expressly stated that Contractor shall do or perform a work or supply articles or perform, services at his own cost or without additional payment or without extra charge or work to the same effect or that it may be stated or not stated that the same are included in and covered by the Schedule of Rates.

- (iii) Without in any way limited the provisions of the preceding sub-clause the Schedule of Rates shall be deemed to include and cover the cost of all Constructional Plant and Equipment, Temporary Work (except as provided for herein), Pumps, Materials, Labour, Insurance, Fuel, Stores, and Appliances to be supplied by Contractor and all other matters in connection with each item in the Schedule of Rates and the execution of Work or any portion thereof finished, complete in every respect and maintained as shown described in the Contract Document or as may be ordered in writing during the continuance of Contract.

- (iv) Unless specifically mentioned otherwise in the contract, all payments shall be made against finished items of work only as defined and included in the schedule of rates. However, Engineer-in-Charge may grant part payment, in certain cases, against partially completed work at his own discretion after proper checking and measurement of the portion of the work completed by the contractor. All such payment shall be regarded merely as an advance payment against the amounts due to the contractor in terms of the contract and any such payment shall not be regarded as an acceptance of any work paid for.
- (v) No exemption or reduction of Customs Duties, applicable taxes, cess, quay or any port dues, Royalties, transport charges, stamp duties or Government or Local Body or Municipal Taxes or Duties, Taxes or Charges (from or of any other body), whatsoever, will be granted or obtained, all of which expenses shall be deemed to be included in and covered by the Schedule of Rates. Contractor shall also obtain and pay for all permits, or other privileges necessary to complete work.
- (vi) For Work under Unit Rate Basis, no alteration will be allowed in the Schedule of Rates by reason of Work or any part of them being modified, altered, extended, diminished or omitted. The Schedule of Rates are fully inclusive rates which have been fixed by Contractor and agreed to by Owner and cannot be altered.
- (vii) No Escalation on account of any increase in price index in the price of materials, imposition of sales tax or other tax etc. or imposition of levies etc. will be payable. No price escalation shall be applicable even during the extended period.

6.03 Procedure for Measurement / Billing of Work in Progress

- (i) All measurement shall be in metric system. All the Work in progress will be jointly measured by the representative of the Engineer-in-Charge and Contractor's authorised agent progressively. Such measurement will be got recorded in the Measurement Book /Sheet by the Engineer-in-Charge or his authorised representative and signed in token of acceptance by Contractor or his authorised representative.
- (ii) For the purpose of taking joint measurement Contractor's representative shall be bound to be present whenever required by the Engineer-in-Charge. If, however, he absents for any reason whatsoever the measurements will be taken by the Engineer-in-Charge or his representative and this will be deemed to be correct and binding on Contractor.
- (iii) The mode of measurement shall be in accordance with Indian Standard Specifications as laid down unless otherwise specified to the contrary.
- (iv) All measurements shall be neatly written on the measurement books / sheets. Each set of measurements, shall commence with entries stating:
 - a) Full name of work as given in estimate
 - b) Situation of work
 - c) Name of Contractor
 - d) Date of agreement entered into with Contractor
 - e) Date of Commencement of Work
 - f) Date of completion of work
 - g) Date of measurement

At the end of measurements, dated signature and designation of the person, who recorded the measurements, shall be made.

- (v) All pages of measurement sheets shall be machine numbered. All receipts and issues of measurement sheets shall be recorded in a register. The eventual return of all measurement sheets shall be recorded and carefully preserved by the Engineer-in-Charge.
- (vi) Contractor will submit a Bill in approved proforma in quadruplicate to the Engineer-in-Charge of Work giving abstract and detailed measurements for the various items executed during a month, before the expiry of the first week of the succeeding month. The Engineer-in-Charge shall take or cause to be taken the requisite measurements for the purpose of having the same verified and the claim, as far as admissible.

Engineer-in-Charge shall review such bills and shall either:

- a) Approve such bills and certify the same for payment; or
- b) Approve part of the bill(s) and certify that part for payment, request further clarifications / revisions from Contractor as to the balance and upon receipt of satisfactory clarification / revisions from Contractor, certify the balance for payment; or
- c) Reject the entire bill subject to further clarification / revisions from Contractor, upon receipt by Engineer-in-Charge of satisfactory clarification / revisions to such rejected bill, Engineer-in-Charge shall approve and certify the clarified / revised bill for payment.

6.04 Secured Advance

No secured advance is payable.

6.05 Notice of Claim for Additional Payment

Should Contractor consider that he is entitled to any extra payment or compensation or to make any claims whatsoever in respect of Work he shall forthwith give notice in writing to the Engineer-in-Charge that he claims extra payment and/or compensation. Such notice shall be given to the Engineer-in-Charge within ten (10) days from the ordering of any Work or happening of any event upon which Contractor bases such claims and such notice shall contain full particulars of the nature of such claim with full details and amount claimed. Failure on the part of Contractor to put forward any claim with necessary particulars as above within the time above specified shall be an absolute waiver thereof. No omission by Owner to reject any such claim and no delay in dealing therewith shall be waiver by Owner of any rights in respect thereof.

6.06 Completion Certificate

- (i) When Contractor fulfils his obligation under clauses he shall be eligible to apply for Completion Certificate. Contractor may apply for separate Completion Certificate in respect of each such portion of Work by submitting the completion Documents along with such application for Completion Certificate.

The Engineer-in-Charge shall normally issue to Contractor the Completion Certificate within one(1) month after receiving an application therefore from Contractor after verifying from the completion documents and

satisfying himself that work has been completed in accordance with and as set out in the construction and erection drawings, and the Contract Document and rectification of defects if any.

Contractor, after obtaining the Completion Certificate, is eligible to present the Final Bill for Work executed by him under the terms of Contract.

- (ii) Within one (1) month of completion of work in all respects, Contractor shall be furnished with a certificate by the Engineer-in-Charge, of such completion, but no certificate shall be given nor shall work be deemed to have been executed until all scaffolding, surplus materials and rubbish is cleared off Site completely nor until work shall have been measured by the Engineer-in-Charge whose measurement shall be binding and conclusive. Work will not be considered as complete and taken over by Owner, until all the temporary works, constructed, are removed and the worksite cleaned to the satisfaction of the Engineer-in-Charge.

If Contractor shall fail to comply with the requirements of this clause on or before the date fixed for the completion of Work, Engineer-in-Charge may at the expenses of Contractor remove such scaffolding, surplus materials and rubbish and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and Contractor shall forthwith pay the amount of all expenses so incurred and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realised by the sale thereof.

- (iii) For the purpose of clause, the following Documents will be deemed to form the completion Documents:
- (a) The technical documents according to which Work was carried out.
 - (b) Three (3) sets of Construction Drawings showing therein the modification and corrections made during the course of execution signed by the Engineer-in-Charge.
 - (c) Completion Certificate for 'embedded' and 'covered' up Work.
 - (d) Certificates of final levels as set out of various work.
 - (e) Material appropriation Statement for the materials issued by Owner for Work and list of surplus materials returned to Owner's store duly supported by necessary Documents. Contractor should also submit the necessary documents before taking out their own materials/equipment from the site. No material/equipment can be taken out from site without prior approval of Engineer-in-Charge.

6.07 Final Certificate

Upon expire of the period of liability and subject to the Engineer-in-Charge being satisfied that work have been duly maintained by Contractor, during such period as hereinbefore mentioned and that Contract has in all respect duly made up any subsidence and performed all his obligations under Contract, the Engineer-in-Charge shall (without prejudice to the rights of Owner to retain the provisions of relevant clause hereof) otherwise give a certificate herein referred to as the final certificate to that effect and Contractor shall not be considered to have fulfilled the whole of his obligations until Final Certificate shall have been given by the Engineer-in-Charge notwithstanding any previous entry upon Work and taking possession, working or using of the same or any part thereof by Owner. Contractor shall provide Owner with a certified satisfactory to both that all privileges, liens, claims, obligations and liabilities against or chargeable to the Owner have been fully paid, satisfied and released and that Contractor has no claim(s) against Owner.

6.08 Certificate and Payments on Evidence of Completion

Except the final certificates no other certificate or payments against a certificate or on general account shall be taken to be an admission by Owner of the due performance of Contract or any part thereof or occupancy or validity of any claim by Contractor.

7.0 RULES, REGULATIONS & INSURANCE COVERAGE

7.01 Observance of Rules/ Acts in Force

- (i) The successful tenderer and his man shall abide by all rules/regulations in force at a location and the laws, by-laws and statutes of Government / Semi-Government and other local authorities such as requirements / liability under enactments, Contract Labour Act etc. and the Company shall stand indemnified against by claims on these scores.
- (ii) The Contractor shall conform to the provisions of Acts, rules, orders or notifications of any Governments, Municipal or local authority for the time being in force affecting the work undertaken by him and will give all necessary notices to and obtain requisite sanction and permits of and from the Municipal and any other authority in respect of the said work or the materials to be used there at and generally will comply with the building and other regulations of such authorities and will keep the Company indemnified against all claims, penalties and losses that may be incurred by it by reason of any breach by the Contractor of any statutes by-laws, rules, regulations, notifications etc.
- (iii) The Contractor and sub-contractor(s) of the Contractor shall obtain authority (ies) designated in this behalf under any applicable laws, rule or regulation (including) but not limited to Contract Labour (in so far as applicable) any and all such license(s) consent(s), registration(s) and/or other authorisation(s) as shall from time to time be or become necessary for or relative to the execution of the work or any part or portion thereof or the storage or supply or any material(s) or otherwise in connection with the performance of the contract and shall at all times observe and ensure due observance by the sub-contractors, servants and agents of all terms and conditions of the said license(s) consent(s) regulation(s) and other authorisation(s) and laws, rules and regulations applicable thereto.
- (iv) The Contractor undertakes to ensure due and complete compliance with all laws, regulations, rules, etc., applicable to the workmen employed or whose services are otherwise availed of by the Contractor, whether in connection with the construction work at the site or otherwise. The Owner shall have the right to inspect the records maintained by the contractor, Contractor shall whenever required by the Owner, produce such records and as and when the Owner may call upon the Contractor, ascertain whether or not the requirements of all such laws, regulations, rules etc. coming to light whether as a result of such inspection or otherwise, the Owner shall have the right to require the contractor to effect such compliance within such time, as the Owner may prescribe in that behalf and in the event of the Contractor failing to effect such compliance within the time prescribed by the Owner, then the Owner shall without prejudice to his other rights, be entitled to withhold from the amount payable to the workmen under any such laws, regulations or rules and to make payment thereof to the workmen. The Owner shall also have in that event the right to terminate the contract with immediate effect and to exercise powers reserved to the Owner under the contract as a result of termination.

7.02 Taxes, Duties & Other Statutory Payments

Contractor agrees to and does hereby accept full and exclusive liability for the payment of any and all taxes, duties etc. now or hereafter imposed, increased, or modified and all the taxes and duties now enforce and hereafter increased, imposed or modified from time to time in respect of Work and materials and all contributions and taxes for unemployment compensation insurance and old age pensions or annuities now or hereafter imposed by any Central or State Governmental Authorities which are imposed with respect to or covered by the wages, salaries, or other compensations paid to the persons employed by Contractor and Contractor shall be responsible for compliance with obligations and restrictions imposed by the Labour Law or another law affecting employer employee relationship and Contractor further agrees to comply, and to secure the compliance of all Sub-contractors, with applicable Central, State Municipal and local laws and regulations and requirements of any Central, State or Local Employment Agency or authority, Contractor further agrees to defend, indemnify and hold harmless from any liability or penalty which may be imposed by the Central, State or Local authorities by reason of any violation by contractor or Sub-contractor of such laws, regulations or requirements and also from all claims, suits or proceedings that may be brought against Owner arising under, growing out of, or by reason of work provided for by this Contract, by third parties, or by / central or State Government Authority or any administrative sub-division thereof.

7.03 Labour Laws

- (i) No Labour below the age of eighteen (18) years shall be employed on Work. In case female workers are engaged, requisite provisions shall be made as per the statute.
- (ii) Contractor shall not pay less than what is provided under law to labourers engaged by him on Work.
- (iii) Contractor shall at his expense comply with all labour laws and keep Owner indemnified in respect thereof.
- (iv) In addition to above, rules and regulations as contained in Contract Labour (Regulation and Abolition) Act, 1970 will also be applicable for this contract. For the purpose of registration as per the above Act, Contractor may contact Owner for further details.
- (v) Contractor shall secure full safety of the workers / employees engaged by him in the Site premises and shall take at his own cost, insurances and such other safety regulations for the said purpose.
- (vi) Contractor shall submit the filled-up **Statutory Compliance Check List** as per the specified format to the owner on monthly basis. All the registers with regards to statutory compliance must be maintained at site.

7.04 Implementation of Apprentices Act 1964

Contractor shall comply with the provisions of the Apprentices Act, 1964 and the Rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of Contract and the Engineer-in-Charge may, at his discretion, cancel Contract. Contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provision of the Act.

7.05 Insurance

Contractor shall at his own expense carry out and maintain insurance with reputable companies to the satisfaction of the Owner as follows:

(i) **Workmen's Compensation and Employees' Liability Insurance:**

Insurance shall effect for all contractors' employees engaged in the performance of this Contract. If any of the work is sublet, after necessary approval by the Owner, the contractor shall require the Sub-contractor to provide Workmen's Compensation and Employees' Liability Insurance for the Sub-contractor's employees, if such employees are not covered under the Contractor's Insurance.

(ii) **Contractors All Risk Insurance:**

Contractor shall take out an All Risk Insurance policy in the Joint names of the Owner and the Contractor (owner as the first beneficiary) including third party liability, against loss or damage from any cause covering the work executed to the estimated current contract value together with the material for incorporation in the work. Such insurance shall be in such a manner that Owner and the Contractor are covered from the date of commencement of work.

The contractor shall indemnify the Owner against all losses and claims in respect of injuries or damage to any person, including any employee of the Owner, material or physical damage to any property whatsoever including that of the owner arising out of the execution of the works or in the carrying out of the contract, and shall insure against his liability with an insurer until the completion of this contract in terms approved by the owner. Whenever required, the contractor shall produce the insurance policy and the current premium receipts to the Owner.

In addition to what it is stipulated above the successful contractor shall execute **Indemnity Bond (as per Attachment –VIII)** to indemnify and hold harmless the Owner for complying with the provision of the following:

- i) Provident Fund Act for P.F. Scheme for labourers engaged by the Contractor / Subcontractors.
- ii) Interstate Migrant Workmen ("Regulation of Employment and Conditions of Services) Act - 1979.
- iii) Minimum Wages Act - 1948.
- iv) Equal Remuneration Act - 1976.
- v) Workman's Compensation Act - 1923.
- vi) Contract Labour (Regulation & Abolition) Act – 1970
- vii) The Building & Other Construction Works (Regulation of employment & Conditions of Service) Act 1996.

8.0 SAFETY CODES & PRACTICES

8.01 General

The Contractor shall adhere to safe construction practice and guard against hazardous and unsafe working conditions and shall comply with Owner's safety rules as set forth herein.

8.02 First Aid and Industrial Injuries

Contractor shall maintain first aid facilities for its employees and those of its sub-contractors -

- (i) Contractor shall make outside arrangements for ambulance or suitable service and for the treatment of industrial injuries. Names of those providing these services shall be furnished to Engineer-in-Charge prior to start of construction, and their telephone numbers shall prominently be posted in Contractor's field office.
- (ii) All critical industrial injuries shall be reported promptly to Engineer-in-Charge, and a copy of Contractor's report covering each personal injury requiring the attention of a physician shall be furnished to Owner.

8.03 General Rules

Carrying/Striking of matches, lighters and smokers inside the hazardous areas is strictly prohibited. Violations of "No SMOKING" rules will be discharged immediately. Within the operation area, no hot work shall be permitted without valid gas/safety/fire permits issued by Owner.

8.04 Contractors Barricades

- (i) Contractor shall erect and maintain barricades required in connection with his operations to guard or protect:
 - a) Excavations
 - b) Hoisting Areas
 - c) Areas adjudged by Contractor or Owner's inspectors.
 - d) Owner's existing property liable to damage by contractor's operations, in the opinion of Engineer-in-Charge.
- (ii) Contractor's employees and those of its sub-contractors shall become acquainted with Owner's barricading practice and shall respect the provisions thereof.
- (iii) Barricades and hazardous areas shall be marked by red falser lanterns at nights.

8.05 Safety Equipment

- (i) All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be made available for the use to the persons employed at the site and maintained in a condition suitable for immediate use, and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.
- (ii) Workers engaged in white washing and mixing or stacking of cement bags or any materials, which are injurious to the eyes, shall be provided with protective goggles.
- (iii) Those engaged in welding and cutting works shall be provided with protective face & eye-shields, hand gloves etc.
- (iv) To ensure that workers use Personnel Protective equipment like safety helmet, safety shoes, gloves etc.

- (v) (When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that the manhole covers are opened and are ventilated at least for an hour before the workers are allowed to get into the manholes, and manholes, so opened, shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accidents to the public.
- (v) The Contractor shall not employ men below the age of 18 years and women on the work of painting or products containing lead in any form. Wherever men above the age of 18 years are employed on the work of lead painting, the following precautions should be taken.
 - a) No paint containing lead product shall be used, except in the form of paste or ready-made paint.
 - b) Suitable facemasks shall be supplied for use by the workers when paint is applied in the form of spray on a surface having lead paint dry, rubbed and scrapped.
- (vi) Hot work should be carried out only in the areas earmarked for the purpose after required safety precautions have been taken and only after obtaining written permission from the Engineer-in-Charge. Any provision required to be made e.g. windscreens of G.I sheets etc. to make the area safe for hot work, will be made by the successful tenderer at his own cost.

8.06 Hoisting Equipment

- (i) Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions.
 - a) These shall be of good mechanical construction, sound materials, adequate strength and free from patent defect and shall be kept in good condition and in good working order.
 - b) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding, winch or indicating signals to the operator.
- (ii) In case of Owner's machine, the safe working load shall be notified by the Engineer-in-Charge. As regards Contractor's machines, the Contractor shall notify the safe working load of the machine to the Engineer-in-Charge, whenever he brings any machinery to site of work and get it verified by the Engineer-in-Charge, concerned.

8.07 Electrical Equipment

Motors, Gear Transmission, Electric Wiring and other dangerous parts of hoisting appliances shall be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load; adequate precautions shall be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations, which are already energised, insulating mats, wearing apparel, such as gloves and boots as may be necessary shall be provided.

may be reasonably necessary for completion of Work and at the said times and in the manner and subject to the terms and conditions or stipulations mentioned in Contract.

(2) In consideration of the due provision, execution and completion of work, Owner does hereby agree with Contractor that Owner will pay to Contractor the respective amounts for the work actually done by him and approved by Owner at the Scheduled Rate and such other sum payable to Contractor under provision of Contract such payment to be made at such time and in such manner as provided for in Contract.

AND

(3) In consideration of the award of the work, Contractor does hereby agree to pay such sums as may be due to Owner for the services rendered by Owner to Contractor such as power supply, water supply and others as set forth in Contract and such other sums as may become payable to Owner towards the controlled items of consumable materials or towards loss, damage to the Owner's Equipment, materials, construction plant and machinery, such payments to be made at such time and in such manner as is provided in Contract.

It is specifically and distinctly understood and agreed between Owner and Contractor that Contractor shall have no right, title or interest in the Site made available by Owner executed on Site by Contractor or in the goods, articles, materials, etc. brought on Site (Unless the same specifically belongs to Contractor) and Contractor shall not have or deemed to have any lien whatsoever charge for unpaid bills nor will be entitled to assume or retain possession or control of Site or structures and Owner shall have an absolute and unfettered right to take full possession of the Site and to remove the Contractor, their servants, agents and materials belonging to Contractor and lying on Site.

Contractor shall be allowed to enter upon Site for execution of work only as a licensee simpliciter and shall not have any claim, right, title or interest in Site or the structures erected thereon equipment, plant and machinery installed, and Owner shall be entitled to terminate such license at any time without assigning any reason.

The Equipment, plant and machinery, materials including sand, gravel, stone, loose, earth, rock etc., dug up or excavated from Site shall unless otherwise expressly agreed under this Contract, exclusively belong to Owner and Contractor shall have no right to claim over the same and such excavations and materials should be disposed of on account of owner according to the instructions in writing issued from time to time by the Engineer-in-Charge.

Contractor shall affect the payment of wages to its / his labours directly without the intervention of any intermediary and no amount by way of commission or otherwise shall be deducted or recovered from the wages of workmen.

The parties hereto hereby agree to submit to the jurisdiction of the courts situated at Kolkata for the purpose of actions and proceedings arising out of contract and the court at Kolkata_only will have the jurisdiction to hear and decide such actions and proceedings.

The contractor shall take adequate insurance cover at his/its properties etc. used in the work against all risks and the Owner shall not in any way be liable for the damages or loss caused to such properties etc., due to whatever causes.

Wrongful appropriation, or proven attempt of wrong appropriation, of materials belonging to the Owner or to any other Contractor working within the Site premises, or commission of any other criminal act by the Contractor, or his agents, or employees or workers shall be deemed to be a breach of contract on the part of the Contractor, and the Owner shall, in addition to the remedies available under the Agreement, be entitled to terminate the Contract forthwith at the risk and cost of the Contractor.

Terms and conditions, if any, stipulated by the Contractor while submitting his tender, or otherwise, shall be applicable only to the extent such terms and conditions are specifically accepted by the Owner in writing.

In witness whereof the parties have executed these presents on the day and the year first above written.

Signed and Delivered for
and on behalf of

Signed and Delivered for
and on behalf of

OWNER

CONTRACTOR

In presence of Two Witnesses

1. -----

1. -----

2. -----

2. -----

Appendix referred to in Clause 'C' of the Agreement

Dated:

Item No.	Description of Documents
1.	Tender Document for the work of "-----" marked: Attachment - I, which contains, inter alias
a)	Tender Notice dated ----- for the work of "-----", and
b)	Special Conditions of Contract.
2.	General Conditions of Contract, marked: ----- Attachment - II: and ----- ----
3.	Letter of Acceptance vide No. ----- dated ----- marked: Attachment - III, along with Tender Schedule "-----" which is marked: Annexure - I to Letter of Acceptance No.----- dated ----- -----

ATTACHMENT – II

BANK GUARANTEE VERIFICATION CHECK LIST**CHECK LIST****YES****NO**

- | | | | |
|---------|--|-------|-------|
| I. | Does bank guarantee compare verbatim with standard
Balmer Lawrie & Co Ltd proforma for BG | _____ | _____ |
| II. a. | Has the executing officer of the BG indicated his name,
designation & power of attorney No./ Signing Power No.
etc. on BG | _____ | _____ |
| b. | Is each page of BG duly signed/initialled by the executant
& last page is signed with full particulars as required in
the Balmer Lawrie's standard proforma of BG & under
the seal of the Bank. | _____ | _____ |
| c. | Does the last page of the BG carry the signature of two
witnesses along side the signature of the
executing Bank Manager | _____ | _____ |
| III. a. | Does the non judicial stamp paper for BG purchase in the
name of BG issuing Bank | _____ | _____ |
| b. | Is the BG on non-judicial Stamp paper of value
Rs. 100/- (Rupees One Hundred only) | _____ | _____ |
| d. | Is the date of sale of non-judicial stamp paper shown on the
BG and the stamp paper is issued not more than six months
prior to date of execution of BG | _____ | _____ |
| IV. a. | Are the factual details such as bid specifications No.,
LOI No., Contract price etc. correct. | _____ | _____ |

b.	Whether over-writing/ cutting, if any on the BG authenticated under signature and seal of executant	_____	_____
V. a.	Is the amount of BG in line with contract provisions/agreement/tender	_____	_____
b.	Is the validity of BG in line with contract provisions/agreement/tender	_____	_____
VI.	Covering letter from bank enclosed with the BG	_____	_____
VII.	BG shall be from a Nationalised/ Scheduled Bank only	_____	_____

ATTACHMENT - IIa**PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY DEPOSIT**

(ON NON-JUDICIAL PAPER OF APPROPRIATE VALUE)

To

Visakhapatnam Port Logistics Park Ltd.

21, Netaji Subhas Road

Kolkata – 700 001

Whereas (Name of the bidder) (hereinafter called “the Bidder”) has submitted its bid for the (purpose) (hereinafter called “the Bid”) against Tender reference No. dated M/S. VISAKHAPATNAM PORT LOGISTICS PARK LTD., 21 Netaji Subhas Road, Kolkata – 700 001.

The conditions of Tender provide that the Bidder shall pay a sum of Rs..... (Rupees only) (hereinafter called “the said amount”) as full Earnest Money Deposit in the forms therein mentioned. The forms of payment of Earnest Money Deposit include guarantee to be executed by a Scheduled Bank.

The said (name and address of the Bidder) have approached us and at their request and in consideration of the premises we, (Name of the Bank) having our office at(address of the Bank) have agreed to give such guarantee as herein after mentioned.

Know All Men by these presents, we,(name of the Bank) of(address of the Bank) having our office, inter alia, at (hereinafter called “the Bank”) are bound unto VISAKHAPATNAM PORT LOGISTICS PARK LTD(address) (hereinafter called “the Purchaser”) in the sum of Rs. (Rupees only) for which payment will truly be made to the Purchaser, the Bank binds itself, its successors and assigns by these presents this day of

THE CONDITIONS of this obligation are :

1. If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the bid form; or
2. If the Bidder, having been notified of the acceptance of its bid by the Purchaser during the period of bid validity;
 - i) fails or refuses to execute the Contract Form if required; or
 - ii) fails or refuses to furnish the Performance Security, in accordance with the instructions to Bidders.

We undertake to pay the Purchaser up to the said amount upon receipt of its first written demand, without the Purchaser having to substantiate their demand, provided that in their demand the Purchaser shall mention that the amount claimed by them is due owing to the occurrence of one or both of the two conditions

This guarantee will remain in force upto (date of expiry) including the days after the period of the bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

Notwithstanding anything contained herein :

- i) Our liability under the Bank Guarantee shall not exceed Rs. (Rupees only)
- ii) This Bank Guarantee shall be valid upto
- iii) We are liable to pay the guaranteed amount or pay part thereof under this Bank Guarantee only if you serve upon us a written claim or demand on or before (last date of validity)

We, (name of the Bank) undertake not to revoke this guarantee during its currency except with your previous consent in writing.

We have power to issue this guarantee in your favour under our Memorandum and Articles of Association and the undersigned has full power to do and execute this Guarantee under the Power of Attorney dated day of granted to him by the Bank.

Your faithfully,

(Specimen Signature)

ATTACHMENT - III

BANK GUARANTEE AGAINST PERFORMANCE

(ON NON-JUDICIAL PAPER OF APPROPRIATE VALUE)

Letter of Guarantee No.

Dated : the day of

THE GUARANTEE is executed at Kolkata on the day of by(set out full name and address of the Bank) (hereinafter referred to as "the Bank" which expression shall unless expressly executed or repugnant to the context or meaning thereof mean and include its successors and assigns).

WHEREAS Visakhapatnam Port Logistics Park Limited. (local address), an existing company within the meaning of the Companies Act, 1956 and having its Registered Office at 21, Netaji Subhas Road, Kolkata – 700 001 (hereinafter referred to as "the Company") issued a Tender being No. dated (hereinafter referred to as "the said Tender") for (set out purpose of the job) and pursuant thereto Messrs/ Mr. (set out full name and address of the Contractor) (hereinafter referred to as "the Contractor" which term or expression wherever the context so requires shall mean and include the partner or partners of the Contractor for the time being/his/its heirs, executors, administrators, successors and assigns) (delete which are not applicable) has accepted the said Tender and field its quotation.

AND WHEREAS the quotation of the Contractor had been accepted by the Company and in pursuance thereof an Order being No..... dated (hereinafter referred to as "the said Order") has been placed by the Company on the Contractor for (set out purpose of the job).

AND WHEREAS under the terms of the said Order the Contractor is required to furnish the Company at their/his/its own costs and expenses a Bank Guarantee for Rs.....(Rupees only) as performance guarantee for the fulfilment of the terms and conditions of the said Tender and to do execute and perform the obligations of the Contractor under the Agreement dated the day of (hereinafter referred to as "the Agreement ") entered into by and between the Company of the one part and the Contractor of the other part, the terms of the said Tender and the terms contained in the said Order which expression shall include all amendments and/or modifications/or variation thereto.

AND WHEREAS the Contractor had agreed to provide to the Company a Bank Guarantee as security for the due performance of their/his/its obligations truly and faithfully as hereinbefore mentioned.

NOW THIS GUARANTEE WITNESSETH as follows :

1. In consideration of the aforesaid premises at the request of the Contractor, we (set out the full name of the Bank) the Bankers of the Contractor shall perform fully and faithfully their/his/its contractual obligations under the Agreement dated the day of entered into by and between the Company of the one part and the Contractor of the other part, the terms and conditions of the said Tender and the said Order

2. We, (set out full name of the Bank) do hereby undertake to pay to the Company without any deduction whatsoever a sum not exceeding Rs..... (Rupees only) without any protest, demur or proof or condition on receipt of a written demand from the Company stating that the amount claimed is due by way of loss and damage caused to or would be caused to or suffered by the Company due to bad workmanship or by reason of breach of any of the terms and conditions of the Agreement, the said Tender and the said Order hereinbefore mentioned.

3. The Guarantee is issued as security against due performance of the obligations of the Contractor or under the Agreement aforesaid and the said Tender and the said Order hereinbefore mentioned and subject to the conditions that our liabilities under this Guarantee is limited to a maximum sum of Rs..... (Rupees only) or the amount of loss or damage suffered or to be suffered by the Company in its opinion at any period of time, whichever is lower.

4. We, (set out full name of the Bank) further agree that the undertaking herein contained shall remain in full force for a period of months from the date of the satisfactory execution of the Contract.

5. This Guarantee shall not be affected by any amendment or change in the Agreement or change in the constitution of the Bank and/or the Company and/or the Contractor.

6. We (set out full name of the Bank) undertake not to revoke this Agreement during its currency except with the previous consent of the Company in writing.

7. All claim under this Guarantee must be presented to us within the time stipulated after which date the Company's claim/right under this Guarantee shall be forfeited and we,(set out full name of the Bank) shall be released and discharged from all liabilities hereunder.

8. This instrument shall be returned upon its expiry or settlement of claim(s) if any, thereunder.

9. Notwithstanding anything contained hereinbefore our total liabilities under this Guarantee shall not exceed a sum of Rs..... (Rupees only) and unless a demand or claim in writing under this Guarantee reaches us on or before the date of (last date of claim) and if no claim is received by us by that date all rights and claims of the Company under this Guarantee shall be forfeited and we,(set out full name of the Bank) shall be released and discharged of all our liabilities under this Guarantee thereafter.

10. We have power to issue this guarantee in your favour under our Memorandum and Articles of Association and the undersigned has full power to execute this Guarantee under Power of Attorney dated the day of granted to him by the Bank.

Place :

Date :

ATTACHMENT – IV**PROFORMA OF BANK GUARANTEE FOR SECURITY DEPOSIT**

Visakhapatnam Port Logistics Park Limited.

21, Netaji Subhas Road

Kolkata – 700 001

Dear Sir,

That Messrs/Mr.(set out full name and address and constitution of the Contractor) (hereinafter referred to as “the Contractor”) filed their/his/its quotation against your Tender being Tender No. dated (hereinafter referred as “the said Tender”) for the work (set out the purpose of the job) and in pursuance thereto an Order being No. dated (hereinafter to as “the Order”) was issued by you to the Contractor.

The conditions of the said Tender, inter alia, requires that the Contractor shall pay a sum of Rs..... only) as full security deposit (hereinafter referred to as “the security deposit”) in the form therein mentioned. The form of payment of security deposit includes a guarantee to be executed by a Scheduled Bank.

The said Messrs/Mr. (set out full name of the Contractor) have/has approached us and at their/his/its request and in consideration of the premises We (set out full name of the Bank) having our office, inter alia at (state the address of the Bank) have agreed to give such guarantee in the manner following :

1. We, (set out full name of the Bank), hereby undertake with you if default is made by Messrs/Mr. (set out full name of the Contractor) in performing any of the terms and conditions of the Tender and/or in payment of the security deposit or any other or in payment of money payable to you. We, (set out full name of the Bank) shall merely on demand from you without demur or protest shall pay you the said amount of Rs..... (Rupees only) or such portion thereof not exceeding the said sum as you may demand from time to time.

2. We, (set out full name of the Bank), further agree with you that you hereunder to adopt any mode for realisation of your dues from the Contractor and/or to vary any of the Terms and Conditions of your Contract with the said Messrs/Mr. (set out full name of the Contractor), or to extend time of performance by Contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by you against Contractor and to forbear or enforce any of the terms and conditions relating to the Contract and we, (set out full name of the Bank) shall not be relieved from our liability by reason of any such variation, or any indulgence to be given by you to the Contractor or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so releasing us.

3. Your right to recover the said sum of Rs..... (Rupees only) from us in the manner aforesaid will not be affected or suspended by reason of the fact that any dispute or disputes is/are pending before any Officer, tribunal, court or any other authority or authorities.

4. The guarantee herein contained shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the said Messrs/Mr. (set out the full name of the Contractors), but shall in all respect, and for all purposes be binding and operative until payment of all the money due to you in respect of such liabilities is paid,

5. Our liability under this guarantee is restricted to Rs. (Rupees only).

6. Our guarantee shall remain in force and effect until (set out the date of expiry) and unless a claim or demand in writing is made against us under this guarantee before the expiry of six months from the aforesaid date i.e. (set out last date of Claim period), the said Guarantee all your rights under this guarantee shall be forfeited and we, (set out full name of the Bank) shall be relieved and discharged from all liabilities thereunder.

7. We , (set out full name of the Bank) undertake not to revoke this Guarantee during its currency except with your previous consent in writing.

8. We, (set out full name of the Bank) have power to issue this Guarantee in your favour under our Memorandum and Articles of Association and the undersigned has full power to execute/sign this Guarantee under the Power of the Attorney dated the day of granted by the Bank.

Yours faithfully,

Dated : (Place)

(Signature of Officer on

.....(Date) behalf of

(Set out name of the Bank)

ATTACHMENT - V

INFORMATION ABOUT TENDERER

A. IN CASE OF INDIVIDUAL

- (i) Name of Business: His age and Father's name:
- (ii) Whether his business is registered:
- (iii) Date of commencement of business:
- (iv) Whether he pays Income Tax over Rs. 10,000/- per year:

B. IN CASE OF PARTNERSHIP

- (i) Name of Partners:
- (ii) Whether the partnership is registered:
- (iii) Date of establishment of firm:
- (iv) If each of the partners of the firm pays Income Tax over Rs. 10,000/- a year and if not which of them pays the same:
- (v) Copies of partnership deed, if any:

**C. IN CASE OF COMPANY LIMITED BY SHARES OR
COMPANY LIMITED BY GUARANTEE**

- (i) Amount of paid up Capital:
- (ii) Names of Directors:
- (iii) Date of Registration of Company:
- (iv) Copies of the last two (2) years balance sheet of the company:
- (v) Certified copies of Memorandum and Articles of Association of Company:

(SIGNATURE OF TENDERER)

ATTACHMENT - VI**DETAILS OF EXPERIENCE**

Tenderer shall give information of similar Works done during past seven (7) years strictly as per the proforma given below.

Sl.No.	Full particulars of similar work carried out by the Contractor	Value of Contract	Completion time as stated in Tender (Months)	Actual Completion time (Months) with date of commencement of work	Year of completion	Name & Postal address of Client with Telex / Telephone No.
1	2	3	4	5	6	7

Certified that the above information is correct.

SIGNATURE OF TENDERER

ATTACHMENT - VII**CONCURRENT COMMITMENTS**

Tenderer shall give information about his present commitments as per proforma.

S. No.	Full Postal Address of Client & Name of Officer-in-Charge with Telex/ Telephone No	Description of the Work	Value of Contract	Date of commencement of Work	Scheduled completion period (months)	% age completion as on date	Expected date of completion	Remark if any

Certified that the above information is correct.

SIGNATURE OF TENDERER

ATTACHEMENT VIII

INDEMNITY BOND (To be executed on Non Judicial Stamp Paper)

Date: _____

THIS DEED OF INDEMNITY made at M/s _____ having their Registered Office at _____ (hereinafter referred to as "Contractor" which expression shall unless it be repugnant to the context or meaning thereof, be deemed to mean and include their respective heirs, assigns, successors, executors and/or administrators) of the ONE PART in favour of Balmer Lawrie & Co Ltd, a Company Registered under Indian Companies Act, VII of 1913, having its Registered Office at 21, Netaji Subhas Road, Kolkata-700001, (India) (hereinafter referred to as the "Company", which expression shall unless it be repugnant to the context or meaning thereof be deemed to mean and include its successors, administrators and assigns) of the OTHER PART.

WHEREAS the Company has awarded to the Contractor, a contract for the _____ in _____ project (hereinafter called the "Contract");

AND WHEREAS it is one of the conditions of the Contract that the Contractor shall comply with all the provisions of the Labour & Industrial Laws, as may be applicable from time to time for the discharge and completion of the said contract by the Contractor including but not limited to the observance and compliance of The Contract Labour (R & A) Act, 1970, Child Labour (Prohibition and Regulation) Act 1986, The Employees Provident Funds & Miscellaneous Provisions Act, 1952, Industrial Disputes Act, 1947, Minimum Wages Act, 1948, Payment of Bonus Act, 1965, Payment of Gratuity Act, 1972, Payment of Wages Act, 1936, Workmen's Compensation Act, 1923 The Maternity Benefit Act, 1961; Inter State Migrant Workmen (RECS), 1979 and The Employee's Deposit Linked Insurance Scheme, 1976, and other Labour Laws (hereinafter referred as the 'Laws').

And whereas to safeguard the Company from any kind of claim and / or demand in the event of failure in observance or non-compliance of any such laws by the Contractor, the said Contractor is executing this Deed of Indemnity.

NOW THIS DEED WITNESSETH AS UNDER:

1. THAT in the event of any liability arising out of failure to observe or non-compliance of any such 'Laws' by the Contractor in discharge of the said contract, the contractor shall bear all the resultant whatsoever liability(ies), if any arising out thereof and that the Company shall not be liable for any such liability(ies). The Contractor indemnifies and keeps harmless the Company at all times from and against any and all such liabilities, costs, damages, claims, penalties, interest, expenses, losses, demands, fines, legal liability, causes of action, injury to persons, etc which may be suffered, incurred, undergone and / or sustained by the Company including the costs and expenses that may be incurred in defending any such liability(ies) claim(s), proceeding(s) etc. that may be made or taken or arise on the same by any person, body, authority, government, judicial / quasi-judicial authority due to the failure or non-compliance of any such laws and rules there under (including any amendments in acts, laws, statutes & rules there under) of whatsoever kind and nature arising out of or in any way connected with, whether or not such acts or omissions are actual or alleged, active or passive with regard to the discharge of the said contract.
2. In addition to that mentioned in the above para that coverage to all workmen under all extant social security schemes like Provident Fund, ESIC, WC, Labour Welfare Fund or any other payments of any nature incidental by extant laws, bylaws, statutes etc. enforceable at the place of work of the "Company" be provided by the "Contractor" without fail and agreed by the "Contractor". Hence the Registrations/ Codes etc under which such compliance is required shall be of the "Contractor" and not the "Company".
3. Further that in the event of any nature of nonpayment or non-compliance in payment of dues for which Company may incur a liability to pay for any non-complying act shall empower company to recover and pay from Contractor by way of deductions retention, bills or due payments.
4. This indemnity shall be in accordance with the laws of India and any dispute between the parties as regards the contract of indemnity shall be settled in accordance with the provisions of Indian Arbitration and Conciliation Act, 1996, including the method and manner of appointment of the Arbitrators. The place of Arbitration shall be at Kolkata and the Courts of Kolkata shall have the proper jurisdiction.

IN WITNESS WHEREOF, the said Contractor has hereunto set their hand the day and year first herein above written.

SIGNED SEALED AND DELIVERED by the within named "CONTRACTOR")

(Authorized Signatory)

Name:

Designation:

Rubber Stamp of Firm/Company

In presence of

Witness

Name & Address of Witness

Signature

1.

2.

SPECIAL CONDITION OF CONTRACT

I N D E X

- 1.00 GENERAL**
- 2.00 LOCATION OF SITE**
- 3.00 DRAWINGS VIS-A-VIS SCHEDULE OF WORK**
- 4.00 SCRAP AND SERVICEABLE MATERIAL**
- 5.00 TESTS & TEST PROCEDURES FOR MATERIALS SUPPLIED BY CONTRACTOR**
- 6.00 MEASUREMENT & BILLING OF WORK**
- 7.00 ON ACCOUNT PAYMENTS**
- 8.00 TERMS OF PAYMENT**
- 9.00 SCHEDULE OF RATES**
- 10.00 EXTRA ITEMS OF WORK**
- 11.00 STRICT ADHERENCE TO SPECIFICATION & CTE INSPECTION**

EXIHIBIT-1-VICINITY PLAN OF MMLH SITE

EXIHIBIT -2-BANK DETAILS FOR SUBMISSION OF BANK GUARANTEE

1.00 GENERAL

- 1.01 Special conditions of contract shall be read in conjunction with the General Conditions of Contract, Specifications of work, Drawings and any other document forming part of this contract wherever the contract so requires.
- 1.02 Notwithstanding the sub-division of the document into three separate sections, every part of each shall be deemed to be supplementary of every other part and shall be read with and into the contract as far as it may be practicable to do so.
- 1.03 Where any portion of the General Conditions of Contract is repugnant to or at variance with any provision of the Special Conditions of Contract, then unless different intention appears, the provision of the Special Conditions of Contract shall be deemed to over-ride the provisions of the General Conditions of Contract only to the extent of such repugnancy or variations in the Special Conditions of Contract are not possible of being reconciled with the provisions of General Conditions of Contract.
- 1.04 Whenever it is mentioned in the specifications that the contractor shall perform certain work or provide certain facilities, it is understood that the contractor shall do so at his own cost.
- 1.05 The materials, design and workmanship shall satisfy the relevant Indian Standards, the job specifications contained herein and codes referred to. Where the job specifications stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied. In the absence of any standards/specifications / code(s) of practice for any part of the work covered in this tender, the instructions/directions of Engineer-in-Charge will be binding on the contractor.
- 1.06 In case of contradictions between Indian Standards, specifications, General Conditions of Contract, Special conditions of Contract, drawings, Schedule of Rates, the following shall be the order of precedence: -
- a) Detailed Letter of Intent along with statement of agreed variations and its enclosures.
 - b) Fax no., e_mail address, mobile no. of Intent.
 - c) Special Conditions of Contract
 - d) Drawings
 - e) General Conditions of Contract & its Annexure.
 - f) Indian Standards / Technical Specifications.
 - g) Schedule of quantities and rates.

2.00 LOCATION OF SITE

The Location of site is at Visakhapatnam near Mulagada Village and adjacent to Mindi Railway Sidings of Visakhapatnam Port Trust. The site is about 4.0 km away from Sheela Nagar Junction at NH-5 and 8 km from Airport. The nearest land mark is Visakhapatnam Port Mindi railway siding. Please refer the Vicinity Plan of MMLH Site enclosed herewith as Exhibit –I.

3.00 DRAWINGS VIS-A-VIS SCHEDULE OF WORK

All drawings herein enclosed are for the purpose of furnishing basic information to the tenderers so as to enable them to quote their price. Upon receiving order, contractor shall design and prepare all working drawings and get approval from the Engineer. However, such approval does not relieve the contractor from his responsibility of correctness and safety of the work. Contractor shall remain responsible to submit the design and drawings for obtaining necessary approval from the statutory bodies.

4.00 SCRAP AND SERVICEABLE MATERIAL

Scrap materials and wastage will not be accepted back by the Owner and shall be considered as a property of the contractor. The Contractor shall take away all such materials, wastage and remove them from the site to the satisfaction of the Engineer-in-Charge.

5.00 TESTS & TEST PROCEDURES FOR MATERIALS SUPPLIED BY CONTRACTOR**Only on approved QAP, Fabrication of Tank shall be executed.**

It is necessary to test the materials supplied by the Contractor to ensure that they conform to relevant clauses in the technical specification. All materials of Contractor shall be inspected and passed by the Engineer-in-Charge from time to time at the source of supplies, for which inspection facilities shall be provided by the Contractor.

Notwithstanding inspection at sources, the Engineer-in-Charge shall have the right to reject any material brought to Site, which does not conform to the specification, without being liable for any compensation whatsoever.

6.00 MEASUREMENT & BILLING OF WORK

All measurements shall be in the metric system and shall be taken in accordance with the procedure set forth in the Schedule of quantities, Specifications, relevant IS, IEC Standards and other contract documents.

All measurements shall be taken jointly by the Engineer-in-Charge or his representative and representative of PMC on the one hand and the Contractor or his representative on the other hand.

7.00 ON ACCOUNT PAYMENTS

7.01 All on account payments shall be subjected to deduction therefrom of all dues to the Owner, advance, retention money and other money deductible within the provisions of this contract and as per Section 194-C of Income Tax Act, or any other Law, Rule or Regulation for the time being in force along with the recovery towards the adjustment of secured advance if any.

7.02 All lawful payments as provided under ESI Act, Workmen's Compensation Act, PF Act etc. not made by the Contractor / Sub-contractor, Owner reserves the right to deduct from the Contractor's bills and remitted to the concerned Authority / Department or Body on Contractor's /Sub-contractor's behalf until sufficient proof is furnished by the Contractor / Sub-Contractor to the contrary.

7.03 All "On Account" Payments shall be regarded merely as an advance payment against the amounts due to the Contractor in terms of the contract and any such payments shall not be regarded as an acceptance or completion of any works paid for.

7.05 The payment against running accounts bills will be made as per 'Terms of Payment' within 30 (Thirty) days from the date of receipt of bill in the accounts department duly certified by our PMC and Engineer-in-Charge.

8.00 TERMS OF PAYMENT

As per NIT

9.00 SCHEDULE OF RATES

All the items of work mentioned in the Schedule of Rates and covered by the Contract shall be carried out as per the Drawings, Specifications and directions of Engineer-in-Charge and shall include all labour, materials, tools, plants, tackle, testing, if any, with Contractor's testing appliance etc. required to complete the work.

10.00 EXTRA ITEMS OF WORK

During the course of execution of the work, should the contractor come across items of work which are not covered under the Schedule of Rate or not included therein, the Contractor shall draw the attention of the Site-in Charge of PMC and Engineer-in-Charge of Owner to the same and such items of work shall be treated as extra only with the prior approval of Site-in Charge of PMC/ Engineer-in-Charge in writing. Contractor shall submit a quotation along with the rate analysis for approval of Site-in Charge of PMC and EIC for such accepted extra items before he commences work or purchases the materials in connection with such items.

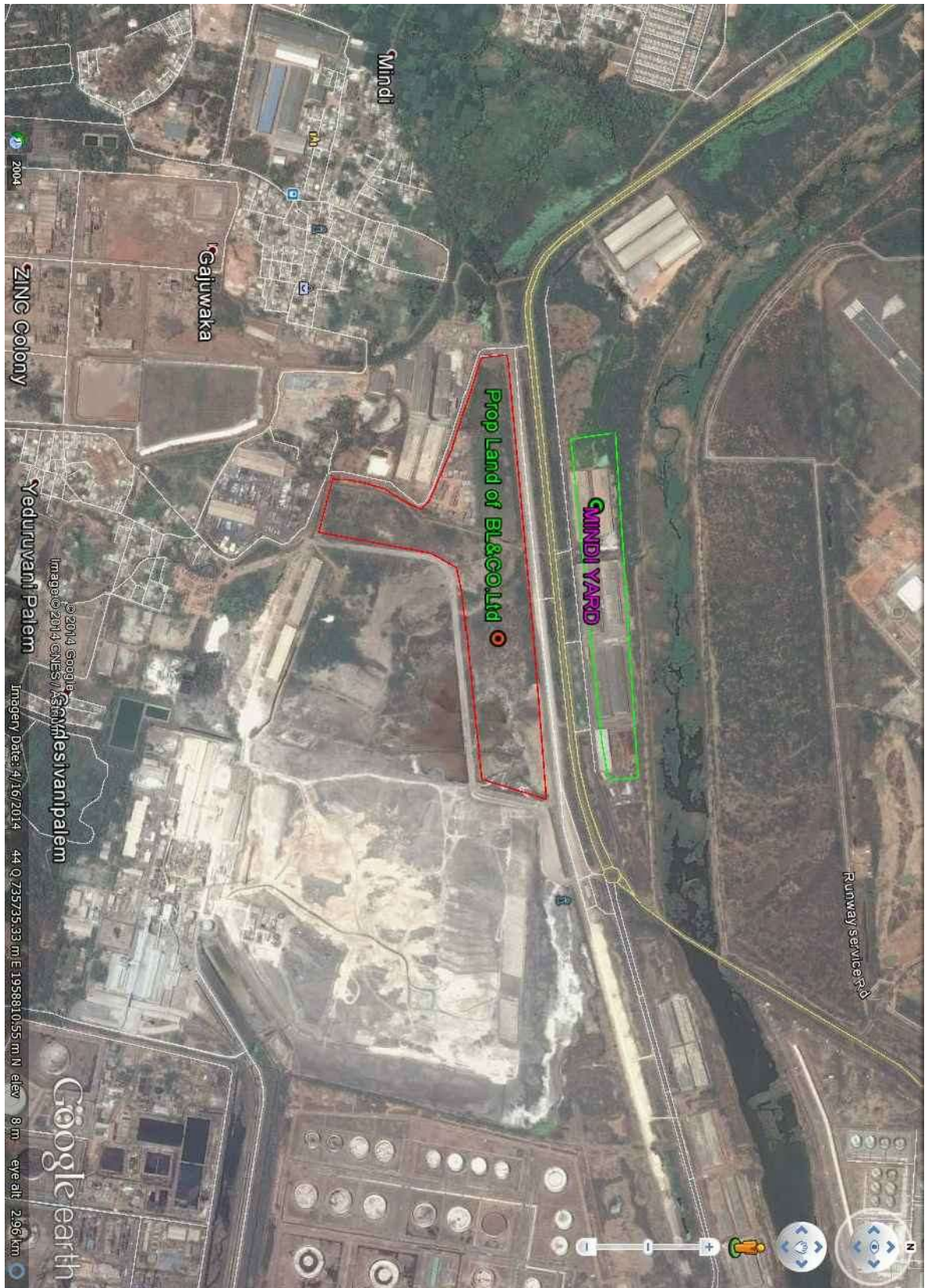
For extra items, rates shall be derived from similar item rates included in the schedule of work. Where there is no such similar item available in the schedule, rate shall be analysed as follows:

Rate for extra item = Cost of material (a) + cost of labour inclusive of all necessary tools, tackles, equipment, machinery and consumable (b) required to carry out the work + 15% of (a+b) towards profit and overhead + taxes, duties etc. as applicable.

11.00 STRICT ADHERENCE TO SPECIFICATION & CTE INSPECTION

The entire work shall require to be carried out strictly as per specifications, quality assurance plan, drawing etc. intended in the tender backed up with proper test report, manufacturers' test certificates etc. The Chief Technical Examiner of Central Vigilance Commission may inspect the work during the course of execution and also during the defect liability period. The contractor has to maintain all documents in acceptable form duly reviewed and approved by the Engineer-in-Charge for any such/ similar inspection.

EXHIBIT-1-VICINITY PLAN OF MMLH SITE



EXIHIBIT -2-BANK DETAILS FOR SUBMISSION OF BANK GUARATEE

Name of the Bank : Indusind Bank
Bank account no. No : 650001891093
Swift Code : NDBINBBCAP.
MICR Code : 700234002.
IFSC Code : INDB0000015.
Branch Address : IndusInd Bank Limited,
Savitri Towers, 3A, Upper Wood Street,
Kolkata – 700 017.

HSE COMPLIANCE

IN RESPECT OF HSE REQUIREMENTS, CONTRACTORS ARE REQUIRED TO FULFIL THE FOLLOWING**Appendix-A****Pre-Qualification Questionnaire for Contractor****Guidelines for Completion of Questionnaire**

- The potential bidder is to ensure that the answers provided are focussed against the activities indicated in the pre-tender document.
- The information is supplied in the same format and sequence in which they appear in the questionnaire. A minimum of 12 has to be obtained in the HSE pre-qualification questionnaire.
- Failure to supply information that accurately and fully covers the material requested may result in an individual Contractor failing to meet minimum expectations and therefore being disqualified.
- Contractor shall provide information that is authentic and documentary evidence.
- Even after getting pre-qualified, if it comes to the notice that non-authentic documents are provided, the Contractor may be disqualified and if any Contract is in place, it may be terminated immediately.
- BL shall have right to audit Contractors records to verify the authenticity of the documents, during any phase of the Contract.

Questionnaire for HSE Pre-Qualifications of contractors:

Contractor Details	
Company Name	
Contact Person for HSE	
Name	
Telephone Number	
E-Mail Address	

	Question	Response		Evidence Required at bidding Stage	Weightage if complied
		Yes	No		
1	Do you have a signed and dated HSE Policy?			Attach HSE Policy	1
2	Do you confirm that you will comply with HSE Policy as per Appendix in as much as it is applicable to your scope of work?			None	1
3	Do you have a Health and Safety System certified by an accredited body to a recognized standard? (Eg : OHSAS 18001)			Provide Current Certificate	3

	Question	Response		Evidence Required at bidding Stage	Weightage if complied
		Yes	No		
4	Do you have an Environmental Management System Certified by an accredited body to a recognized standard? (Eg : ISO 14001)			Provide Current Certificate	3
5	Have you identified, documented and maintained your Health and Safety risk assessment of your activities?			None	3
6	Have you identified, documented and maintained your Environmental Impact Assessment of your activities?			None	3
7	If you use subcontractors, will you assess them in terms of HSE?			None	2
8	Have you produced project/contract HSE plans for recently completed work?			None	2
9	Is HSE Covered in your company's organization chart?			Provide Current Org Chart.	2
10	Have HSE roles and responsibilities been defined in your company?			None	2
11	Have your employees received documented HSE training appropriate to the task they will undertake?			None	2
12	Do you identify and monitor compliance with HSE Legislation?			None	2
13	Do you carry out regular medical examination for your employees?			None	1
14	Is your company free from any charges or notices served by the regulatory authorities in relation to HSE in the last 3 years?			None	1
15	Do you have any procedure of reporting HSE Incident and investigation?			None	2

Please provide your accident data for the current year and the last 2 calendar years	Current Year	Current Year -1	Current Year -2	Period Average

	Note: this must include the data of any contractors working for your organization.				(Three years average)
16	Number of Fatalities				
17	Number of Environmental Incidents reported to Pollution Control Board				
18	Number of accidents with 2 or more days lost time.(LTI)				
19	Man Days Lost				
20	Total Hours Worked				

I confirm that the above information is correct and that further evidence to support this will be provided to BL on request.

Name	Position	Company	Date	Signature

Appendix-B

HSE REQUIREMENTS BY CONTRACTORS (To be a part of contract documents)

1.0 Housekeeping

Contractors shall ensure that their work area is kept clean tidy and free from debris. The work areas must be cleaned on a daily basis. Any disposal of waste shall be done by the Contractor.

All equipment, materials and vehicles shall be stored in an orderly manner. Access to emergency equipment, exits, telephones, safety showers, eye washes, fire extinguishers, pull boxes, fire hoses, etc. shall not be blocked or disturbed.

2.0 Confined Space

Before commencing Work in a confined space the Contractor must obtain from Owner a Permit to Work, the Permit to Work will define the requirements to be followed.

As minimum Contractors must ensure the following:

- 2.1 Confined spaces are kept identified and marked by a sign near the entrance(s).
- 2.2 Adequate ventilation is provided
- 2.3 Adequate emergency provisions are in place
- 2.4 Appropriate air monitoring is performed to ensure oxygen is above 20%.
- 2.5 Persons are provided with Confined Space training.
- 2.6 All necessary equipment and support personnel required to enter a Confined Space is provided.

3.0 Tools, Equipment and Machinery

The Contractor must ensure that all tools & equipment provided for use during the Work is:

- suitable for its intended use;
- safe for use, maintained in a safe condition and where necessary inspected to ensure this remains the case (any inspection must be carried out by a competent person and records shall be available);
- Used only by people who have received adequate information, instruction and training to use the tool or equipment.
- Provided with Earth leakage circuit breaker (ELCBs) at all times when using electric power cords. Use of electrical tape for temporary repairs is prohibited.

4.0 Working at Height

Any Work undertaken where there is a risk of fall and injury is considered to be working at height.

For any Contractor Personnel working at height, Contractors shall provide fall prevention whenever possible and fall protection only when fall prevention is not practicable. Before commencing Work in a height the Contractor

must obtain from Owner a Permit to Work, the Permit to Work will define the requirements to be followed. Supervisor must be present at all point of time, to ensure no deviation occur during the course of work.

Fall Prevention System

Fall prevention systems (e.g. fixed guardrails, scaffolds, elevated work platforms) must provide protection for areas with open sides, including exposed floor openings.

Fall Protection Systems

Where fall protection systems are used then the Contractor must ensure the following is applied:

- i) Only approved full body harness and two shock-absorbing lanyards are used,
- ii) Prior establishment of a rescue plan for the immediate rescue of an employee in the event they experience a fall while using the system,
- iii) Anchorage points must be at waist level or higher; and capable of supporting at least the attached weight,
- iv) Lifeline systems must be approved by Owner before use.
- v) Use of ISI marked industrial helmet at all point of time.

5.0 Scaffolding

All scaffolds shall subject to a documented inspection by a competent person and clearly marked prior to use. The footings or anchorage for scaffolds shall be sound, rigid and capable of carrying the maximum intended load without settling or displacement. All scaffolding materials should be of MS tubular type.

Guardrails and toe-boards shall be installed on all open sides and ends of scaffold platforms. Scaffolds shall be provided with an access ladder or equivalent safe access. Contractor Personnel shall not climb or work from scaffold handrails, mid-rails or brace members.

6.0 Stairways and Ladders

Ladders should only be used for light duty, short-term work or access in line with the below and the Site Requirements.

- i) Fabricated ladders are prohibited.
- ii) Ladders will be secured to keep them from shifting, slipping, being knocked or blown over.
- iii) Ladders will never be tied to facility services piping, conduits, or ventilation ducting.
- iv) Ladders will be lowered and securely stored at the end of each workday.
- v) Ladders shall be maintained free of oil, grease and other slipping hazards
- vi) Ladders will be visually inspected by a competent person and approved for use before being put into service. Each user shall inspect ladders visually before using.
- vii) Ladders with structural defects shall be tagged "Do Not Use," immediately taken out of service, and removed from the Site by the end of the day.

7.0 Lifting Operations

7.1 Cranes and Hoisting Equipment

Contractors shall operate and maintain cranes and hoisting equipment in accordance with manufacturer's specifications and legal requirements.

Only Contractor Personnel trained in the use of cranes and hoists are permitted to use them.

7.2 Lifting Equipment and Accessories

All lifting equipment / accessories e.g., slings, chains, webbing, chain blocks, winches, jacks etc shall be indicated with their safe working load have an identification number visible on the unit and be inspected and tested in accordance with legal requirements.

Damaged equipment / accessories and equipment shall be tagged "out of use" and immediately removed from Site.

8.0 Lockout Tag out ("LOTO")

Prior to performing work on machines or equipment, the Contractor shall ensure that it is familiar with LOTO and Permit to Work procedures and that all of its affected Contractor Personnel receive the necessary training.

9.0 Barricades

Floor openings, stairwells, platforms and walkways, and trenching where a person can fall any distance shall be adequately barricaded and where necessary, well lit. Where there is a risk of injury from a fall then rigid barriers must be used.

Barricades must also be used to prevent personnel entering an area where risk of injury is high e.g., during overhead work activity or electrical testing etc. Such barricading must provide clear visual warning.

10.0 Compressed Gas Cylinders

Gas cylinder shall be securely stored and transported, and identified and used in line with the local requirements. Hose lines shall be inspected and tested for leaks in line with local requirements. Flash Back arrestor to be used to prevent any explosion due to back fire.

11.0 Electrical Safety

Prior to undertaking any work on live electrical equipment the Contractor must obtain a Permit to Work from Owner. Where ever possible live work should be avoided. Any control measures highlighted shall be implemented prior to work commencing.

The below measures will be taken:

- i) Work practices must protect against direct or indirect body contact by means of tools or materials and be suitable for work conditions and the exposed voltage level.
- ii) Energized panels will be closed after normal working hours and whenever they are unattended. Temporary wiring will be de-energized when not in use.
- iii) Only qualified electrical Contractor Personnel may enter substations and/or transformer and only after being specifically authorized by Owner.

12.0 Hot Works

A Permit to Work must be obtained from Owner prior to any hot works (welding, grinding, open flame work). Suitable fire extinguishing equipment shall be immediately available. Objects to be welded, cut or heated shall be moved to a designated safe location, or, if they cannot be readily moved, all movable fire hazards in the vicinity shall be taken to a safe place. Personnel working around or below the hot works shall be protected from falling or flying objects.

Prior to the use of temporary propane or resistance heating devices approval must be obtained from Owner.

13.0 Trenching, Excavating, Drilling and Concreting

A Permit to Work must be obtained from Owner and all underground lines, equipment and electrical cables shall be identified and located prior to beginning the work. The Contractor shall assign a competent Contractor Personnel to all trenching and excavation work.

Safe means of access and egress shall be located in trench excavations. Daily inspections shall be conducted by a competent Contractor Personnel for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems or other hazardous conditions.

Physical barriers shall be placed around or over trenches and excavations. Flashing light barriers shall be provided at night.

14.0 Environmental Requirements

14.1 Waste Management

The Contractor is responsible to remove any waste generated by the work being done on the Site. The Contractor must dispose of the waste in line with the relevant local legislative requirements. The waste disposal route shall be documented and made available for Owner to review at any time and may be subject to BL's prior approval.

Wastes (includes rinse from washing of equipment, PPE, tools, etc) are not to be poured into sinks, drains, toilets, or storm sewers, or onto the ground. Solid or liquid wastes that are hazardous or regulated in any way are not to be disposed of in general site waste receptacles.

14.2 Spills

The Contractor is responsible for the provision of adequate spill kits/protection and the clean up and disposal costs arising from such spills.

14.3 Emissions

The Contractor shall identify and quantify any emission sources associated with the Works. The control measures associated with these emission shall be subject to the approval of Owner. Emissions include but are not limited to noise, dust, fumes, vapours.

DESIGN BASIS REPORT

Doc No (MMLH/FPS/DBR)

(9 pages)

TECHNICAL SPECIFICATION

1.0.0 GENERAL**1.1.0 Intent of Specification**

- 1.1.1 This specification is intended to cover residual engineering, supply, fabrication, erection, testing and commissioning of the fire-protection system, as per enclosed Schedule of Work, drawings, data sheets, specifications and tender terms & conditions inclusive of the supply of all labour, supervision, tools, equipment and erection materials as necessary.
- 1.1.2 The specification shall be read in conjunction with the General Condition of Contract and Special Conditions of Contracts as enclosed with this Specification. However, in the event of any conflict between Schedule of Work and Technical Specification or data sheets, item description mentioned in Schedule of Work shall prevail.

1.2.0 Standards & Codes

The complete supply and installation work for the equipment and accessories covered under this specification shall be designed, manufactured, erected, tested and commissioned in accordance with the latest IS. In cases where IS are not available, the equipment and accessories shall conform to the latest publication of recognized National Standard Institutions.

All fire-protection equipment and installation work shall also conform to local Pollution Control Board, Fire Department and Fire Insurance Regulations as regards safety, earthing and other essential provisions specified therein for installation and operation of the systems.

Nothing in this specification shall be construed to relieve the CONTRACTOR of this responsibility.

2.0.0 SCOPE OF WORK

- 2.1.0 The details of various equipment relevant to the Fire Protection system have been elaborated in the subsequent sections of this document.
- 2.1.1 All equipment, materials, hardware and accessories to be supplied by the bidder shall be brand new ones and make specified in the technical data sheet. For other make, prior written approval of the owner shall be obtained for which detail technical document & Data sheet for all such items with make etc. shall be furnished along with application for owner review and acceptance.
- 2.1.2 All relevant drawings, technical data sheets and technical leaflets on each piece of device.

2.2.0 Scope of Services

- 2.2.1 Furnishing of all labour, skilled and unskilled, supervisory personnel, erection tools and tackles, testing equipment, implements, supplies, consumables and hardware for timely and efficient execution of the erection work.
- 2.2.2 Transport vehicle necessary for efficient transportation of equipment from the stores to site of erection.
- 2.2.3 Complete assembly, erection and connection, testing and commissioning, putting into successful and satisfactory commercial operation of the above mentioned electrical equipment.
- 2.2.4 The item of work to be performed on all equipment and materials shall include but not be limited to the following:

Receiving, unloading and transportation at site (to owner's /contractor's stores and from their up to actual place of erection).

Opening, inspection and reporting all damages and short supply of items.

Arranging to repair and/or re-order all damaged and short supply items.

Storing at site with suitable all weather protection.

Assembly, erection and complete installation.

Necessary co-ordination between works done by the other contractors.

Final check-up, testing and commissioning in presence of owner's representative.

Trial run for seven days, rectification of defects, if any and adjustment as necessary.

Re-rolling of cables on new drums if so desired by the owner.

Compilation and submission of test-reports and Drawings, follow-ups/ liaison with the local Fire Department on behalf of Client for obtaining approval on the total installation of the System.

2.2.5 Field modification carried out shall be marked up red on one set of erection drawings.

2.2.6 Preparation of cable schedule

2.2.7 Preparation of AS BUILT DRAWINGS and submission of the same in soft copies (in Auto cad 2004 / Microsoft Word/excel format) as well as in three hard copies.

2.2.8 Reference shall be drawn to the "Schedule of Work" for quantity of major items.

2.2.9 Facilities to be arranged by Contractor

2.2.10 Contractor will be given a place for storing his materials, tools, tackles.

2.2.11 For Construction power and water pl. refer NIT.

2.2.12 The Contractor shall also arrange for storing material with weather protection wherever necessary and proper security arrangement till the installation is taken over by the owner.

2.2.13 Annual Maintenance Contract (after 1-year guarantee period)

The scope of work comprises (i) Checking & verifying the working condition of Pumps, Drivers & Accessories presence in the Pump house; (ii) Checking of all external Hydrant and Hose points & their accessories; (iii) Checking of working condition of Hydrant valve; (iv) Checking of all First Aid hose reels, their accessories & working condition; (v) Recommendation for required accessories to get proper operation of hydrant system during emergency, if any missed; (vi) Recommendation for rectification of accessories or items in the hydrant system ring main & Pump room; and (vii) Recommendation for any rectification to be done for proper system operation.

2.2.14 OTHER TERMS OF MAINTENANCE CONTRACT

i) Replacement of any items required for maintenance Issued as 'Free Issue Material' to the contractor shall be done within your quoted rates.

- ii) Supply of missing items, replacement of any defective accessories or any rectification work may be charged additionally by the contractor
- iii) Comments on the service report shall be rectified within 24 hrs. to get proper system operation during emergency.

Periodical (once in a month) running of system to ensure proper operation during emergency and any problem/failure during BL personnel training/usage shall be attended immediately (within 24 hours)

3.0.0 TECHNICAL DATA/DRAWINGS/DOCUMENTS TO BE FURNISHED

3.1.0 Along with the Offer

Technical Particulars of all Supply-items covered under the scope.

3.2.0 After Award of Contract

Fire Hydrant Layout, Layout of individual buildings with sprinklers, detectors, Fabrication drawing of MS Tanks, Technical Particulars, Technical Catalogs, GA Dwgs, Control schematics & interlocks and routine test certificates of motors, engines, pumps etc. **The successful bidder has to take approval of the owner before procurement or start of site activities.**

4.0.0 TESTS

4.1.0 Pre-commissioning Tests at site

- 4.1.1 The installation work shall be tested by the contractor after completion of his erection work with an advance notice to the engineer so that he or his authorized representative may witness the same also.

The contractor shall prepare the pre-commissioning test program of each equipment / work / system indicating the data of each equipment / work / system, the tests to be carried out in seriatim and the test result to be tabulated. The program shall be submitted to the owner for approval.

The contractor shall carry out Test as per relevant codes & standards.

After completion of the tests, the results shall be submitted to the owner for his approval and acceptance.

- 4.1.2 The test result of any installation or equipment or its part, if considered satisfactory to the engineer, the concerned installation / equipment and its accessories shall be properly rectified by the contractor and shall be properly rectified by the contractor and shall be tested again to the satisfaction of the engineer by the contractor at his own cost.

5.0.0 DESIGN BASIS

5.1.0 CONFIGURATION OF PUMPS

The configuration of Pumps shall be as per enclosed Design Basis Report (DBR).

5.2.0 PUMPS, ENGINE AND ACCESSORIES

The pumps shall be exclusively used for firefighting purposes. One set for system shall be of electrical motor driven direct couple centrifugal pump of adequate discharge and the Standby Diesel engine driven direct coupled centrifugal pump of adequate discharge and head shall be provided as per TAC requirement. The pumping capacity of main and stand by system pumps shall be as per Data sheet.

Approval of Pump characteristic curve and data sheet shall be obtained from owner before placement of order on the manufacturer & sub-supplier. Approval on the pump engine shall be obtained from Owner for engine driven pump before placement of order on the manufacturer & sub-supplier.

5.3.0 GENERAL REQUIREMENT

The pumps shall be horizontal centrifugal back pull out type; pump designed for continuous operation and shall have a continuously dropping head characteristic without any zone of instability. The power capacity characteristic shall be non-over loading type. The head vs. capacity, input power vs. capacity characteristics, etc., shall match to ensure load sharing and trouble free operation throughout the range. In case of accidental reverse flow through the pump the driver shall be capable of bringing the pump to its rated speed in the normal direction from the point of maximum possible reverse speed. The contractor under this specification shall assume full responsibility in the operation of the pump and the drive as one unit. The pump shall be capable to discharge 150 percent of rated capacity at a total head of not less than 65 percent of the total rated head. The total shut off head shall not exceed 120 percent of total rated head on the pump. An automatic air release valve shall be provided to vent air from the pump discharge and also to admit to the pump to dissipate the vacuum there, upon stopping of the pump.

This valve shall be located at the highest point in the discharge line between the pump and the discharge check valve. Pump coupled with motor or engine on a common base plate shall perform smoothly without any excessive noise or vibration. Also pump shall be provided with re-circulation piping with valves.

5.4.0 PUMP CASING

The casing shall be cast iron to IS 210 and capable of withstanding to the maximum pressure developed by the pump at the pumping temperature.

5.5.0 IMPELLER

The impeller shall be of standard bronze. The impeller shall be secured to the shaft with hydraulically balanced and shall be retained against circumferential movement by keying, pinning or lock rings. All screwed fasteners shall tighten in the direction of normal rotation.

5.6.0 SHAFT

Shaft size shall be selected on the basis of maximum combined shear stress. The shaft shall be of stainless steel AISI-410 ground and polished to final dimensions and shall be adequately sized to withstand all stresses from motor weight, hydraulic loads, vibrations and torque's coming in during operation. Pump Shaft-Motor Shaft Coupling shall be connected with adequately sized flexible couplings with spacer of suitable approved design. Necessary guards shall be provided for couplings. Pump shall be consisting with Gland plate for gland packing.

5.7.0 BASE PLATE

A common base plate for mounting both the pump and drive shall be provided. The base plate shall be of rigid construction, shall be fabricated by M.S. channels. Base plate and pump supports shall be so constructed, the pumping unit shall be mounted so as to Minimize misalignment caused by mechanical forces such as normal piping strain, hydraulic piping thrust etc.

5.8.0 VIBRATION AND BALANCING

The rotating elements shall be so designed to ensure least vibration during start and throughout the operation of the equipment. All rotating components shall be statically dynamically balanced at workshop. All the components of pumps of identical parameters supplied under these specifications shall be interchangeable

6.00 FIRE HYDRANT SYSTEM

- 6.1.0 Without restricting to the generality of the foregoing, the fire hydrant system shall include the following:
- 6.1.2 Pump, suction / delivery pipes, Valves, control panel and Instrumentation and pump set shall be manual start / stop.
- 6.1.2. Mild Steel Iron (M.S.), ERW, Black (Heavy Grade) Pump house / Mild Steel Iron (M.S.), ERW, Black Class "C" (Heavy Grade) / ring mains / riser main within the building and as well outside the building.
- 6.1.3 Landing valves, external hydrant valves, hose reels, fire duct shutters. Hose cabinets, fire brigade connections and connections to pumps and appliances as required.
- 6.1.4 All materials shall be of the best quality and brand new, conforming to these specifications / standards and subject to the approval of the Client / consultant.
- 6.1.5 Pipes shall be fixed in a manner as to provide easy accessibility for repair and maintenance and shall not cause obstruction in shafts, passages etc.
- 6.1.6 Pipes and fittings shall be fixed to walls and ceilings by suitable clamps at intervals specified. Only approved types of anchor fasteners shall be used for RCC ceilings and walls.
- 6.1.7 Pipes and fittings shall be fixed truly vertical, horizontal or in slopes as required in a neat manner. The pipes shall be supported by structural steel fabricated (like, channel / angle / flat / plate etc) supports with suitable anchor fasteners / suspended thread rods not less than M16 in size.
- 6.1.8 Valves and other appurtenances shall be as located that they are easily accessible for operation, repairs and maintenance. Valves / other equipment fitted above the false ceiling shall be provided with trap / access doors.
- 6.1.9 Pipes for wet risers within the Building shall be M.S. tubes conforming to **IS 1239** (Heavy 'C' class) with flanged/welded joints.
- 6.1.10 Fittings for steel pipes shall be malleable iron or forged iron fittings with screwed / welded joints.
- 6.1.11 Inter connection between sprinkler and hydrant pumps shall be carried out at discharge side with Check valve and isolation valves.

6.2.0 PIPING

All pipes inside the building and where specified, outside the building shall be M.S. conforming to IS: 1239 - Heavy. Pipes 200 mm dia. and above shall be M.S. as per IS: 3589 with minimum 6 mm wall thick & fittings shall be fabricated from pipes confirming to IS 3589.

Pipes shall be carefully laid to the alignment, levels and gradients shown on the plan and sections and great care shall be taken to prevent any sand, earth or other matter from entering the pipes during laying. Pipes shall be kept

thoroughly clean during the course of laying. The ends of pipes shall be blocked with wooden plugs wedged home, at the end of each days work to prevent dirt and rodents, insects etc., entering the pipe.

Pipes up to 50mmdia, tapered screwed / Socket welded / Butt welded type jointing shall be adopted, while for pipes above 50mmdia welded or flanged connections shall be used. Flanged joints shall be made with 3 mm thick insertion rubber washer / Gaskets. All bolt holes in flanges shall be drilled & making hole by using gas cutting is not acceptable. The drilling of each flange shall be in accordance with relevant Standards provided in Data Sheet.

Flanged joints shall be used for connections to vessel, equipment, flanged valves and also on suitable straight lengths of pipeline at strategic points to facilitate erection and subsequent maintenance work. The Bolts /Nuts / Washers used in the system shall be in accordance with relevant Standards provided in Data Sheet.

6.2.1 PIPE PROTECTION

6.2.1.1 ABOVE GROUND PIPES

All pipes above ground and in exposed locations shall be painted as follows,

Surface Preparation: As per data sheet.

6.2.1.2 UNDER GROUND PIPES

The pipes (buried) should be initially brushed to remove all foreign matter and apply the primer over the pipe. Primer is allowed to dry until the solvent evaporates and surface becomes tacky. The tape 4mm thick and 150/250mm wide shall then be wound in a spiral fashion and bonded completely to pipe by thermo fusion process. The overlap is to be maintained at 15mm.

6.2.3 THRUST BLOCKS

Contractor shall provide suitable PCC blocks of suitable dimensions at Change – in – direction and regular intervals of 6 meters to support the pipes. Minimum Size of Blocks shall be 600mmx600mmx450mm.

6.2.4 PIPE SUPPORTS

Supports for above ground pipes of 65mm dia and above shall be fabricated by structural steel of suitable sections with suitable fasteners. The supports shall be painted with coats as mentioned in the data sheets.

Suitable type hangers shall support pipes below 50 mm dia with clamps, anchor fasteners and suspended rods etc.

6.3.0 VALVES

6.3.1 BUTTERFLY VALVES

Butterfly valves shall be as per BS 5155 & provided for pipes 50mmdia and above on down stream (delivery side) of the pumps. The valves shall be CI construction, seat shall be black nitrile rubber with in situ molding. The valves shall be PN 1.2 rating. All valves shall be connected with supervisory switch for monitoring at Fire alarm panel. Cabling shall be measured and paid under Fire alarm system.

6.3.2 NON – RETURN VALVES

Non – return valves shall be reflux swinging disc type with C.I. body and bronze / brass internals as per Technical data sheet enclosed and as per IS: 5312.

6.4.0 HOSE REEL

Hose reel shall be swinging type for 180 deg with mounting base plate. Hose reel shall consist with 19mm dia high-pressure rubber braided hose of 30M length with gunmetal nozzles. Hose reel water shall be tapped off from the wet riser with Ball valve. The hose reel shall be installed in fire hose duct inside the building.

6.5.0 HYDRANT VALVE

The Hydrant valve shall be gunmetal single headed type conforming to IS: 5290 complete with hand wheel, quick coupling, spring and blank cap. 2 Nos. of RRL type hose pipe of 63mmdia and 15M length as per IS: 636 with 63mmdia instantaneous type SS heavy duty couplings & SS Branch pipe and nozzle to be provided. Fire hoses and branch pipes shall be mounted inside the fire shaft with suitable supports.

6.6.0 FIRE HOSE

Fire hoses shall be Reinforced Rubber Lined (RRL) type as per IS: 636 & 63mmdia and 15M long. Hoses shall be bounded by G.I. wire to heavy-duty instantaneous gunmetal couplings as per IS 903.

6.7.0 BRANCH PIPE & NOZZLE

Branch pipe shall be gunmetal, 63mmdia with Nozzle of 19mmdia made as per IS: 903 and suitable fitted with hoses as specified elsewhere in this specifications.

6.8.0 HOSE CABINET

Hose cabinet shall be fabricated by CRC sheet 18swg and size shall be 750mm x 600mm x 250mm. Hose cabinet shall have glass fronted door fitted with 4mm thick clear glass & powder coated finish of red outside & white inside. Cabinet shall be suitable for stand mounting / wall mounted as specified in Schedule and shall have built in breakable glass type feature to keep key.

6.9.0 FIRE BRIGADE INLET CONNECTION (FBIC)

FBIC shall be as per IS 5131 & gunmetal four way connecting head with 4 x 63mmdia instantaneous type inlets with built in check valve and 150mmdia outlet connection to the fire main grid with 150mmdia Butterfly valve and non – return valve. The fire brigade inlet shall be feed water in to the system as well as to the fire water tank

6.10.0 AIR RELEASE VALVES

Air release valve is 25mm screwed inlet GM single acting type and shall be fixed on all high points in the system (wet riser) with Ball valves or as shown on drawings.

6.11.0 DRAIN VALVES

Gun metal Gate / Ball valve of 15 / 25 / 40 / 50mmdia as per IS; 778 with fittings as required for instruments / draining any water in the system / Risers in low points.

LIST OF APPROVED MAKE

Sl. No.	Item Description	Preferred Make
1	Cable & Wires	: CCI/ RPG Asian/ Universal/Fort Gloster/ Nicco Torrent /Finolex/ Polycab/ Havells
2	Pump	: Mather & Platt / Kirloskar
3	Engine	: Greaves / Cummins/Kirloskar
4	Motor	: Crompton /Kirloskar/ ABB / Bharat Bijlee /equivalent approved make (E.A.M)
5	Gate Valves	:KBL/H sarkar / Fluid Control /Upadhya/ Kalpana/ (E.A.M)
6	Pipes	: Tata / Jindal /SAIL / (E.A.M)
7	Pressure Switch & Guage	: ANI/H Guru / Waree/ Wika /Indfoss/ Pricol/Fiebig(E.A.M)
8	Control Panel Component	: ABB / Universal / Khatau Junkar/L&T/ (E.A.M)
9	Relays	: Alstom / ABB / Siemens / GE / (E.A.M)
10	Hydrant valve & water monitor Branch Pipe with Nozzle	: GEI / Newage / Shah Bhogilal / ASCO/Fire Shield/Sh Fire(E.A.M)
11	Non- Return Valves	: KBL/ H sarkar / Fluid Control /Upadhya/ Kalpana/ Venus/ Hawa/ InterValve / (E.A.M)
12	Butterfly Valves	: KBL/H sarkar / Fluid Control /Upadhya/ Kalpana/ Venus/ Hawa / (E.A.M)
13	Pipe Fittings	: Bharat Forge/ Tube Products/M.S. Fittings/ Sanjay Forge/ VS Brand (E.A.M)
14	Gate Valves, screwed end	: Leader/Zoloto/ITAP/ (E.A.M)
15	Ball Valves, screwed end	: Leader/Zoloto/ITAP/ (E.A.M)
16	Strainer	: Gujrat OTO Filt/ Grand Prix/Tel Flow/ Jaypee/ (E.A.M)
17	PI	: Fiebig/H Guru / Pricol/ Waree/ (E.A.M)
18	Anti Corrosive Material	: IWL/ Rustech/ (E.A.M)
19	Fire Hose & Hose Coupling	: Newage / CRC/ GEI/BRG/Fire Shield(E.A.M)
20	Air Release Valve	: Leader/ Bajaj/ Hawa/ (E.A.M)
21	Welding Electrodes	: ESAB/ ADVANI/Best Arc/ (E.A.M)

22. All FDA System part such as detectors
, RI , MCP, Fire Alarm Panel, Modules etc. : Apollo / Edwards / Honeywell (Morley)
23. Steel for Plates & Structural materials : SAIL/RINL/TATA/JINDAL/ESSAR/BHUSAN
24. Isolation Control Valve (ISI) :Safe Spray/HD
25. Sprinkler head (UL Listed) :HD/Viking/Tyco
26. Paint :Berger/Asian Paints/Nerolac/ CDC Carboline/ Jenson &
Nicholson/ Shalimar Paints/Bombay Paints

Besides above mentioned make **equivalent approved make (EAM)** may also be used. The Contractor shall also obtain prior approval from Owner for the 'Make' and 'Rating' of any other major item not mentioned above.

TECHNICAL DATA SHEETS

(Attached)

INDEX OF DATA SHEETS

Document No.	Title
MMLH/FPS/01	Fire Water Pump (Motor Driven)
MMLH/FPS/02	Fire Water Pump (Engine Driven)
MMLH/FPS/03	Jockey Pump (Motor Driven)
MMLH/FPS/04	Terrace Pump (Motor Driven)
MMLH/FPS/05	Branch Pipe & Nozzles
MMLH/FPS/06	Fire Hose with couplings
MMLH/FPS/07	Hose Box
MMLH/FPS/08	Landing / Hydrant
MMLH/FPS /9	Water Monitor
MMLH/FPS / 10	Pressure Switch
MMLH/FPS / 11	Pressure Gauge
MMLH/FPS / 12	Y- type Strainer
MMLH/FPS /13	Pipe fittings, flanges etc.
MMLH/FPS /14	CI Gate Valves
MMLH/FPS /15	CI Non Return Valves
MMLH/FPS /16	Wrapping & Coating material
MMLH/FPS/17	Painting of Piping, Equipment & Structure
MMLH/FPS/18	Sprinklers
MMLH/FPS/19	Flow Switch
MMLH/FPS/20	Flexible Hose for Sprinklers
MMLH/FPS/21	FRLS Cable
MMLH/FPS/22	Mechanical Foam Extinguishers
MMLH/FPS/FPA/23	Facility Wise details of Fire Protection Appliances

TENDER DRAWING

List of Drawings

Sl.No.	Title	Drawing No.	Revision	Date
1	FIRE FIGHTING LAYOUT	DRG.NO. AA / Rly / 1691 / BL&CL / MP	Rev.No. 18	24-11-2017
2	MS Fire Water Tanks	DRG.NO. AA / Rly / 1691 / BL&CL / FWT	Rev.No.0	12-10-2017



बामर लॉरी एंड क. लिमिटेड

(भारत सरकार का एक उधम)

BALMER LAWRIE & CO. LTD.

(A Government of India Enterprise)

Multi-Modal Logistics Hub (MMLH)

SBU – Logistics

30-15-154/4F2, 5th Floor, GKP Heavenu,

Dabagardens Main Road, Visakhapatnam - 530020

TENDER DOCUMENT

for

**Supply, Installation, Testing & Commissioning of Fire
Protection System for**

for

Multi-Modal Logistics Hub at Visakhapatnam, Andhra Pradesh

Tender No. MMLH /FPS/ PT/25 Date: 30.12.2017

Due Date: 16.01.2018, 16:00 Hrs

PART – II (PRICED)

- 1.0 Details of the items under this Schedule shall be read in conjunction with the corresponding Specifications, Drawings and other Tender Document. In the event of any conflict between BOQ/Schedule and Technical Specification/ Data sheets, BOQ/Schedule of Work shall prevail.
- 2.0 The work shall be carried out as per approved drawings, Specifications and the description of the items in this Schedule and/or Engineer's instructions. Drawings enclosed with these documents are only for providing some preliminary of the work involved.
- 3.0 Items of work provided in this Schedule but not covered in the Specifications shall be executed strictly as per instructions of the Engineer-In-Charge.
- 4.0 Unless specifically mentioned otherwise in the Contract, the Tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, Constructional Plant, Temporary Work, labour, materials, levies, taxes, transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, services, temporary roads, revenue expenses, contingencies, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the contract. The rates quoted for the "Supply" items shall include all taxes, duties, packing, forwarding, freight, transit insurance & unloading charges. The "erection/installation" charges shall be inclusive of the cost of shifting materials from the Stores, unpacking, installation on foundations as specified elsewhere, supply of hardware, consumables and any minor civil works involved.
- 5.0 The Quantities of the various items mentioned in the Schedule of Items are approximate and may vary to any extent or may be deleted altogether. The Contractor, in his own interest, should get an indication of the probable extent of the work to be executed under any particular item in this Schedule before undertaking any preliminary and enabling work or purchasing bought out components related to the work. Payment will be made as per executed quantity.
- 7.0 Engineer's decision shall be final and binding on the Contractor regarding clarification of items in this Schedule with respect to the other sections of the Contract.
- 8.0 For extra items, rates shall be derived from similar item rates included in the schedule of work. Where there is no such similar item available in the schedule, rate shall be analyzed as follows:

Rate for extra item = Cost of material (a) + cost of labour inclusive of all necessary tools, tackles, equipment, machinery and consumable (b) required to carry out the work + 15% of (a+b) towards profit and overhead + taxes, duties etc. as applicable.

Schedule of Work

Supply, Installation, Testing and Commissioning of Fire Protection System for MMLH Vizag

Sl. No.	Description	Qty.	Unit	Supply + Installation	
				Unit Rate (Rs)	Amount (Rs)
A FIRE WATER RESERVIORS/TANKS					
1.0	200 KL MS TANK: Residual engineering, procurement, supply, fabrication, inspection, testing, surface preparation, supply and application of primers and paints etc. for vertical cylindrical type conical roofed water storage tank of Mild Steel with all accessories (nozzles, manholes, stairs, grating, handrails, guards, blind flanges etc) excluding civil foundation work in strict compliance with Tender Drawing No AA/Rly/1691/BL&CL/FWT, Rev 0(attached), specifications, standards and code. Water for hydrotesting shall be arranged by the contractor. [1 each for Exim & Domestic area]	2	No		
Sub total (A) Fire Water Reservoirs					
B FIRE WATER PUMPING SYSTEM					
Supply, Installation, Testing & Commissioning (SITC) of					
1.0	Electric Motor driven main Fire water pump complete with Centrifugal pump set, energy efficient type electric motor, base frame, coupling, companion flange, coupling guard and all accessories as per specification and duty condition. [Capacity: 171 M3/ Hr (2850 LPM, Head: 70 MWC, with a Motor of suitable HP (min 75 HP) connected]. Pump foundation with pocket will be carried-out by civil contractor. But the grouting of bolts of base frames included in this item. [Main Pump for EXIM & Domestic area].-Refer data sheet.	2	No.		
2.0	Diesel engine driven fire water pump complete with pump set, suitably rated four stroke diesel engine, drive coupling, companion flange, common base frame, exhaust manifold, silencer, etc. as per specifications. [Capacity: 171 M3/ Hr (2850 LPM, Head: 70 MWC, Engine of 1800 RPM with power rating of suitable BHP(min 85 BHP)]. Exhaust pipe for Diesel engine of with mineral wool insulation and aluminum sheet cladding with necessary Structural supports, clamps etc. up to 8 meter Height shall be included in the cost. The engine will be supplied with 4/6 Nos. of suitable Anti vibration pads. Pump foundation with pocket will be carried-out by civil contractor. But the grouting of bolts of base frames included in this item. Cost of initial fill of lube oil, coolant shall be included in this item. [Stand-by Pump for Exim & Domestic area]. Refer data sheet.	2	No.		
3.0	Diesel Engine Control Panel for above with 12V (or as per engineer manufacturer requirement) power back up with Battery Charger Unit [Exim & Domestic Both] for Sl. No. 1.0 & 2.0 of above.	2	Nos		
4.0	Jockey pump complete with pump set, energy efficient type electric motor, base frame, companion flange and all accessories as per specifications and duty conditions. [Capacity : 10.8 M3/ Hr, (180 LPM) Head: 88 MWC, Motor Rating: 15 HP]. Pump foundation with pocket will be carried-out by civil contractor. But the grouting of bolts of base frames included in this item. (Exim & Domestic Both). Refer data sheet.	2	No.		
5.0	Electric motor driven Booster Pump complete with pump set, energy efficient type electric motor, base frame, companion flange and all accessories as per specifications and duty conditions as per particular specifications. [Capacity : 54 M3/ Hr (900 LPM), Head: 35 MWC, Motor Rating: 12.5 HP]. DOL starter shall be supplied with the pump and starter shall be mounted on ground floor of Admin Building in Exim/Domestic Area near main entry gate. Refer data sheet.	2	No		

NOT TO QUOTE
HERE

Schedule of Work

Supply, Installation, Testing and Commissioning of Fire Protection System for MMLH Vizag

Sl. No.	Description	Qty.	Unit	Supply + Installation	
				Unit Rate (Rs)	Amount (Rs)
6.0	Sheet steel fabricated cubicle type, floor mounted MCC cum Annunciation Panel having main incomer section with fuse switch unit, Fire water pumps section (Motor Driven + Engine Driven) and Jockey pump section. All the 3- sections shall be compartmentalized. Fire panel comprising of all accessories like relays, timers, hooters, contactors, indication lamps, annunciators, etc, for auto / manual operation of fire pumps (both motor & diesel engine driven) as per specifications. High level & low level alarm for water in fire water tank shall also be available in panel. PANEL CABLE ENTRY SHALL BE FROM TOP/BOTTOM. NO CABLE TRENCH SHALL BE MADE. Owner/VPLPL will supply one point power cable up to the panel. Termination of the same shall under the scope of this item. Hot Dip GI perforated cable tray as required shall be included in this item. Cable laying layout drawings shall be prepared by the Contractor and submitted to owner/VPLPL for approval before procurement of cable and tray. The Jockey pump shall run on DOL Starter and main Pumps will run on Star Delta Starter. The Panel shall have 62A, 3phase Isolation Switch and in-built Battery Charger. (Exim & Domestic Both).	2	Set.		
7.0	Diesel day storage tank (8- hours continuous engine running capacity, min. 120 lit capacity, Mild Steel Tank) with support mounted out-side the fire-water pump-room, piping upto engine fuel pump, Level gauge, isolation valves, on line fittings, primer and final painting etc. Cost of initial fill diesel in diesel tank shall be included in the offer. Diesel of 100 ltrs. for each area to be supplied. (Exim & Domestic Both).	2	No.	NOT TO QUOTE HERE	
8.0	Supply, laying & termination of Control / Power Cables - 1.1 KV Grade, XLPE, Cu/Aluminum Conductors, taped inner Sheathed, Overall FRLS Sheath, Armoured type with accessories between the fire panels and the electric motors, battery pack, siren, pressure switch etc. The power supply cable for both the Pump Houses shall be laid from respective LT PCC panel, which is under the scope of owner/VPLPL.				
a)	Cu Cable-2 C x 1.5 mm ²	150	Mtr		
b)	Al Cable 3.5C x 120 mm ²	70	Mtr		
c)	Al Cable 3 C X 10 mm ²	130	Mtr		
d)	Flexible Cu Cable 10/12C x 1.5 mm ²	60	Mtr		
9.0	Dial type glycerine filled pressure gauge with 150 mm dial and range of 0-14 Kg./sq.cm. together with SS needle valve of 15 mm and GI Barrel Nipples.	16	Nos.		
10.0	Supply and installation of Pressure Switches together with accessories & needle Valve and GI Barrel Nipples.	8	Nos.		
11.0	Air-cushion Mild Steel Tank of 300 mm dia, 1.5 mtr height, both ends closed with dished end, internal design pressure 18 Kg/sq. cm (g), leg support, pedestals, inlet & vent nozzles, mounted with safety valve & pressure gauge, piping accessories complete in all respect along with test drain arrangement. Design shall be as per code requirement.	2	No.		
Subtotal (B)- Fire Water Pumping System				NOT TO QUOTE HERE	
C SITC of FIRE HYDRANT SYSTEM					
1.0	Supplying and laying above ground piping carried out of MS Class "C" pipes as per IS : 1239 for pipes up to 150 mm NB and as per IS:3589 (6.35mm thick) with all online Pipe Fittings, flanges, ASA 150 class, nuts,bolts,gaskets,washers,auxiliary pipe supporting pipe 'U' clamps,surface preparation & painting and tapping for gauges/instruments.. Above ground piping mostly take support from the columns of boundary wall (located at 5 m interval). Necessary arrangements for fixing insert plates/ angles on the wall along with anchor fasteners/expansion bolts and finishing shall be included in the scope. Only steel work for supports shall be paid under separate item. If concrete pedestal support is required for laying the pipe, it will be paid in relevant item of civil work. Cost of other items such as anchor fasteners etc (except steel work & civil work) shall be included in this item.				
a	300 mm NB Pipes.	24	Mtr		
b	250 mm NB Pipes.	30	Mtr		
c	200 mm NB Pipes.	300	Mtr		

Schedule of Work

Supply, Installation, Testing and Commissioning of Fire Protection System for MMLH Vizag

Sl. No.	Description	Qty.	Unit	Supply + Installation		
				Unit Rate (Rs)	Amount (Rs)	
d	150 mm NB Pipes.	2850	Mtr			
e	100 mm NB Pipes.	350	Mtr			
f	80 mm NB Pipes.	160	Mtr			
g	65 mm NB Pipes.	30	Mtr			
h	50 mm NB Pipes.	80	Mtr			
i	25 mm NB Pipes.	150	Mtr			
j	15 mm NB Pipes.	50	Mtr			
2.0	Cast Iron Butterfly valve with companion Flanges, Bolts, Nuts and Gaskets as per BS 5155 The valves shall be CI construction, seat shall be black nitrile rubber with instantmoulding. The valves shall be PN 1.6 rating & Leak proof.					
a	250 mm NB (gear operated)	4	Nos.			
b	200 mm NB (gear operated)	3	Nos.			
c	150 mm NB. (lever operated)	22	Nos.			
d	100 mm NB.(lever operated)	18	Nos.			
e	80 mm NB. (lever operated)	4	Nos.			
3.0	Bronze / Gun metal gate valve, threaded ends					
a	15 mm NB	24	Nos.			
b	20 mm NB	2	Nos.			
c	25 mm NB	4	Nos.	NOT TO QUOTE HERE		
d	50 mm NB	2	Nos.			
4.0	Ball valve, 300 # rating, flanged ends, ISI marked					
a	25 NB	20	Nos.			
b	20 NB, screwed ends	2	Nos.			
c	15 NB, screwed ends	15	Nos.			
5.0	Y- Type Strainer, Cast Iron Double Flanged (CIDF), PN 1.6 along with companion flanges					
a	200 mm NB.	4	Nos.			
b	150 mm NB	2	Nos.			
c	100 mm NB.	2	Nos.			
d	80 mm NB.	4	Nos.			
e	10/15 mm NB. (for diesel line)	2	Nos.			
6.0	Cast Iron Non-return Valves as per IS:5312 , leak proof with companion Flanges, Bolts, Nuts and Gaskets PN 1.6					
a	Size 150 mm NB	4	Nos.			
b	Size 100 mm NB	2	Nos.			
c	Size 80 mm NB	2	Nos.			
d	Size 65/ 50 mm NB	3	Nos.			
7.0	Air Release valve					
a)	25 NB Gun metal Air release valve	12	Nos.			
8.0	Cast Iron Gate Valve --Rising Spindle type (IS : 14846) with companion Flanges, Bolts, Nuts and Gaskets					
a	Size 250 mm NB	4	Nos.			
b	Size 200 mm NB	6	Nos.			
c	Size 150 mm NB	6	Nos.			
d	Size 100 mm NB	2	Nos.			
e	Size 80 mm NB	4	Nos.			
f	Size 65 mm NB	4	Nos.			
9.0	Supplying and laying underground buried piping together with protective wrapping and coating for MS pipe as per IS : 1239 carried out of MS class "C" piping for pipes up to 150mm NB and as per IS : 3589 for pipes 200mm NB and above together with fittings and accessories as under : Rates shall include Excavation & Back filling in soft soil/murum and application of 4mm thick wrapping & coating material over under ground piping. Refer data sheet of wrapping & coating material.					
a	200 mm NB pipes.	60	Mtr			
b	150 mm NB pipes.	400	Mtr			

Schedule of Work

Supply, Installation, Testing and Commissioning of Fire Protection System for MMLH Vizag

Sl. No.	Description	Qty.	Unit	Supply + Installation	
				Unit Rate (Rs)	Amount (Rs)
c	100 mm NB pipes.	130	Mtr		
d	80 mm NB pipes.	24	Mtr		
10.0	SITC of Hydrant Valves				
a	Double Hydrant valve of SS construction of 63 mm dia as per IS: 5290 together with cap and chain. ISI Marked. (Inlet flange 100 NB). Refer data sheet.	2	Nos.		
b	SS Single Hydrant Oblique Valve as per IS 5290 , ISI marked of 63 mm dia (Yard + Escape). Refer data sheet	100	Nos.		
11.0	SITC of Fire Hose Delivery 15 M long 63mm RRL Hose Pipe as per IS: 636, Type 'A' ISI marked with SS 63mm male and female hose coupling as per IS: 903, ISI marked with GI binding wire.	180	Nos.		
12.0	Hydrant accessories				
a	Supply, fixing, testing & commissioning of ISI MARKED STAINLESS STEEL WATER BRANCH PIPE WITH NOZZLE. The general design and construction of branch pipes and nozzles shall comply with IS: 903 (latest revision). Nozzles shall be constructed of Stainless Steel.	75	Nos.	NOT TO QUOTE HERE	
b	Supply, fixing, testing & commissioning of SS Standard branch (universal) as per IS 2871 having 63mm male Inst inlet.	15	Nos		
c	SS 63mm Fog Nozzle as per IS: 952	4	Set.		
d	Nozzle Spanners.	4	Set.		
13.0	Supplying and fixing Fire Hose Cabinet, made of CRC 18 SWG sheet for body and doors of size 750 X 600 X 250 double hinged double doors painted with Signal Red, with front glass, lock and key suitable for 1 branch pipe and 2 hoses including anchor fastening for fixing of box in wall/ or in foundation as per requirement. (Structural work shall be paid separately).	90	Nos		
14.0	SITC of Fire Monitors				
a	Stand Post type Water Monitor made of C.S Body having 63/32 mm nozzle size with flow capacity of 1750lpm@7Kg/Cm2 as per IS:- 8442 Type- "I", ISI marked.-Refer data sheet.	9	Nos.		
b	Foam Monitor, Nozzle Size 63 / 32 as per IS: 8443. All ancillary items, proportioner, required for induction of Foam to Monitor from Foam Barrel shall be included under this head. (Refer Data Sheet)	3	Nos		
15.0	Hose Reels: First aid Hose reels consist of 30 M Thermoplastic Type 2 Hose with Shut off valve, High density PVC Nozzle & hose drum and swivel bracket to accommodate 270 Deg. operation (min dia 19 mm) IS 884:1985. 25 mm dia Ball valves for First Aid Hose Reel along with companion flanges/necessary fittings shall be included in this item.	30	Each		
16.0	Foam Compound Mechanical type (AFFF) 3% concentrate mfd. To IS:4989 Marked in 20/50/200 liter can/drum as required	1000	Ltrs.		
17.0	63mm Foam Making Branch Pipe made of Aluminum Alloy FB- 5X with Pick up tube having flow capacity of 225lpm@Kg/cm2.	6	Nos		
18.0	Standard Fireman's Axe with Heavy Rubber Handle tested to 20000VIts as per IS:926	4	Set.		
19.0	Fire Siren of 2 KM range to be installed on top of Fire Water pump house with cabling, mounting bracket etc. Power connection to be taken from MCC cum Annunciation Panel. Cabling cost for Siren shall be included under this head	2	No.		
20.0	Earthing as required for motors, panels, tanks and other installed system complete for EXIM and Domestic area	1	Job		
21.0	Supply, fabrication, erection, alignment and fixing in position, true to line and level, structural steel work for structural support grating etc. made out of rolled steel angles, plates, steel tubes etc., including splicing, cutting, bending, drilling, welding, riveting, bolting etc., with all tools and tackles, plant and machinery including preparation of detailed shop drawings as per design drawings and specifications, wire brushing to remove mill scales etc and painting as per relevant data sheet.	27000	Kg		

Schedule of Work

Supply, Installation, Testing and Commissioning of Fire Protection System for MMLH Vizag

Sl. No.	Description	Qty.	Unit	Supply + Installation	
				Unit Rate (Rs)	Amount (Rs)
22.0	Fire brigade inlet siamese connection (4way) manifold including valves and check valve of size 150mm size having gunmetal 4 nos. 63mm dia instantaneous inlet arrangements to the main header with cap and chain etc. It shall be as per IS 5131 with built in check valve and 150mm dia outlet connection to the fire main grid with 150mm dia Butterfly valve and non – return valve. The fire brigade inlet shall feed water in to the system as well as to the fire water tank. The inlet shall be located inside a box made of 1.6 mm mild steel plate with openable 4 mm thick glass frontage with locking arrangement. The words ' Fire Service Inlet' should be written in letters at least 75 mm in height and 12 mm in width in fluorescent fire red colour (refer IS: 5-1978)	4	Nos.		
Subtotal (C) -Fire Hydrant System					
D SITC of Automatic Sprinkler System					
Sprinkler systems to be installed at PEB Warehouses (Height 10.5 mtr), TCW (Height 11.5 mtr) and Double Storied Admin Buildings (approx 4 mtr each floor)					
1.0	Supply , Fabrication, providing, laying/installation of following sizes of Pipes, conforming to IS-1239 with all accessories like Tees, Elbows, Reducers, Flanges for Sprinkler System and to be provided in the specified areas .All pipes 65 dia and above shall have seamless butt welded fittings and pipes with 50mm and below shall have socket welded fittings.				
a	150 mm NB pipes.	400	Mtr		
b	100 mm NB Pipes.	900	Mtr		
c	80 mm NB Pipes.	150	Mtr		
d	65 mm NB Pipes.	150	Mtr		
e	50 mm NB Pipes.	1400	Mtr		
f	40 mm NB Pipes.	1400	Mtr	NOT TO QUOTE HERE	
g	32 mm NB Pipes.	1500	Mtr		
h	25 mm NB Pipes.	800	Mtr		
i	20 mm NB Pipes	300	Mtr		
j	15 mm NB Pipes	200	Mtr		
2.0	Providing & Fixing Butterfly valve for isolating the sprinklers system in each floor from sprinkler wet riser				
a	Size 150 mm NB	9	Nos		
b	Size 100 mm NB	2	Nos		
c	Size 80 mm NB	2	Nos		
	Butterfly valves shall be lever operated.				
3.0	Flow Switches to indicate and transfer signal to Fire Alarm Panel regarding the flow of the water in respective sprinkler system of each floor				
a	For 150 mm dia riser	8	Nos		
4.0	Cast Iron Non-return Valves as per IS:5312, leak proof with companion Flanges, Bolts, Nuts and Gaskets PN 1.6				
a	150 NB	4	Nos.		
b	100 NB	2	Nos.		
c	80 NB	2	Nos.		
d	65 / 50 NB	2	Nos.		
5.0	Inspection / Supervisory drain arrangement for sprinkler network system at extreme end of the sprinkler system in each of the floors, comprising of 25 mm Gate Valve and 3 Mtrs. of 25 mm dia piping, 25 mm dia 3 nos. sight glass	10	Nos		
6.0	Supply, Installation, Testing & Commissioning of Sprinkler Heads, QB type 68 Deg C, brass chrome plated sprinkler heads with 15 mm end connection.				
	Upright or Pendant type-Spray pattern with 125 LPM 100% flow towards downward direction	1820	Nos		

Schedule of Work

Supply, Installation, Testing and Commissioning of Fire Protection System for MMLH Vizag

Sl. No.	Description	Qty.	Unit	Supply + Installation	
				Unit Rate (Rs)	Amount (Rs)
7.0	Sprinkler installation valve assembly fitted with main installation valve to control water supply. Valve set comprise of comprise of a) Main stop valve; b) Alarm valve ; c) Water motor alarm & gong. d) Press. gauges; e) Drain & Test Valve etc. complete in all respect as per code requirement. Size: 150 mm.	8	Set		
8.0	Structural, Hangers Supports with/ without Bracing for Sprinkler Pipes shall be provided as per relevant code requirement. This will cover all common type of hanger equipment as per system design/ piping stability requirement. Mild Steel Structural requirement for Bracing shall be paid under Structural Steel Work (item no 21 of C). Scope shall also include Supply of U clamps, GI thread rods and Anchor fasteners etc as required as per page 210 of NFPA-13. The sprinklers are to be installed in 2 PEB Warehouses (one each for EXIM & Domestic), Temperature Controlled Warehouse and Admin Buildings (Double Storied, one each for EXIM & Domestic). Eave Height of the warehouses are 10.5/11.5 mtr. Bidders must visit site , asses the extent of enabling work required for working at height and quote in Lumsun basis accordingly.	1	Job		
Subtotal(D)- Automatic Fire Sprinkler System					
E SITC of Fire Detection & Alarm System - EXIM & DOMESTIC					
1	FIRE ALARM CONTROL PANEL (FACP)				
1.1	Supply, Installation, Testing & Commissioning of Microprocessor based Intelligent Analog Addressable Type 4 Loops Fire Alarm Control Panel with 160 character LCD display, four access level. 1000 event historic logging, flash EPROM sufficient numbers of programmable relay control, 24 V DC standby & Battery backup/battery charger of 48 hrs (please provide battery calculations).. The FACP shall have provision of loop expansion, The FACP shall be networkable type. The FACP loops is designed considering 125 detectors & devices per loop and each loop is loaded 80%. (Admin- EXIM-1, Domestic Admin-1, TCW-1)	3	Nos.		
2	REPEATER PANEL				
2.1	Supply, Installation, Testing & Commissioning of remote annunciators with 4 line 80 character LCD display. The annunciator shall have built in memory to record the alarm events and shall have standard buttons for alarm ack, reset etc. Max of 32 remote annunciators shall be loopable to one FACP. (To be located in Security Blocks of EXIM & DOMESTIC area)	3	Nos.	NOT TO QUOTE HERE	
3	DETECTORS				
3.1	Photo Detectors: Supply, Installation, Testing and Commissioning of Intelligent Addressable Photo Electric Type Smoke Detectors Above False Ceiling with indicating lamp, mounting base and all other mounting accessories complete as required.	30	Nos.		
3.2	Photo Detectors: Supply, Installation, Testing and Commissioning of Intelligent Addressable Photo Electric Type Smoke Detectors - Below False Ceiling with indicating lamp, mounting base and all other mounting accessories complete as required.	342	Nos.		
3.3	Heat Detector (Addressable): Supply, Installation, Testing and Commissioning of Intelligent Addressable Heat Detectors with indicating lamp, mounting base and all other mounting accessories complete as required.	18	Nos.		
3.4	Multi Sensor Detector: Supply, Installation, Testing and Commissioning of Intelligent Addressable Multi Sensor Detectors with indicating lamp, mounting base and all other mounting accessories complete as required.	8	Nos.		
3.5	Response Indicator: Supply, Installation, testing and commissioning of Response Indicator with all mounting accessories complete as required.	90	Nos.		
4	DEVICES				
4.1	Isolator Module: Supply, Installation, testing and commissioning of Isolator Module with indicating lamp, mounting base and all other mounting accessories complete as required.	20	Nos.		
4.2	Manual Call Points: Supply, Installation, testing and commissioning of Intelligent Addressable Manual Call Points with indicating lamp, mounting base and all other mounting accessories complete as required.	32	Nos.		

Schedule of Work

Supply, Installation, Testing and Commissioning of Fire Protection System for MMLH Vizag

Sl. No.	Description	Qty.	Unit	Supply + Installation	
				Unit Rate (Rs)	Amount (Rs)
4.3	Control Module for Hooter: Supply, Installation, testing and commissioning of Addressable Control Modules for activating hooters with all the mounting accessories complete as required. One CM shall provide one activation signals.	22	Nos.		
4.4	Relay Module for High Voltage Applications: Supply, Installation, testing and commissioning of Addressable Relay Modules for Tripping the AHU's & Ventilation Equipments with all the mounting accessories complete as required.	4	Nos.		
4.5	Monitor Module: Supply, Installation, testing and commissioning of Addressable Monitor Modules for Interfacing PFC/Dry Inputs of Fire Pump Signals, Sprinkler Line Flow Switch Status, Base builder fire alarm panel integration with all the mounting accessories complete as required.	16	Nos.		
5	NOTIFICATION DEVICES				
5.1	Hooters with Strobes: Supply, Installation, testing and commissioning of Hooters with Strobes with all mounting accessories complete as required.	20	Nos.		
6	CABLES, CONDUITS, HUME PIPES & RACEWAYS				
6.1	Supply, wiring, testing and commissioning of ISI Certified 2Cx1.5 sq.mm, twisted shield, FRLS type, armored double insulated copper cable with Ferrules, Lugs, saddles, saddles base & other accessories complete as required. The cable specification shall meet FACP & detectors manufacturer requirement. (including hooter cabling)	11000	Mtr.		
7	OTHER EQUIPMENTS				
	Any additional items required for executing of Fire Detection & Alarm System shall be considered under this item			NOT TO QUOTE HERE	
7.1	Supply, Installation, testing and commissioning of DC Regulated Power Supply, 230 to appropriate Volts requirement of Hooters	20	Nos.		
	Subtotal (E)-FIRE DETECTION & ALARM SYSTEM				
F	Misc. Civil Work				
1.0	Dismantling work with all labour, tools and tackles complete as per direction of Engineer-In-Charge including cleaning the area of all spoils and carting debris outside the plant area or stacking the material as per direction of the Engineer-in-Charge.				
a)	Plain Concrete	2	CuM		
b)	Reinforced Concrete including cutting of reinforcement	2	CuM		
c)	Brick work including plastering	2	CuM		
2.0	Excavation and back filling work with all materials, labour, tools and tackles complete as per direction of Engineer-In-Charge.	20	CuM	NOT TO QUOTE HERE	
3.0	P.C.C. work with all materials, labour, tools and tackles complete as per direction of Engineer-In-Charge for the supports	2	CuM		
4.0	R.C.C. work with all materials,labour, tools and tackles complete as per direction of Engineer-In-Charge for the supports.	5	CuM		
5.0	Non-sinking grout material, supply & application	15	KG		
6.0	Supply & installation of level Switch with Low level indication at Pump Room together with all accessories	2	No		
	SUB TOTAL (F)- Misc. Civil Work				
G	HAND APPLIANCES , PPE & SIGNAGES				
	Supply, installation, transportation of Fire Extinguishers including supply of nuts, bolts, brackets etc. including making good of wall, wherever required, after installation and supply of all related material all complete as per codes, standards, specifications, documents and direction of Engineer-in-Charge.				
1.0	CO2 type Fire Extinguisher				

Schedule of Work

Supply, Installation, Testing and Commissioning of Fire Protection System for MMLH Vizag

Sl. No.	Description	Qty.	Unit	Supply + Installation	
				Unit Rate (Rs)	Amount (Rs)
a	4.5 KG as per IS 15683	50	Nos.		
b	22.5KG as per IS 2878	4	Nos.		
2.0	Water CO2				
a	9 Liter as per IS 15683	12	No.		
3.0	Mechanical Foam				
a	9 Liter as per IS 15683	36	Nos.		
b	50 Liter as per IS 13386	4	Nos.		
c	150 Liter as per IS 14951	2	Nos.		
4.0	DCP type Fire Extinguisher				
a	25 Kg as per IS 10658, Trolley type	6	Nos.		
5.0	ABC type Fire Extinguisher				
a	6 KG as per IS 15683	101	Nos.	NOT TO QUOTE HERE	
6.0	Self Contained Breathing Apparatus sets	4	Nos.		
7.0	MS Fire Water buckets including the structure of fixing-10 Kg	2	Nos.		
8.0	Self Illuminated Signages-Fire Exit, Fire Extinguishers, Danger, Fire Bucket and No Smoking, Size 300 x 150 mm Approx	60	Nos.		
9.0	Supply & fixing in position the signages with required texts on 3 mm thick 'Opaque' PVC foam board of computerized cut, PVC non-reflective self adhesive vinyl painted foam board.- Fire Notice Board in 600 X 450 mm or any other sizes as required.	10	Sq. m		
10.0	Sign-writing/Letter writing with 'Post Office Red' paint on sing-boards or at any other places like "Fire Extinguisher", "Fire Bucket", "Danger"etc. Rate shall be inclusive of supplying the board.	10	Sq.m		
11.0	Clean Agent Fire Extinguisher of 10kgs capacity modular type, fitted with pressure gauge and quartzite bulb 68 degrees, filled with DuPont HFC 236 gas and supplied complete with initial charge and ceiling bracket.	2	Nos.		
12.0	ABC stored pressure automatic modular type fire extinguisher 10kgs capacity, made out of 2mm thickness body with MIG welding, CRC sheet, upper part of which is fitted with flange for fixing on the ceiling and below part fitted with automatic release nozzle based on sprinkler technology with 68 degrees sprinkler bulb, filled with map 50% as per 14609 with ISI mark and pressurized nitrogen gas and supplied complete with initial charge and ceiling bracket.	5	Nos.		
Subtotal (G)- Hand Appliances & Signanges					
H Potable Water System					
1.0	SITC of Raw Water Transfer Pumps with constant pressure water supply of average discharge pressure comprising horizontal, single outlet, centrifugal stainless steel, & variable speed. Each Pump (1 Working + 1 Stand by = 1 Set including panel) having a capacity of minimum 20 Cum/Hr @ min 50 m head with suitable motor capacity, with cast iron casing, stainless steel impeller, Stainless steel shaft and electric motor operating on 3 phase, 415V Supply. The pumps will be used for pumping raw water from Ground level reservoir to overhead tanks located on terrace of various buildings. The pumps to be installed on the top slab of Ground Water Reservoir and will have negative suction . The quoted price shall be inclusive of the Foot Valve, Suction valve and strainer and discharge NRV and valve, Pressure Gauge and suitable canopy. The starter electrical panel with all protection and Amp Meter / Volt Meter / Auto Manual selector shall be in the scope of the supplier.	3	Set		
2.0	SITC of Centrifugal Pumps of Capacity 5 Cum/Hr @ 30 Mtr head directly coupled to the suitable T.E.F.C. induction motor and starter along with necessary electrical work up to starters complete.	3	No		

Schedule of Work

Supply, Installation, Testing and Commissioning of Fire Protection System for MMLH Vizag

Sl. No.	Description	Qty.	Unit	Supply + Installation	
				Unit Rate (Rs)	Amount (Rs)
3.0	External work: Supplying & fixing Chlorinated Polyvinyl Chloride (CPVC) pipe as per ASTM F 441, Schedule 40 with all CPVC plain and brass threaded fittings, bends, tees, flanges, rubber gasket, reducers, nut bolts, sockets, unions end cap etc. as required including fixing of pipes with clamps at suitable regular spacing. The pipes shall be laid along drain wall/ overground/underground as required based on site condition. This item includes jointing the pipes and fittings with one step CPVC solvent cement trenching, refilling and testing the joints as required complete as per direction of Engineer-in-Charge. Piping network to be hydrotested at 8 Kg/sq. cm. pressure.				
a	65 mm nominal bore	20	Mtr		
b	50 mm nominal bore	50	Mtr		
c	40 mm nominal bore	30	Mtr		
d	32 mm nominal bore	30	Mtr		
e	25 mm nominal bore	10	Mtr		
4.0	Supply, Installation, Testing and Commissioning of CPVC Sch 40 Brass threaded/plain end ball valves (pressure rating: 235 psi @ 23°C) based on end of pipe of following sizes			NOT TO QUOTE HERE	
a	65 mm Nominal Bore	2	No		
b	50 mm nominal bore	1	Nos		
c	40 mm nominal bore	1	Nos		
d	32 mm nominal bore	4	Nos		
e	25 mm nominal Size	2	Nos		
	Sub TOTAL (H) Potable Water System				
	I Approval from Fire Department & AMC				
1.0	Obtaining final approval/No- Objection Certificate of the entire system from the Concerned Fire Department. The bidder has to prepare the layout, drawings and any other statutory requirements for getting the approval from the Fire Department. Statutory fees to the Department will be paid by Owner/VPLPL. All other incidental expenses, visits and meeting expenses shall be included against this head the by the bidder.	1	Job		
2.0	Annual Maintenance Contract [AMC] (after expiry of 1-year guarantee period): Rectification & maintenance of the Fire Protection system including supply of man-power tools tackles, regularly consumable spares required for schedule maintenance, maintenance against calls and break down maintenance. The charges to be paid on annual basis. Annual Maintenance Contract rate will include system inspection and running the Fire Hydrant System once in a month by the contractor. The Log book shall be signed by both Owner & Contractor. For details refer Scope of Work.			NOT TO QUOTE HERE	
a	1st year	1	LS		
	SUB TOTAL (I) Approval from Fire Department & AMC				
	GRAND TOTAL (A+B+C+D+E+F+G+H+I) WITHOUT GST				
	Applicable IGST(bidder to indicate %)				
	Applicable CGST (bidder to indicate %)				
	Applicable SGST(bidder to indicate %)				
	GRAND TOTAL WITH GST				