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 Heavenue,
Dabagardens Main Road, Visakhapatnam - 530020

TENDER DOCUMENT

for
Supply, Installation, Testing & Commissioning of High Mast Lighting Tower

for
Multi-Modal Logistics Hub at Visakhapatnam, Andhra Pradesh

Tender No. MMLH/HIGHMAST/PT/21

Date: 19/07/2017

Due Date: 10/08/2017, 16:00 Hrs

PART – I (UNPRICED)

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

Sl. No.	Check list points	Bidder's Confirmation /Submission (Yes / No)
	PQ Criteria	
1	Demand Draft for Tender Fees of **Rs 5,000/-**	
2	Demand Draft or Bank Guarantee for Earnest Money Deposit of **Rs 50,000/-**	
3	Attested/Notarized copy of valid NSIC certificate or "Micro and Small" industry certificate (In case of "Micro & Small" industries)	
4	Audited Annual Reports for Last 3 financial years ending 31st March,2017	
4.1	Turnover in FY 2014-15 Turnover in FY 2015-16 (Mention Turnover) Turnover in FY 2016-17	…… …… ……
5	Purchase Order and Completion Certificates for similar supply as per required pre-qualification criteria	
6	Proposed Make of tower & luminaries	
7	PAN	
8	GST Registration details	
9	SGST Registration details in Andhra Pradesh	
10	Provident Fund Registration	
11	ESI Registration (as applicable)	
12	IT Return for Last Three Financial Years ending March 2016	
13	HSE Appendix A & B	
14	Original Power of Attorney of the Signatory signing the tender document duly notarized	
	Other Conditions	
15	List of Supply Executed	
16	List of Supply in Progress	
17	Confirmation on Completion of work **by 14 (Fourteen) weeks**	
18	Stamped and Signed Tender Document along with addendum/corrigendum	
19	Confirmation of ' NO DEVIATION' from Tender	
20	Confirmation of Bid Validity of 120 days	
21	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) 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)

NOTICE INVITING TENDER

Tender No. MMLH/HIGHMAST/PT/21

1.0 TENDER INVITATION

Balmer Lawrie & Co. Ltd. (BL) invite ONLINE BIDS from experienced, competent and resourceful suppliers with sound technical and financial capabilities for **Supply, Installation, Testing & Commissioning of High Mast Lighting Tower 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 Balmer Lawrie & Co. Ltd. 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 Heavenue, Dabagardens Main Road, Visakhapatnam - 530020, India, Tel: + 91 891 2564933.

2.0 SCOPE OF WORK

The scope of work under this tender covers Supply, Installation, Testing & Commissioning of High Mast Lighting Tower for Multi-modal Logistics Hub at Visakhapatnam, Andhra Pradesh as defined in General Conditions of Contract, Technical Specification, Tender Drawing & Schedule of Work.

2 (Two) Separate Orders may be placed as per the discretion of VPLPL on selected bidder for Supply and Installation.

3.0 COMPLETION PERIOD

Time is essence of the contract. Time schedule for completion of total work is **14 (Fourteen) weeks** from the date of Letter of Intent / placement of Work Order.

Sl. No.	Activity Description	Activity Duration
1	Submission of drawings & design for approval to VPLPL	within Ten (10) days from the date of Letter of Intent / placement of Work Order.
2	Approval of drawings & design by VPLPL	within Ten (10) days after submission of drawing, if inline with the technical specification.
3	Delivery of foundation bolts, nuts, foundation templates etc.	within seven (7) days after approval of drawing.
4	Completion of Supply	within Eleven (11) weeks from the date of Letter of Intent / placement of Work Order.
5	Installation & Commissioning	within Three (3) weeks after completion of supply and handing over of last facility at site for instllation.

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 50,000.00 (Rupees Fifty Thousand 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 **150 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 (interest free) 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.

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5.5 EMD is liable to forfeiture in the event of:

a) Withdrawal of offers during validity period of the offer
b) Non acceptance of orders by the bidder within the stipulated time after placement of order.
c) Any unilateral revision made by the bidder during the validity period of the offer.
d) Non submission of Security Deposit.
e) 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 111 Lakhs** 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

The tenderer should have successfully supplied & installed High Mast Lighting Systems of approved make of the following minimum values during past seven (7) years ending last day of month previous to the one in which applications are invited should be either of the following:-.

a. 3 jobs each of value not less than **Rs 40 Lakhs** or

b. 2 jobs each of value not less than **Rs 50 Lakhs** or
c. 1 job of value not less than **Rs 80 Lakhs**

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.

6.4 PAN, VAT, GST, Excise, Service Tax, ESI & PF Registration & Product Catalogue

Tenderers are required to submit attested photocopies of PAN, GST Regn., ESI Registration (as applicable), Provident Fund registration & Product Catalogue along with Un-priced part of their offer, failing which their offer may be liable to be rejected. **The bidder must have GST registration in the state of Andhra Pradesh to pass on the input tax credit to VPLPL**

6.5 Income Tax Return

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

6.6 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.

6.7 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 notorized 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 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 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/Sri Dhritiman Nandi**.

8.0 TENDER SUBMISSION

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.

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	Email IDs	Contact Nos
Ritabrata Chakraborty	ritabrata.chakraborty@c1india.com	**+91-86979 10411**
Tuhin Ghosh	tuhin.ghosh@c1india.com	**+91-8981165071**
Tirtha Das	tirtha.das@c1india.com	**+91-9163254290**
Ujjal Mitra	ujjal.mitra@c1india.com	**+91-77026 69806**
Rajesh Kumar	rajesh.kumar@c1india.com	**+91-96504 65143**

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/Sri Dhritiman Nandi.**

The bidder must keep track of the Addendum / Corrigendum / Amendment, 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.

9.0 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 under sealed envelope should reach our office located at 30-15-154 / 4F2, 5th Floor, GKP Heavenue, 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 bidders shall quote rates (item wise), details about taxes etc. ONLINE only. Hard copy of price bid shall not be submitted. Hard copy of price bid shall not be submitted.** 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.

10.0 SUPPLY OF EQUIPMENT

High Mast Lighting Towers along with all accessories for required function shall be supplied in whole by the Tenderer.

11.0 TERMS OF PAYMENT

11.01 SUPPLY

a) **80%** against supply of materials upon receiving of materials at site in good condition and duly inspected and certified by the Engineer-in-Charge.

b) **20%** against successful installation, testing and commissioning upon verification and certification by the Engineer- in-Charge.

11.02 INSTALLATION

a) **100%** against successful installation, testing and commissioning duly certified by the Engineer- in-Charge.

11:03 RETENTION FOR SUPPLY & INSTLATTAION

a) **10%** shall be deducted from each bills and retained as Retention money for the defect liability period which can be paid after completion of successful commissioning of High Mast Towers against submission of Bank Guarantee of equivalent amount. Validity of BG shall be till completion of defect liability /warranty period.

12.0 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 which are not mentioned in the Price Schedule/Schedule of Work shall be included in the basic rate of equipment. If GST is applicable on freight, it will be paid separately.

13.0 NON-CONFORMANCE

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

14.0 VALIDITY OF OFFER

Tendered shall keep their offer valid for a period of **120 days** from the date of opening of Unpriced bid.

15.0 RATES AND OTHER ENTRIES

(a) The tenderer should quote for all items in the Schedule of Work. The rates 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.

(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.

16.0 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.

17.0 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 holidays as per the company policy.

18.0 BID REJECTION CRITERIA

A bid may be rejected

18.1 If the bidder fails to send the EMD and Tender Fee amount along with the Unpriced Bid within the due date.

18.2 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.

18.3 The deviations from the terms mentioned in the document is likely to affect in any way the scope, quality and performance of the work.

18.4 If a conflict of interest between the bidder and the company is detected at any stage.

18.5 If the bidders fails to produce all the original documents/credentials, photo copy of which has been submitted along with bid.

18.6 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.

19.0 FIRM PRICE

The quantity as mentioned in the Schedule of Work/ Price Bid is indicative. Accordingly, there may be variation of quantity while execution. The price should be firm and irrevocable and not subject to any change till the completion of Scope of Work.

20.0 OPENING OF BIDS

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

21.0 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.

22.0 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.

23.0 CONTACT DETAILS

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

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

M S RAO
SR. MANAGER (LIAISON)

GENERAL CONDITIONS OF CONTRACT

ATTACHMENTS		**No. of pages**
I	BG Verification Check List	1
II	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 Similar Supplies	1
VII	Concurrent Commitment of Supplies	1

EXHIBITS		**No. of pages**
Exihibit-1	Vicinity Plan of MMLH Site	1
Exihibit-2	Bank Details for Submission of Bank Guarantee	1

1.00 DEFINITIONS

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 / "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.

1.04 The "Supplier / Contractor/ Successful tenderer" 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 Supplier.

1.06 **The "Project" shall mean Supply, Installation Testing & Commissioning of High Mast Lighting Towers 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 Supplier / Consultants at site.

1.08 The "Engineer-in-Charge (EIC)" 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" 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 The "Total Contract Value" means the value of original work order issued and duly accepted by the Supplier. The remuneration due to the Supplier in terms of the Contract on successful completion of the work shall mean the value of job actually executed by the Supplier within the original time schedule or within the approved extended time.

2.00 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 or Notarised NSIC/MSME Registration Certificate

(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 notorized 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.

e) Income Tax Returns for the last 3 years, GST Registration details/ESI Registartion/PF registration/ Audited Annual Reports for the last 3 years, Product Catalogue etc.

3.00 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.

4.00 SECURITY DEPOSIT

(i) On acceptance of the Bid, Supplier shall within **fifteen (15) days**, deposit with Owner an initial Security Deposit of 2% 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 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 Supplier 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 Supplier'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) Security deposit shall be returned after within 60 days from completion of total job.

5.00 VALIDITY OF OFFER

The validity of the tender shall be **120 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.

6.00 LIQUIDATED DAMAGE

i) If the Supplier is unable to complete the delivery 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 delivery and shall recover from the Supplier'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 10% 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 SUPPLIER 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 get the remaining equipment at the risk and cost of the Supplier, in the event of his failing to complete the Supply within the stipulated time or in the even progress of Supplier'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 delivery time for completion of the Supplies as per provision provided further that the Supplier shall constantly use his best endeavour to the satisfaction of the Engineer-in-Charge to proceed with the Supplies. Nothing herein shall prejudice the rights of the Supplier under clause herein above.

(iv) The Supplier 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.

6.00 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.

7.00 REVISION / CHANGES / QUANTITY VARIATION

(i) Owner may make in writing any revisions or changes in the purchase order, including additions or deletions from the quantities ordered in the specifications or drawings. The Supplier shall carry out such

revision / changes and be bound by the same terms and conditions to the extent applicable, though the said revisions/ changes were not incorporated in the initial order.

(ii) Owner reserves the right to increase or decrease the tendered quantity to any extent or replace specification, drawing, design of any or every item or delete them out at any stage of the work. The Supplier's claim for compensation or damages on account of this shall not be entertained. Such deviation shall be adjusted at the rates contained in the order/ contract or by issuing variation order(s) at the prevailing market rates, if the rates are not available in the order/ contract

8.00 SUB-LETTING OF WORK

The Supplier shall not sublet or assign this order/ contract or any part thereof without the written permission of the Owner. In the event of the Supplier's sub-letting or assigning this order/ contract or any part thereof without such permission the Owner shall be entitled to cancel the order/ contract and to purchase the equipment / material elsewhere on the Supplier's account and risk and the Supplier shall be liable for any loss or damage which the Owner may sustain in consequence of or arising out of such purchase

9.00 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.

10.00 IMPLEMENTATION OF APPRENTICES ACT 1964

Supplier 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. Supplier shall also be liable for any pecuniary liability arising on account of any violation by him of the provision of the Act.

11.00 INSURANCE

Supplier shall at his own expense carry out and maintain insurance with reputable companies to the satisfaction of the Owner as per statutory requirement.

Contractor shall at his own expense carry out and maintain insurance with reputa¬ble 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 con¬tract, 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 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.

12.00 NOTIFICATION OF DELIVERY OR DESPATCH

Notification of delivery / dispatch on the Owner’s standard dispatch advice in regard to each and every consignment shall be made to the consignee and to the Owner immediately upon dispatch or delivery. The Supplier shall further supply to the Owner a priced invoice in quadruplicate and packing account to the consignee of all equipment / material delivered / dispatched. All packages, containers, bundles and loose materials forming part of each and every consignment shall be described fully in the packing account and full details of contents of

packages and quantity of materials shall be given to enable the consignee to check the stores on arrival at destination

The Supplier shall not sublet or assign this order/ contract or any part thereof without the written permission of the Owner. In the event of the Supplier's sub-letting or assigning this order/ contract or any part thereof without such permission the Owner shall be entitled to cancel the order/ contract and to purchase the equipment / material elsewhere on the Supplier's account and risk and the Supplier shall be liable for any loss or damage which the Owner may sustain in consequence of or arising out of such purchase.

13.00 PERFORMANCE GUARANTEE & WARRANTY

(i) Performance Guarantee:

a) The supplier 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 supplier 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 supplier 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 12 (twelve) calendar months after final acceptance of the work by the Owner.

(ii) Warranty:

The Supplier 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 supplier will provide similar warranty on the parts, components, fittings, accessories etc. repaired and/or replaced.

14.00 ARBITRATION

Any dispute or difference arising under this Contract shall be referred for adjudication at Kolkata to a sole arbitrator to be appointed by the Chairman & Managing Director, Balmer Lawrie & Co. 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.

15.00 INSPECTION & TESTING

(i) The material, design and workmanship shall satisfy the relevant Indian & international 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 Supplier.

(ii) The owner reserve the right to inspect the Equipment at Tenderer's works by them or through a third party nominated by the Owner. Tenderer will provide all assistance to Owner's inspector in carrying out such inspection at Tenderer's works free of any charges.

16.00 LOCATION OF SITE

The Location of site is at Visakhapatnam near Muladaga 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.

17.00 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 Owner / Engineer-in-Charge to the same and such items of work shall be treated as extra only with the prior approval of Engineer-in-Charge in writing. Contractor shall submit a quotation along with the rate analysis for approval of 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.

18.00 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.

ATTACHMENT – I

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 validly 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 - II

PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY DEPOSIT

(ON NON-JUDICIAL PAPER OF APPROPRIATE VALUE)

To

Visakhapatnam Port Logistics Park Limited
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 LIMITED, 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 LIMITED……(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 Supplier) (hereinafter referred to as "the Supplier" which term or expression wherever the context so requires shall mean and include the partner or partners of the Supplier 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 Supplier 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 Supplier for (set out purpose of the job).

AND WHEREAS under the terms of the said Order the Supplier 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 Supplier 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 Supplier 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 Supplier 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 Supplier, we …….. (set out the full name of the Bank) the Bankers of the Supplier 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 Supplier 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 Supplier 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 Supplier.

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 Supplier) (hereinafter referred to as "the Supplier") 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 Supplier.

The conditions of the said Tender, inter alia, requires that the Supplier 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 Supplier) 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 Supplier) 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 Supplier and/or to vary any of the Terms and Conditions of your Contract with the said Messrs/Mr. …… (set out full name of the Supplier), or to extend time of performance by Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by you against Supplier 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 Supplier 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 Suppliers), 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 SIMILAR SUPPLIES

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 Supplier	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 OF SUPPLIES

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

EXIHIBIT-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:

Contactor 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

	Question	Response		Evidence Required at bidding Stage	Weightage if complied
		Yes	No		
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
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 Note: this must include the data of any contractors working for your organization.	**Current Year**	**Current Year -1**	**Current Year - 2**	**Period Average (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.

TECHNICAL SPECIFICATION

FOR

HIGH MAST LIGHTING TOWER

CONTENTS

1.0.0 SCOPE

This specification defines the requirements for design, fabrication, testing at manufacturer's works, supply, installation at site, testing and commissioning of high mast lighting system, including supply and installation of associated cables and materials, design of civil and structural foundation and supply of all related materials excluding civil foundation work.

(a) Scope of supply

1.1.1 Lighting mast of with all accessories & fittings: 30M height -12 (Twelve) nos & 12 mtr Height-1(One) no.

1.1.2 Each Lighting mast of 30M height (minimum) suitable for wind velocity **250** Km/hr shall comprise of but not limited to the following:

a) Lantern Carriage : 1 No.
b) Raising and lowering mechanism with power Tool & Stainless Steel Wire Ropes : 1 Set
c) Lightening arrester : 1 No.
d) Aviation obstruction light : 1 No.
e) Luminaries-2X 400 W MH : 4-12 Nos. (BAJAJ BARNF 24 or approved equivalent) (Refer enclosed Lighting Layout)
f) Feeder Pillar Box with all switchgears : 1 No.
g) Double-Earthing system
h) Trailing cable (Mast base to DB at lantern carriage, 1 TPN circuits)
i) Incoming power cables (separate for lighting & motor from feeder pillar box to mast base.
j) All Fittings, supports, brackets, anchors, clamps, JB's etc. as required for successful execution of the job
k) All materials required for E&C of Lighting Masts (**excluding civil foundation work for mast**).

1.1.3 Data sheet, Drawings, Instruction manual, Test reports and Technical leaflets on each piece of equipment/device.

1.1.4 List of recommended spares for double drum winch and other equipment/devices, special tools-tackles, if any.

1.2.0 Scope of services

a) Services of all skilled/ unskilled/ supervisory workforce, erection tools-tackles, testing equipment, implements, supplies, consumables, hardware etc. as required for complete Installation (excluding Civil foundation), Storage, Handling, Erection, Testing, Commissioning and putting into successful commercial operation of the high mast illumination system and efficient execution of the job.
b) Receiving, Loading, Unloading and Transportation of all materials to work site.
c) Unpacking, inspection, preparation & submission of short supplied/damage items.
d) Arranging to repair/ replacement of damaged items and /or re-order of short supply item, if any.
e) Earth excavation, cable laying etc.
f) Assembly of loose accessories, complete erection of high-mast, fixing of luminaries, connection of cables & wirings with glands/ sockets/ tags/ marking ferrules, earthing of equipment/ fitting/ structure etc.

2.0 CODES AND STANDARDS

2.1 The equipment shall comply with the requirements of latest revision of following standards issued by BIS (Bureau of Indian Standards), unless otherwise specified.

IS-325 Three phase induction motors
IS-1554 PVC insulated (Heavy duty) electrical cables
IS-2309 Code of practice for protection of buildings and allied structures against lightning
IS-3043 Code of practice of earthing
IS-3618 Phosphate treatment of iron and steel for protection against corrosion
IS-4237 General requirement of switchgear & control gear for voltage not exceeding 1100v
IS-4691 Degree of protection provided by enclosure of rotating machines
IS-6005 Code of practice of phosphating of iron and steel
IS-9968 Elastomer insulated cables (Part-1) for working voltage unto and including 1100v
IS-13947 Low voltage switchgear and control gear: General rules
IS - 875 (Part III) 1987 Code and practice for design loads for structures
BSEN 10025/DIN 17100 Special Grade steel for mast
BS - 5135/IS 10178 Welding
BS.ISO 1461/IS 4759 Galvanizing
IS2062 Hot Rolled MS Plate for base plate
TR No. 7 1996 of ILE, UK. Specifications for masts and foundations

2.2 In case of imported equipment standards of the country of origin shall be applicable, if these standards are equivalent or stringent than the applicable Indian standards.

2.3 Electrical installation should meet the requirements of Indian Electricity Rules as amended up-to-date and relevant IS Code of practice. In addition, other rules and regulations applicable to the work might be followed. In case of any discrepancy, more restrictive rules shall be binding.

2.4 Equipment and material confirming to any other standards, which ensure equal or better quality, may be accepted. In such case copies of the English version of the standard adopted shall be submitted along-with the bid.

2.5 In case of any contradiction between various referred standards/specifications/data sheet and statutory regulations the following order of priority shall govern:

a. Statutory regulations
b. Project data sheets
c. Job specification
d. This specification
e. Codes and standards

3.0 Design Criteria

The lighting mast shall be of continuously tapered polygonal cross section hot dip galvanized fabricated from special steel confirming to IS. The mast shall be of height 30 meter (minimum) with lantern carriage to enable raising and lowering for ease of maintenance, including the dead frame, double drum winch, continuous stainless steel wire rope, In built power supply tool, luminaries, suitable aviation

warning light, lightning protection electrode, Necessary cables and wiring accessories etc as required to complete the work in totally.

The mast shall be delivered only in three sections and shall be joined together by slip stress fit method at site. No site welding or bolting joints shall be done on the mast. The minimum overlap distance shall be 1. 5 times the diameter at penetration.

Lantern carriage shall be fabricated suitably and hot dip galvanized for fixing and holding flood light fixtures and their control gear boxes, Lantern carriage shall be provision for connecting 12 nos 2 x 400 W MH flood light fixtures.

Junction box shall be weather proof confirming to IP:55 protection class made of cast aluminium and mounted on the carriage to facilitate interconnection of light luminaries.

4.0 SITE CONDITIONS & ELECTRICAL SUPPLY PARTICULARS

4.1	Ambient Temperature	:	Maximum 45ºC, Minimum 10ºC
4.2	Relative Humidity	:	Around 60% at maximum temperature
4.3	Altitude	:	Around 1000 M above MSL.
4.4	Design Wind Speed	:	250 KMPH
4.5	System Voltage (Normal)	:	**415V**
4.6	No. of Phases	:	3
4.7	Frequency	:	50 c/s
4.8	Fault level	:	**50 KA at 415V**
4.9	Neutral Earthing	:	Solidly earthed
4.10	Auxiliary supply	:	24 V D.C. supply for D.G Set starting Motor.

5.0 EQUIPMENT SPECIFICATIONS

The high mast and other equipment and materials shall be of the best quality and shall conform to the specifications given hereunder.

5.0.1 Details of High Mast System :

a)	Height of mast	: 30 Mtr.
b)	No. of Sections	: Three sections (single section 12 mtr and 2 sections for 16 mtr and 20 mtr)
c)	Material construction	: S 355 grade as per BS-EN10 025
d)	Cross section of Mast	: 20 sided polygon.

e)	Base dia. and top diameter (A/F) diameter	: Top diameter 150 mm(minimum) & Bottom 630 mm (min)
f)	Plate Thickness	: **Top : 5 mm, Middle : 6 mm, Bottom : 8 mm.**
g)	Type of joints	: Stress fit at site
h)	Length of overlap	: Min overlap shall be 1.5 times the dia at penetration
i)	Provision for cable termination	: MCB Isolator
j)	Diameter of base plate	: 840 mm (minimum)
k)	Thickness of base plate	: 40 mm (minimum)
l)	Lightning protection finial	: G.I single spike of length 1200 mm
m)	Size of Opening & door at base	: 1200 X 350 mm (minimum)
n)	Lighting protection finial	: G.I single spike of length 1200 mm
o)	Number of foundation bolts	: 12nos or 16 nos (per mast) as per design
p)	PCD of foundation bolts	: 750 mm (min)
q)	Type / diameter / length of foundation bolts	: TS 600 / 30 mm dia / 850 mm long (min)

5.0.2 Details of Trailing Cable

a)	Conductor	: Copper 5 core, 6 sq mm
b)	Insulation	: EPR insulated PCP sheathed
c)	No. of circuits per mast	: One

5.0.3 Details of Winch / Power Tool

a)	Type / SWL of winch	: Double drum, double gear, SWL 750 Kg
b)	Method of operation	: Motorized, RPM 900
c)	Motor capacity	: 2 HP (min)
d)	Torque limitor	: With mechanical tripping facility

5.0.4 Details of Stainless Steel Wire Rope

a)	Grade / construction	: AISI 316, 7/19 construction
b)	Number of ropes	: Two continuous
c)	Diameter (mm)	: 6 mm
d)	Braking load capacity	: 2350 kg x 2

5.0.5 Details of Luminaires Carriage

a) Material of construction	: 50 NB ERW Class B - M. S. Pipe
b) Diameter of carriage ring (mm)	: 710 mm (ID)
c) Construction	: 12 Arm, Welded, 2 sections
d) Load carrying capacity	: 12 Luminaries

SPECIFIC DETAILS APPLICABLE FOR 12 MTR HIGH MAST IS PROVIDED BELOW.

a)	Height of mast	: 12 Mtr.
b)	No. of Sections	: Single sections
c)	Plate Thickness	**: 4 mm**
d)	Cross section of Mast	: 12/16 or 20 sided polygon.
e)	Base dia. and top diameter (A/F)	: Top diameter 100 mm(min) & Bottom diameter 360 mm (min)
f)	Diameter of base plate	: 520 mm (minimum)
g)	Thickness of base plate	: 25 mm (minimum)
h)	Size of Door Opening	: 1050 X 225 mm (minimum)
i)	Conductor	: Copper 5 core, 4 sq mm
j)	Type / SWL of winch	: Double drum, double gear, SWL 350 Kg
k)	Motor capacity of winch	: 1 HP (min)

l) Details of Stainless Steel Wire Rope

i)	Grade / construction	: AISI 316, 7/19 construction
ii)	Number of ropes	: Two continuous
iii)	Diameter (mm)	: 5 mm minimum
iv)	Braking load capacity	: 1450 kg x 2

m) Details of Luminaires Carriage

i)	Material of construction	: 40 NB (minimum) ERW Class B - M. S. Pipe
ii)	Diameter of carriage ring (mm)	: 450 mm (ID)
iii)	Construction	: 6 Arm, Welded, 2 sections
iv)	Load carrying capacity	: 6 Luminaries

n) Number of foundation bolts : 6 nos or 8 nos (per mast) as per design

o) PCD of foundation bolts : 445 mm (min)

p) Type / diameter / length of foundation bolts : TS 600 / 24 mm dia / 850 mm long (min)

Except the above, other general specifications as mentioned throughout the technical specification is applicable for 12 mtr High Mast also.

5.1.0 High Mast Tower

Structure

The High mast shall be of continuously tapered, polygonal cross section, at least 20 sided, presenting a good and pleasing appearance and shall be based on proven In-Tension design conforming to the standards referred to above, to give an assured performance, and reliable service. The structure shall be suitable for **250 KMPH,** wind loading as per IS 875, part-3 (1987).

Construction

The mast shall be fabricated from special steel plates, conforming to BS-EN10025/DIN 17100 or equivalent (The mast shaft shall be made with best steel in compliance with BS EN 10025 FE 510), cut and folded to form a polygonal section as stated at 6.01 above and shall be telescopically jointed and welded. The welding shall be in accordance with BS.5135/AWS. The procedural welds geometry and the workmanship shall be exhaustively tested on the completed welds. The Mast shall be delivered in multiple sections of effective length 10 meters i.e. in 3 sections. No site welding or bolting joints shall be done on the mast. The minimum overlap distance shall be 1.5 times the diameter at penetration. The dimensions of the mast shall be decided based on proper design and design calculations shall be submitted to the owner for verification

The mast shall be provided with fully penetrated flange, which shall be free from any lamination or incursion. The welded connection of the base flange shall be fully developed to the strength of the entire section. The base flange shall be provided with supplementary gussets between the bolt holes to ensure elimination of helical stress concentration. The Mast shall be hot dip galvanized internally and externally having a uniform thickness of minimum 85 microns.

Door Opening

An adequate door opening shall be provided at the base of the mast and the opening shall be such that it permits clear access to equipment like winches, cables, plug and socket, etc. and also facilitate easy removal of the winch. The door opening shall be complete with a fitting, heavy duty, weatherproof door provided with a heavy-duty double internal lock with special paddle key. The door opening shall be carefully designed and reinforced with welded steel section, so that the mast section at the base shall be unaffected and undue buckling of the cut portion is prevented. The distance from the mast flange plate to the bottom of the door opening shall be a minimum of twice the width of the door opening.

Dynamic Loading for the Mast

The mast structure shall be suitable to sustain an assumed maximum reaction arising from a wind speed as per IS 875 (three second gust), and shall be measured at a height of 10 meters above ground level. The design life of mast shall be minimum 25 years.

5.2.0 Lantern Carriage

Fabrication

A fabricated Lantern Carriage shall be provided for fixing and holding the flood light fittings and control gear boxes. The Lantern Carriage shall be of special design and shall be of steel tube construction, the

tubes acting as conduits for wires, with holes fully protected by grommets. The Lantern Carriage shall be so designed and fabricated to hold the required number of flood light fittings and the control gear boxes, and also have a perfect self-balance and shall have proper arrangement to avoid swing. The inner lining of the carriage shall be provided with protective PVC arrangement, so that no damage is caused to the surface of the mast during the raising and lowering operation of the carriage. The entire Lantern Carriage shall be hot dip galvanized after fabrication. Lantern Carriage/Accessories shall be made with best steel in compliance with BSEN 10025 FE430A or better.

Junction Box

Weather proof junction box of IP 55, made of Cast Aluminium shall be provided on the Carriage Assembly as required, from which the inter-connections to the designed number of the flood light luminaries and associated control gears fixed on the carriage, shall be made.

5.3.0 Raising and lowering mechanism

For the installation and maintenance of the luminaries and lamps, it will be necessary to lower and raise the Lantern Carriage Assembly. To enable this, a suitable Winch Arrangement shall be provided, with the winch fixed at the base of the mast and the specially designed head frame assembly at the top.

Winch

The winch shall be of completely self-sustaining type, without the need for brake shoes, springs or clutches. Each driving spindle of the winch shall be positively locked when not in use by gravity activated PAWLS. Individual drum also should be operated for fine adjustment of lantern carriage. The capacity, operating speed, safe working load, recommended lubrication and serial number of the winch shall be clearly marked on each winch. The average rate of raising and lowering shall be not less than 3 meters per minute. Initial supply of oil for winch shall be given by the party.

The minimum working load shall be not less than 750 kg. The winch shall be self-lubricating type by means of an oil bath and the oil shall be readily available grades of reputed producers. The winch drums shall be grooved to ensure perfect seat for stable and tidy rope lay, with no chances of rope slippage. The rope termination in the winch shall be such that distortion or twisting is eliminated and at least 5 to 6 turns of rope remains on the drum even when the lantern carriage is fully lowered and rested on the rest pads. It should be possible to operate the winch manually by a suitable handle by an integral power tool. It shall be possible to remove the double drum after dismantling, through the door opening provided at the base of the mast. Also, a winch gear box with double gear arrangement for simultaneous and reversible operation of the double drum winch shall be provided as part of the contract. The winch shall be type tested in presence of a reputed Institution and the test certificates shall be furnished before supply of materials. A test certificate shall be furnished by the Contractor from the original equipment manufacturer, for each winch in support of the maximum load operated by the winch.

Head Frame

The head frame, which is to be designed as a capping unit of the mast, shall be of welded steel construction, galvanized both internally and externally after assembly. The top pulley shall be of appropriate diameter, large enough to accommodate the stainless steel wire ropes and the multi-core electric cable. The pulley block shall be made of non-corrodible material, and shall be of die cast Alluminium Alloy (LM-6). Pulleys made of synthetic materials such as Plastic or PVC are not acceptable. Self-lubricating bearings and stainless steel shaft shall be provided to facilitate smooth and maintenance free operation for a long period. The pulley assembly shall be fully protected by a canopy galvanized internally and externally.

Close fitting guides and sleeves shall be provided to ensure that the ropes and cables do not dislodged from their respective positions in the grooves. The head frame shall be provided with guides and stops with PVC buffer for docking the lantern carriage.

Stainless Steel Wire Ropes

The suspension system shall essentially be without any intermediate joint and shall consist of only non-corrodible stainless steel of AISI 316 or better grade. The stainless steel wire ropes shall be of 7/19 construction, the central core being of the same material. The overall diameter of the rope shall not be less than 6 mm. The breaking load of each rope shall not be less than 1800 kg. giving a factor of safety of over 5 for the system at full load as per the TR-7 as per standards. The end constructions of ropes to the winch drum shall be fitted with talurit.

The thimbles shall be secured on ropes by compression splices. Three continuous lengths of stainless steel wire ropes shall be used in the system and no intermediate joints are acceptable in view of the required safety. No intermediate joints/terminations, either bolted or else, shall be provided on the wire ropes between winch and lantern carriage.

Power Tool for the Winch

A suitable, high-powered, electrically driven, internally mounted power tool, with manual over ride shall be provided to (operate the winch) raising and lowering of the lantern carriage for maintenance purposes. The speed of the power tool shall be to suit the system. The power tool shall be single speed, provided with a motor of the required rating. The power tool mounting shall be so designed that it will be not only self-supporting but also aligns the power tool perfectly with respect to the winch spindle during the operations. Also, a handle for the manual operation of the winches in case of problems with the electrically operated tool shall be provided and shall incorporate a torque limiting device. The winch drive unit shall be squirrel cage reversible induction motor with following characteristic: 415V, 3 phase, 50 HZ, Class F insulation, Weather resistant, IP 55 Protections,

There shall be a separate torque-limiting device to protect the wire ropes from over stretching. It shall be mechanical with suitable load adjusting device. The torque limiter shall trip the load when it exceeds the adjusted limits. There shall be suitable provision for warning the operator once the load is tripped off. The torque limiter is a requirement as per the relevant standards in view of the over all safety of the system. Each mast shall have its own power tool motor.

5.04 Electrical System, Cable and Cable Connections

A suitable terminal box shall be provided as part of the contract at the base compartment of the high mast for terminating the incoming cable. The electrical connections from the bottom to the top shall be made by special trailing cables (1 Circuit). The cable shall be EPR insulated and PCP sheathed to get flexibility and endurance. The min. size of cable shall be 5 core 6 sq mm copper. At the top there shall be weather proof junction box to terminate the trailing cable. Connections from the top junction box to the individual luminaries shall be made by using 3 core 2.5 sq. mm flexible PVC cables of reputed make. The system shall have in-built facilities for testing the luminaries while in lowered position. Also, suitable provision shall be made at the base compartment of the mast to facilitate the operation of internally mounted, electrically operated power tool for raising and lowering of the lantern carriage assembly. The trailing cables of the lantern carriage rings shall be terminated by means of suitably designed, metal clad, multipin plug and socket provided in the base compartment to enable easy disconnection when required.

5.05 Lightning Finial

One number heavy duty hot dip galvanized lighting finial shall be provided for each mast. The lightning finial shall be minimum 1.2 M in length and shall be provided at the centre of the head frame. It shall be bolted solidly to the head frame to get a direct conducting path to the earth through the mast. Two nos. earth electrodes shall be made at base of mast for earthing the mast in accordance with relevant IS.

5.06 Aviation Obstruction Lights

Suitable Twin Dome Aviation Obstruction Lights of reliable design and reputed manufacturer shall be provided on top of each mast.

5.07 Earthing System

Suitable earth terminal using 12 mm diameter stainless steel bolts shall be provided at a convenient location on the base of the Mast, for lightning and electrical earthing of the mast.

The mast shall be provided with lightning & Earthing protection comprising of an Earthing system as follows: 50mm dia, 3 meters Long G.I Pipe with CC enclosures and cover – 2 Nos.

2 Nos. x 50 mm X 6mm G.I straps for interconnection of earthing stud at mast to earth electrode at earth pit.

5.08 Feeder Pillar Box: CONTROL PANEL (FEEDER PILLAR BOX)

Each mast shall be provided with a feeder pillar fabricated out of 14 SWG CRCA sheet and finished with two coats of red oxide primer and gray enamel paint of shade 631 of IS-5. The feeder pillar shall comprise of incoming MCB Isolator, Copper wiring, suitable timer, contactor to switch on the luminaries at a preset time. There shall be suitable control arrangement to change the direction of rotation of the power tool - motor. Feeder pillar shall be mounted on suitable foundation near to the mast.

5.09 LUMINARIES: 8- 12 Nos. for each 30 mtr High Mast as per Lighting Layout, 4 nos for 12 mtr High Mast

Luminaries shall be specially designed with suitable lamp housing and control gears for 2 x 400 W metal halide, Non-integral type, complete with control gear box with all accessories. The Ballast shall be heavy duty, best quality, copper ballast and degree of protection of the light fitting & CG box shall be IP65.

The luminaries shall be tested as per Indian standards and test reports shall be submitted along with the materials. The luminaries shall be suitable for installation on high masts.

6.0 INSPECTION, TESTING AND ACCEPTANCE AT WORKS

During fabrication, the High mast lighting system shall be subject to inspection by Owner, or by an agency authorized by the Owner, to assess the progress of work, as well as to ascertain that only proven raw material is used. The manufacturer shall furnish all necessary information /data concerning regarding the date of testing to enable him or his representative to witness the tests

Factory Tests shall be carried out at the manufacturer's works under his care and expense. All routine tests as specified by the applicable standard codes shall be conducted. Type test certificates for the high mast In lighting system equipment used shall be furnished of a recognized testing organization.

The High Mast Lighting System shall be tested at factory before dispatch by Third Party Inspection Agency (TPIA). The TPIA test certificates shall be submitted to the owner in three copies for approval.

The materials shall be dispatched from works only after obtaining owners written approval on TPIA test

certificate.

All tests shall be conducted as per relevant applicable standards.

7.00 Erection, Testing, Commissioning

7.01 Civil/Structural Work of each Lighting Mast

The scope of work under this specification also includes design of civil foundations or providing recommendations for civil foundation design for high light mast works.

Design details along with drawing of foundation is required to be submitted to owner/VPLPL along with the offer.

Design and drawing shall be prepared on standard size sheets and submitted for approval prior to execution of works. In case of providing recommendations, final 'Good for Construction'/ 'Issued for Construction' drawings of foundation must be approved by the selected bidder.

Relevant pages of soil test report of the project site are attached along with this tender document for the notice of bidders.

However, the construction work of civil foundation of High Mast will be done by the owner as per bidder's design and drawing.

7.02 Erection of High Mast

Complete erection of high mast with suitable lifting T&P, Fitting, Fixing & connection of Luminaries, Erection of Feeder Pillar box over suitable prepared civil structure, laying of cables between Feeder pillar box and mast base through trench in the soil as per standards & practices, Glanding, socketing & Connection of all Cables with cable tags & marking ferrules as applicable, commissioning of the entire system and adjustments of tilts for luminaries, if required. Final painting of all un-painted metal surfaces. Verticality and straightness measurement shall be carried out and these should be within the limits as specified elsewhere in this specification.

7.03 Earthing

Each mast shall be provided with lightning & earthing protection through 2 (nos.) earth pit for each mast, comprising of an Earthing electrode of size 50 mm dia, 3 meters Long G.I Pipe with GI funnel with mesh enclosed in CC chamber of 400mm x 400mm x 400mm /Hume pipe ring with R.C.C. Slab cover duly providing staggered holes filling with salt and charcoal from the bottom of the pipe– 2 Nos. (as per relevant IS 732/1982 –Part-II). Laying and termination of 2 Nos. x 50mm X 6mm G.I strips for interconnection of earthing stud at mast & Feeder pillar box to earth electrode at earth pit. All metal work including luminaries, control gear units and luminaries carriage shall be bonded to the earth core of the luminaries supply cable. The earth continuity from luminaries carriage shall be via a single core of the multi-core cable.

7.04 FIELD TESTING AND COMMISSIONING

Supervision during installation, testing and commissioning shall be carried out by vendor's experienced and trained engineer/supervisor. Any defect pointed out by OWNER shall be rectified by vendor at no extra cost to the owner.

Before any part of the High mast system is energised, the pre-commissioning tests shall be carried out. This shall include and be not limited to the following :

a. Insulation resistance tests

b. Continuity test

c. Earth continuity check and measurement

d. Load current in all phases shall be measured in each mast

e. All safety interlock

f. Feeder pillar wiring schematics and functional requirements

All pre-commissioning checks and tests both for power distributions and lighting system shall be carried out by vendor in the presence of Engineer-in-charge of Owner.

After completion of job, vendor shall carry out the measurement of achieved illumination level in different areas and shall furnish test reports. The focusing angle of fixture shall be changed / adjusted where required.

After inspection and pre-commissioning tests are carried out, vendor shall obtain necessary statutory approval of the system from Central Electricity Authority or any other agency before energising the installation. All test results shall be recorded and submitted to owner in triplicate in bound volume as part of system documentation.

8.00 Documents – Drawings, Data & Manuals

Details of foundation, design calculations of foundations of High mast, catalogue of High mast and luminaries, credentials for past supply, E&C, performance certificate shall be provided by the party along with the offer. Offer without any of these documents will be liable for rejection.

LIST OF APPROVED MAKE

Sl. No.	Item Description	Approved Make
1.	High Mast Lighting System	Phillips / Bajaj / Transrail / Crompton Greaves / Surya Roshni
2.	Motors	Crompton Greaves/Kirloskar/ Siemens/ABB/ALSTOM
3.	MH Luminaries	Philips/ Bajaj/Surya Roshni/Transrail
4.	Cables	CCI/Gloster/Polycab/Havells/Finolex/Mescab/RR/RPG/ Incab/Nicco
5.	Aviation Lamp	Bajaj/Philips/Syska
6.	Cable Glands	Electromeg/Comet/Flexpro
7.	Cable Lugs	Dowel/Connectwell
8.	Terminal Blocks	Elmax/Connectwell
9.	Termination Kit	Raychem / M-seal
10.	Straight Thru. Jointing Kit	Raychem / M-seal
11.	Conduit Pipe	EGA / Clipsal / National / ELPRO
12.	TPIA	Llyods/ LRIS / CEIL / PDIL / BAXCOUNSEL / /TUV/SGS/Bureau Vertias.
13.	Double drum Winch	ISI marked with type test certificate.
14.	Stainless steel wire rope	Bharat wire ropes / Usha Martin/ SAFELIFT
15.	MCB	GE/ MDS/ L&T/Siemens

Besides the above make, equivalent approved make may also be used. However, prior approval shall be taken for other make not mentioned above.

For make and rating of any other major electrical item not mentioned above, contractor to take prior approval from Engineer-in-Charge before procurement of the same.

TENDER DRAWINGS

1. Drawing No. HCE_V.HUB-2017-03, REV 0, HIGH MAST & BOUNDARY WALL LIGHTING LAYOUT
2. Drawing No. HCE_V.HUB_06. Rev 0, HIGH MAST SUPERSTRUCTURE LAYOUT

RECOMMEDATIONS OF GEO TECHNICAL INVESTIGATIONS

Total 9 pages along with Bore Hole Plans

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 Heavenue,
Dabagardens Main Road, Visakhapatnam - 530020

TENDER DOCUMENT

for
Supply, Installation, Testing & Commissioning of High Mast Lighting Tower

for
Multi-Modal Logistics Hub at Visakhapatnam, Andhra Pradesh

Tender No. MMLH /HIGHMAST/ PT / 21

Date: 19/07/2017

Due Date: 10/08/2017, 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 Documents.

2.0 The work shall be carried out as per approved drawings, Specific ations 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.

5.0 The Quantities of the various items mentioned in the Schedule of Items are approximate and may vary or may be deleted altogether. The Supplier, 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.

6.0 Rates shall be quoted both in figures and in words in clear legible writing. No over writing is allowed. All scoring and cancellations should be countersigned by the Tenderer. In case of illegibility, the rates written in word will be considered final. All entries shall be in English language.

7.0 Engineer's decision shall be final and binding on the Supplier 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 & Commissioning of High Mast Towers for Multi Modal Logistics Hub at Visakhapatnam, Andhra Pradesh.

Tender No. MMLH /HIGHMAST/PT /21 dated 19/07/2017; Due on 10/08/2017

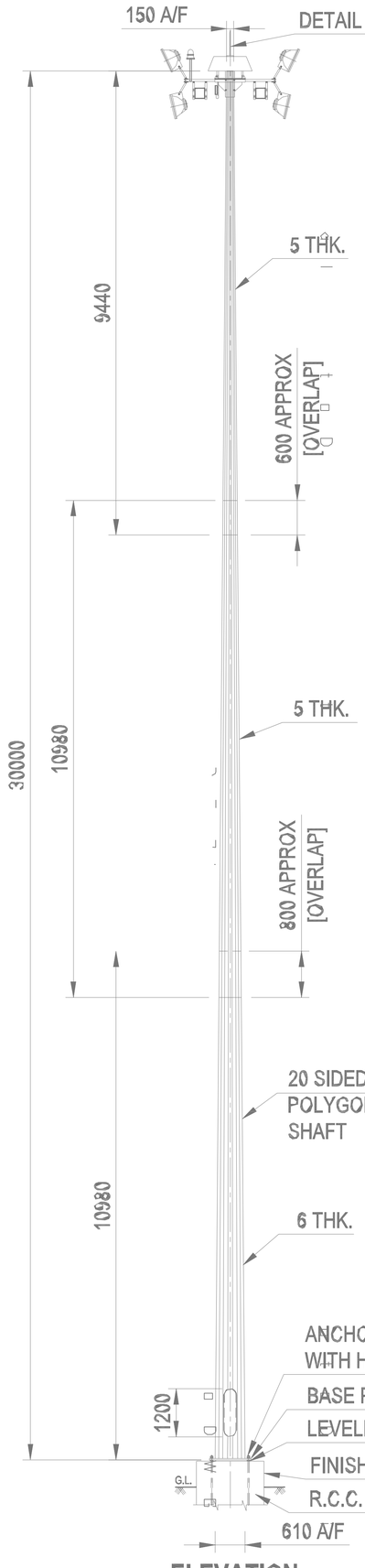
Sl no.	Item	Unit	Qty	PART - A -SUPPLY										PART-B-ERECTION									Supply (A)+ Erection (B)
				Basic Unit Supply Rate (Rs.)	Basic Amount (Rs.)	SGST Rate in %	SGST Amount (Rs)	CGST Rate in %	CGST Amount (Rs)	IGST Rate in %	IGST Amount (Rs)	Loading, unloading, Transportation & Transit Insurance Amount (Rs.)	Total Supply Amount (Rs)	Basic Unit Erection Rate (Rs.)	Basic Amount (Rs.)	SGST Rate in %	SGST Amount (Rs)	CGST Rate in %	CGST Amount (Rs)	IGST Rate in %	IGST Amount (Rs)	Total Erection Amount (Rs)	
			Q	A	B=Q X A	C1 in %	C=B X C1	D1 in %	D=B X D1	E1 in %	E= B X E1	F	G=B+C+D+E+F	G	H=Q X G	I1 in %	I= H X I1	J1 in %	J= H X J1	K1 in %	K= H X K1	L=H+I+J+K	G+L
A	**30 MTR HIGH MAST**																						
1	Supply of 30 M High Mast Tower with it's accessories as per the technical specification	Nos.	12																				
3	Supply of Foundation bolts along with nuts, washers, anchor plates and templates complete in all respect for 30 M High Masts	Set	12																				
4	Supply of non-integral floodlight luminaries type ((BAJAJ BARNF 24, 2X400W Line Range MH or equivalent model from other make as per ' List of Approved Make') and its control gear bo)xes along with suitable claims for the above High Mast Towers as per Lighting Layout enclosed with the Tender (quantity varies from 8-12 nos for each tower) for 30 M High Masts.	Nos.	119																				
5	Supply of twin dome aviation obstruction lights of type BJAOL 2 with two nos Jumbo LED lamps (1 fitting per mast is necessary if no taller structures are in near vicinity) for 30 M High Masts.	Nos.	12																				
6	Supply of control panel housing 63 A TPN MCB incomer, single dial timer contactor circuit for the automatic control of luminaries, outgoing terminals and control circuit for the power tool motor for 30 M High Masts.	Nos.	12																				
B	**12 MTR HIGH MAST**																						
7	Supply of 12 M High Mast Tower with it's accessories as per the technical specification	Nos.	1																				
8	Supply of Foundation bolts along with nuts, washers, anchor plates and templates complete in all respect for 12 M High Mast	Set	1																				
9	Supply of non-integral floodlight luminaries type (BAJAJ BARNF 24, 2 X 400 W Line Range MH or equivalent model from other make as per 'List of Approved Make') and its control gear bo)xes along with suitable claims for the above High Mast Towers as per Lighting Layout enclosed with the Tender for 12 M High Mast.	Nos.	4																				
10	Supply of twin dome aviation obstruction lights of type BJAOL 2 with two nos Jumbo LED lamps (1 fitting per mast is necessary if no taller structures are in near vicinity) for 12 M High Mast.	Nos.	1																				
11	Supply of control panel housing 63 A TPN MCB incomer, single dial timer contactor circuit for the automatic control of luminaries, outgoing terminals and control circuit for the power tool motor for 12 M High Mast.	Nos.	1																				
C	**THIRD PARTY INSPECTION CHARGES & EARTHING**																						
12	Third Party inspection agency (TPIA) charges of the High Masts at Factory for each High Mast Towers	Nos.	13																				
13	Earth Pit Construction : GI pipe earthing with 40mm dia, 3.0 m long pipe as per relevant IS with all supply of materials and labour charges complete. The connections to be made with 50X6 mm2 GI strip as per tender document / drawing-2 nos independent earthing for High Mast & Control Panel	Nos.	26																				
14	**Total of all items**																						
15	**Grand Total in words**																						

NOT TO BE QUOTED HERE

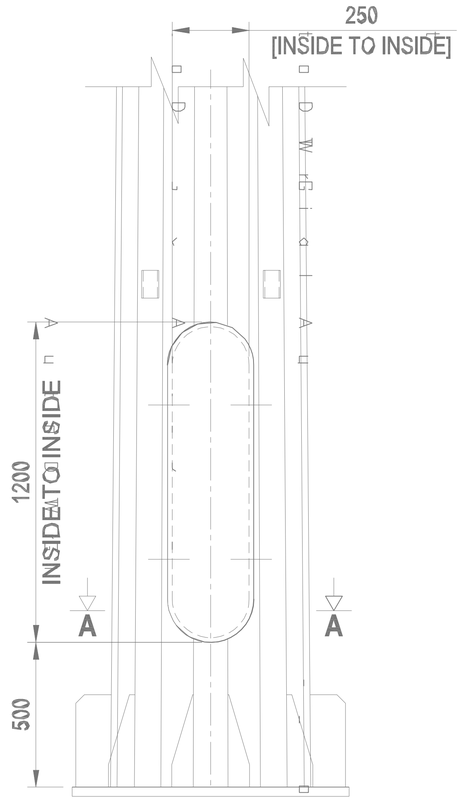
NOT TO BE QUOTED HERE

Note:

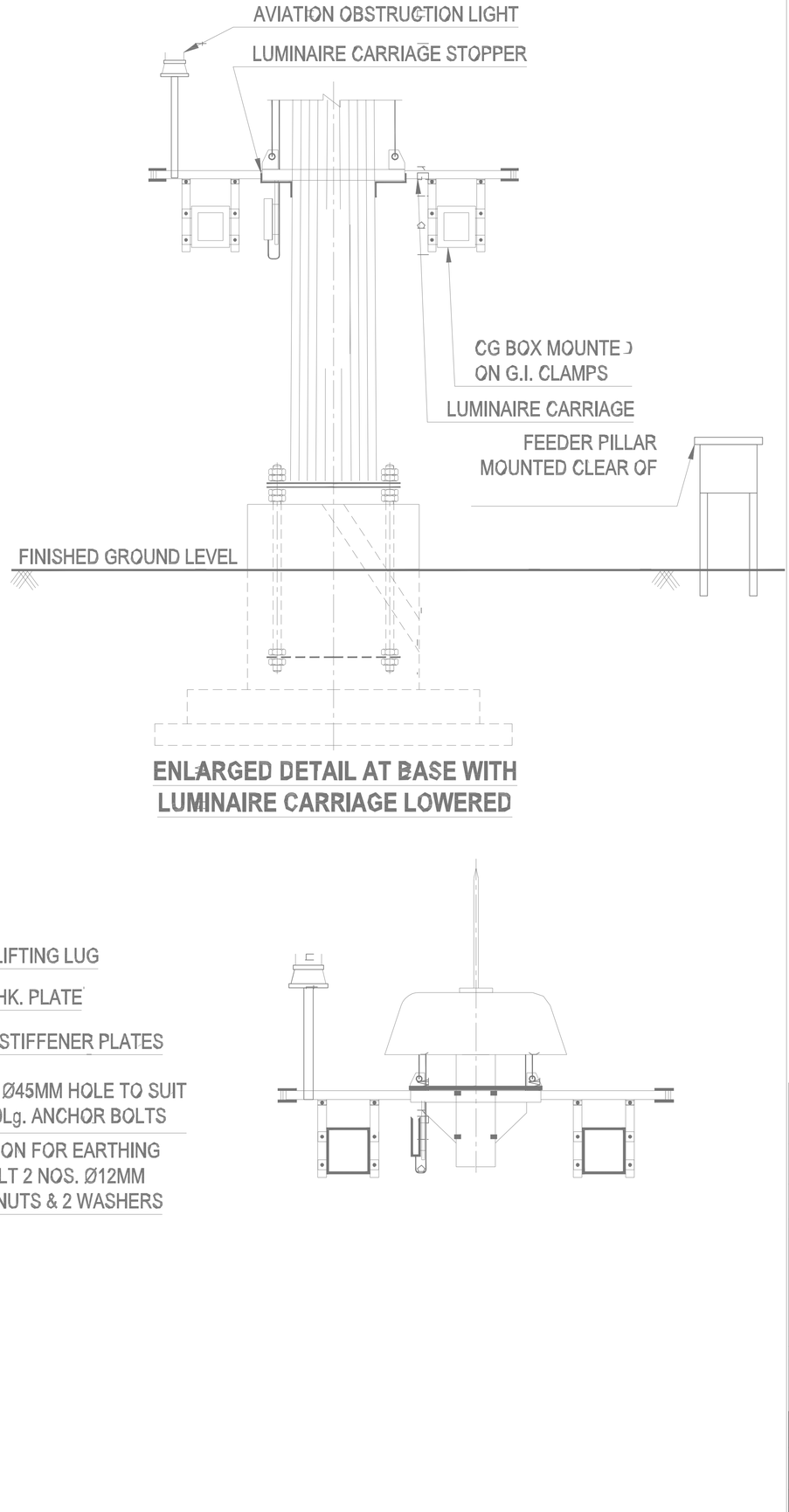
1) Basic Rate for Supply shall include packing & forwarding.
2) GST will applicable as IGST or CGST+SGST. The bidder must pass on the Input Tax Cedit to VPLPL.
3) Payment will be made based on actual executed quantity only.



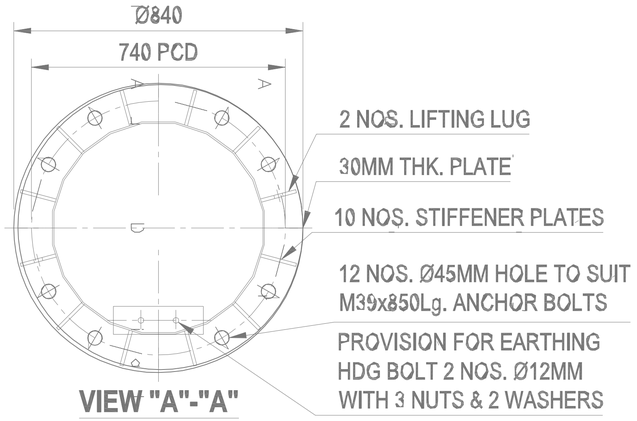
ELEVATION



DOOR DETAILS



ENLARGED DETAIL AT BASE WITH LUMINAIRE CARRIAGE LOWERED



VIEW "A"-"A"

NOTES :-

1. ALL DIMENSIONS ARE IN M.M.
2. DESIGN STANDARD I.L.E TECHNICAL REPORT NO. 7.
3. DESIGN CRITERIA :
   - 3.1.BASIC WIND SPEED - IS : 875 PART III : 1987
   - 3.2.DESIGN LIFE - 25 YEARS.
   - 3.3.TERRAIN CATEGORY - 2
   - 3.4.TOPOGRAPHY - FLAT
4. MATERIALS :
   - 4.1.SHAFT/GUSSETS : S355 AS PER BS EN 10025.
   - 4.2.FLANGE/DOOR STIFFENER : AS PER IS-2062.
   - 4.3.FOUNDATION BOLTS : T.S. 600 N/Sq.mm Y.S.-405 N/Sq.mm.
5. FINISHING : HOT DIP GALVANIZED TO BS EN ISO 1461.
6. THE TOLERANCE IN A/F DIMENSION ARE -0/+3mm.
7. THE A/F DIMENSIONS ARE OUTSIDE TO OUTSIDE.
8. THE DOOR SHALL BE VANDAL PROOF AND WEATHER PROTECTED.
9. THE MAST WILL HAVE PADLOCKING ARRANGEMENT IN THE CENTER AND 2 Nos ALLEN BOLT AT TOP AND BOTTOM.

TENDER PURPOSE DWG, FOR REFERENCE ONLY
SHALL BE READ IN CONJUCTION
WITH TECHNICAL SPECIFICATION OF TENDER

NOT TO SCALE

CLIENT :
VISAKHAPATNAM PORT LOGISTICS PARK LIMITED.
(A BALMER LAWRIE – VISAKHAPATNAM PORT TRUST JV)

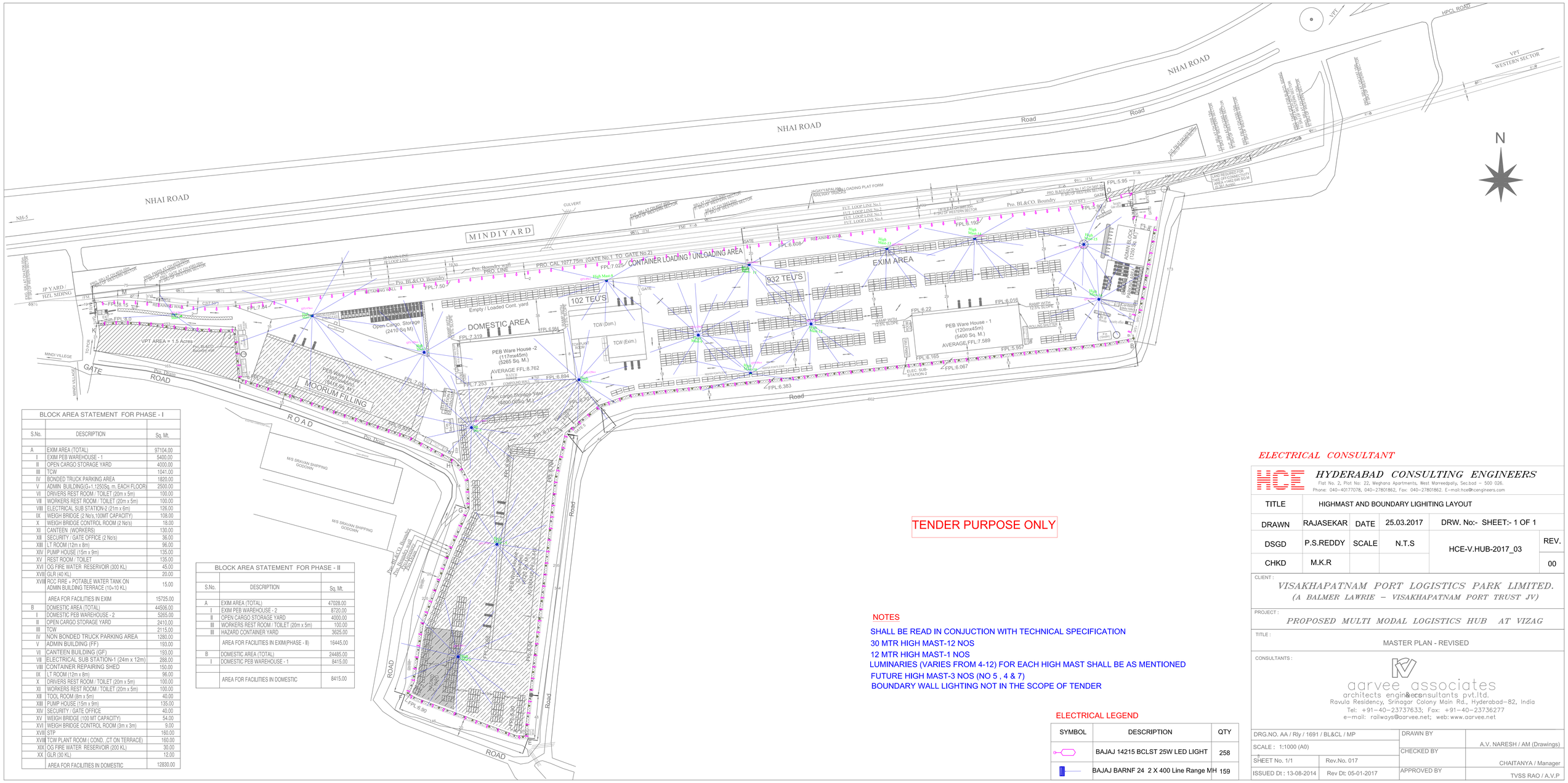
PROJECT :
PROPOSED MULTI MODAL LOGISTICS HUB AT VIZAG

TITLE : – HIGHMAST SUPER STRUCTURE LAYOUT

PROJECT MANAGEMENT CONSULTANTS :
aarvee associates
architects engineers & consultants pvt.ltd.
Ravula Residency, Srinagar Colony Main Rd., Hyderabad–82, India
Tel: +91–40–23737633; Fax: +91–40–23736277
e–mail: railways@aarvee.net; web: www.aarvee.net

ELECTRICAL CONSULTANTS
HCE HYDERABAD CONSULTING ENGINEERS
Flat No.2,MEGHANA APARTMENTS, MAIN ROAD, WEST MARREDPALLY, SECUNDERABAD. PHONE: 040 – 27801862/40177078

DRAWN	RAJASEKAR	DATE	25.04.2017	DRAWING NO:	REV.
DSGD	P.S.R	SCALE	NTS	HCE_V.HUB_06	00
CHKD	M.K.R	SIZE			



BLOCK AREA STATEMENT FOR PHASE - I		
S.No.	DESCRIPTION	Sq. Mt.
A	EXIM AREA (TOTAL)	97104.00
I	EXIM PEB WAREHOUSE - 1	5400.00
II	OPEN CARGO STORAGE YARD	4000.00
III	TCW	1041.00
IV	BONDED TRUCK PARKING AREA	1820.00
V	ADMIN BUILDING(G+1,1250Sq. m. EACH FLOOR)	2500.00
VI	DRIVERS REST ROOM / TOILET (20m x 5m)	100.00
VII	WORKERS REST ROOM / TOILET (20m x 5m)	100.00
VIII	ELECTRICAL SUB STATION-2 (21m x 6m)	126.00
IX	WEIGH BRIDGE (2 No's,100MT CAPACITY)	108.00
X	WEIGH BRIDGE CONTROL ROOM (2 No's)	18.00
XI	CANTEEN (WORKERS)	130.00
XII	SECURITY / GATE OFFICE (2 No's)	36.00
XIII	LT ROOM (12m x 8m)	96.00
XIV	PUMP HOUSE (15m x 9m)	135.00
XV	REST ROOM / TOILET	135.00
XVI	OG FIRE WATER RESERVOIR (300 KL)	45.00
XVII	GLR (40 KL)	20.00
XVIII	RCC FIRE + POTABLE WATER TANK ON ADMIN BUILDING TERRACE (10+10 KL)	15.00
	AREA FOR FACILITIES IN EXIM	15725.00
B	DOMESTIC AREA (TOTAL)	44505.00
I	DOMESTIC PEB WAREHOUSE - 2	5265.00
II	OPEN CARGO STORAGE YARD	2410.00
III	TCW	2115.00
IV	NON BONDED TRUCK PARKING AREA	1280.00
V	ADMIN BUILDING (FF)	193.00
VI	CANTEEN BUILDING (GF)	193.00
VII	ELECTRICAL SUB STATION-1 (24m x 12m)	288.00
VIII	CONTAINER REPAIRING SHED	150.00
IX	LT ROOM (12m x 8m)	96.00
X	DRIVERS REST ROOM / TOILET (20m x 5m)	100.00
XI	WORKERS REST ROOM / TOILET (20m x 5m)	100.00
XII	TOOL ROOM (8m x 5m)	40.00
XIII	PUMP HOUSE (15m x 9m)	135.00
XIV	SECURITY / GATE OFFICE	40.00
XV	WEIGH BRIDGE (100 MT CAPACITY)	54.00
XVI	WEIGH BRIDGE CONTROL ROOM (3m x 3m)	9.00
XVII	STP	160.00
XVIII	TCW PLANT ROOM (COND. ,CT ON TERRACE)	160.00
XIX	OG FIRE WATER RESERVOIR (200 KL)	30.00
XX	GLR (30 KL)	12.00
	AREA FOR FACILITIES IN DOMESTIC	12830.00

BLOCK AREA STATEMENT FOR PHASE - II		
S.No.	DESCRIPTION	Sq. Mt.
A	EXIM AREA (TOTAL)	47028.00
I	EXIM PEB WAREHOUSE - 2	8720.00
II	OPEN CARGO STORAGE YARD	4000.00
III	WORKERS REST ROOM / TOILET (20m x 5m)	100.00
III	HAZARD CONTAINER YARD	3625.00
	AREA FOR FACILITIES IN EXIM(PHASE - II)	16445.00
B	DOMESTIC AREA (TOTAL)	24485.00
I	DOMESTIC PEB WAREHOUSE - 1	8415.00
	AREA FOR FACILITIES IN DOMESTIC	8415.00

TENDER PURPOSE ONLY

NOTES

SHALL BE READ IN CONJUCTION WITH TECHNICAL SPECIFICATION
30 MTR HIGH MAST-12 NOS
12 MTR HIGH MAST-1 NOS
LUMINARIES (VARIES FROM 4-12) FOR EACH HIGH MAST SHALL BE AS MENTIONED
FUTURE HIGH MAST-3 NOS (NO 5 , 4 & 7)
BOUNDARY WALL LIGHTING NOT IN THE SCOPE OF TENDER

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	QTY
	BAJAJ 14215 BCLST 25W LED LIGHT	258
	BAJAJ BARNF 24 2 X 400 Line Range MH	159

ELECTRICAL CONSULTANT

HYDERABAD CONSULTING ENGINEERS
Flat No. 2, Plot No: 22, Meghana Apartments, West Marredpally, Sec:bad – 500 026.
Phone: 040-40177078, 040-27801862, Fax: 040-27801862. E-mail:hce@hcengineers.com

TITLE	HIGHMAST AND BOUNDARY LIGHITING LAYOUT				
DRAWN	RAJASEKAR	DATE	25.03.2017	DRW. No:- SHEET:- 1 OF 1	
DSGD	P.S.REDDY	SCALE	N.T.S	HCE-V.HUB-2017_03	REV.
CHKD	M.K.R				00

CLIENT :
VISAKHAPATNAM PORT LOGISTICS PARK LIMITED.
(A BALMER LAWRIE – VISAKHAPATNAM PORT TRUST JV)

PROJECT :
PROPOSED MULTI MODAL LOGISTICS HUB AT VIZAG

TITLE :
MASTER PLAN - REVISED

CONSULTANTS :
aarvee associates
architects engineers & consultants pvt.ltd.
Ravula Residency, Srinagar Colony Main Rd., Hyderabad–82, India
Tel: +91–40–23737633; Fax: +91–40–23736277
e–mail: railways@aarvee.net; web: www.aarvee.net

DRG.NO. AA / Rly / 1691 / BL&CL / MP		DRAWN BY	A.V. NARESH / AM (Drawings)
SCALE : 1:1000 (A0)		CHECKED BY	CHAITANYA / Manager
SHEET No. 1/1	Rev.No. 017		
ISSUED Dt : 13-08-2014	Rev Dt: 05-01-2017	APPROVED BY	TVSS RAO / A.V.P

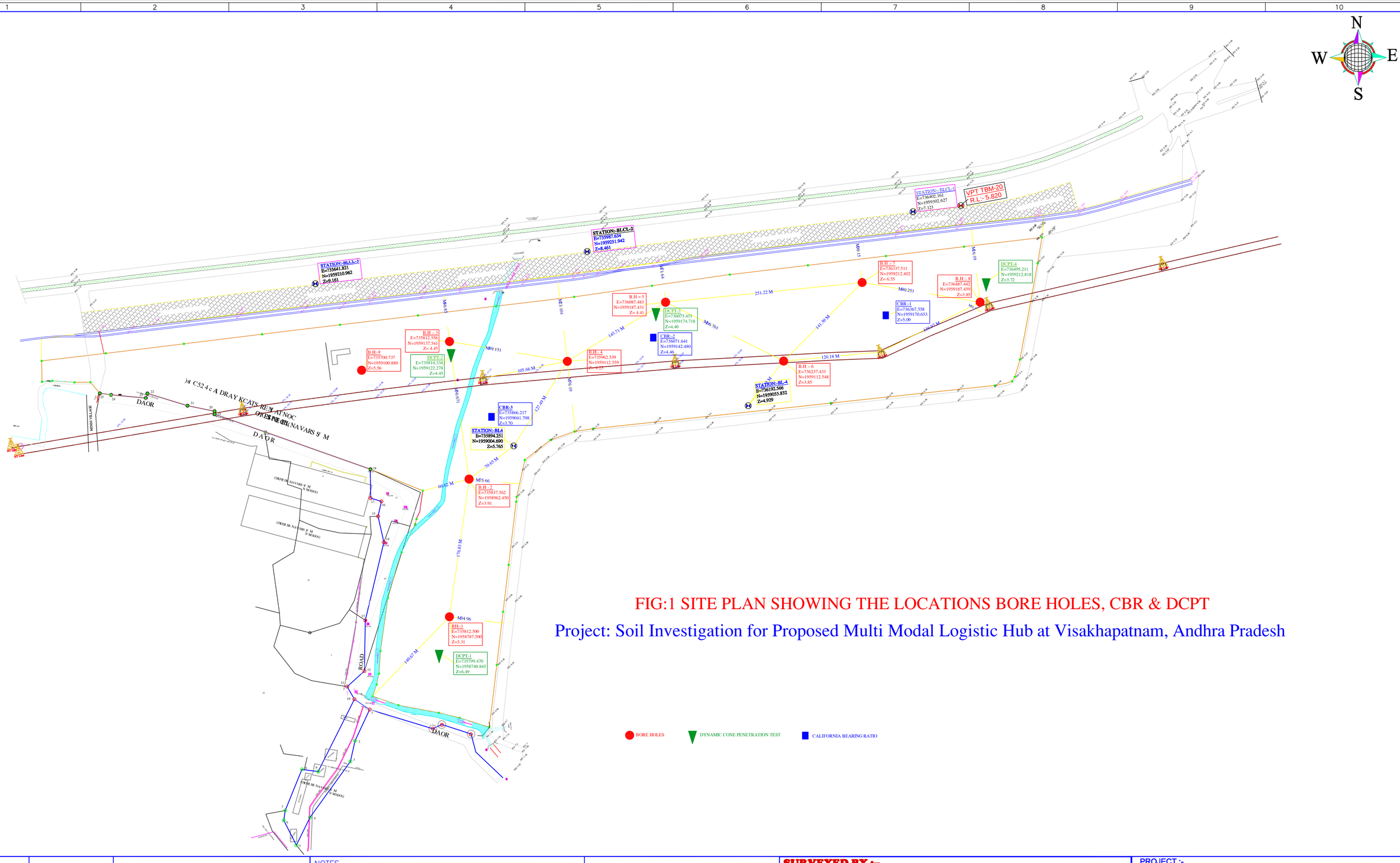


FIG:1 SITE PLAN SHOWING THE LOCATIONS BORE HOLES, CBR & DCPT

Project: Soil Investigation for Proposed Multi Modal Logistic Hub at Visakhapatnam, Andhra Pradesh

BORE HOLES DYNAMIC CONE PENETRATION TEST CALIFORNIA BEARING RATIO

LEGENDS

- BOUNDARY POINT
- BOUNDARY LINE
- ROAD
- RAILWAY TRACK
- OPEN DRAIN
- LAMP POST
- TEMPLE
- MOSQUE
- CHURCH
- TREE
- MAN HOLE
- BORE
- GATE
- HIGHTENSION LINE
- HAND PUMP
- WATER TAP

R.L : 9.57 — Rail Top Level
RD: 6.34 — Road Top Level
HTL: 13.46 — Lowest Level of Conductor Level

NOTES

1. ALL THE COORDINATES ARE TAKEN WGS84–DATUM
2. ALL THE LEVELS ARE TAKEN REFERENCE TO MEAN SEA LEVEL
3. SCALE 1:1000
4. ALL DIMENSIONS AREA IN METERS.
5. THE BENCH MARK HAS BEEN MARKED ON THE SITE
6. SPOT LEVELS ARE TAKEN 10M X 10M INTERVAL
7 CONTOUR LINES ARE DRAWN AT 0.25m INTERVAL
8. GRID LINES ARE DRAWN AT 25M X25M INTERVAL

SURVEYED BY :-

DGPSSURVEY.IN

DGPS, TOTAL STATION SURVEY & MAPPING PROFESSIONAL'S

Flat No:-101,Block:-2 R.V Maanyatha Apartments, PJR Enclave Road, ChandaNagar, Hydarabad-50,
Land: 040-42417272, Cell: 0-9000 90 6000, e-mail: dgpssurvey.in@gmail.com, www.dgpssurvey.in

PROJECT :-

Plan Showing The Borehole Location of Proposed Balmer Lawries & Co Ltd. at Visakhapatnam Port Trust

SURVEYED AREA 237814.29 Sqm 58.765 Acres

DATE OF SURVEY	28-July-2014	DATE OF DRAWING	28-July-14	DWG No:- BLCL/VPT/bh-1

6. RECOMMENDATIONS

The following recommendations are made for the proposed Multi Modal Logistic Hub project at VPT, Visakhapatnam. These recommendations are based on Standard Penetration Tests and Laboratory Tests on samples from Nine (09) bore holes, three (3) Field and Lab CBR tests, and four (4) Dynamic Cone Penetration Tests.

Sub-soil Profile:

- The subsoil profile at the site can be broadly generalized as follows:

Depth, m	Strata	N Value
0.00 – 7.00	Clay / Silty clay / silty sand	2 – 7
7.00 – 9.00	Clayey Gravel / Silty gravel	12 – 45
9.00 – 14.00	Gravel / Soft Disintegrated Rock (SDR)	38 – 100
Below 14.00	Refusal strata / Rock	> 100 & Cores

- The top layer essentially consists of clay / silty clay / silty sand. Filled-up soil is observed only in BH-7 to a depth of 4.3 m. Thickness of the top layer varies from 3.0 m (BH-2) to 9.4 m (BH-7). N (SPT) values in this layer are very low.
- The top soil is followed by clayey gravel / silty gravel to a depth of 6.0 – 12.0 m, with N values varying over a wide limit (12 to 50), in different boreholes.
- This is underlain by Gravel / Soft Disintegrated Rock (SDR) to a depth of 9.0 – 15.0 m. N values in this layer vary from 38 to 100. No cores were recovered in SDR strata due to weathering and fissuring.
- Ground water level is generally at 0 – 2 m below the present GL.
- DCPT (N_{cd}) values at the four test locations vary from 3 to 125 in the depth range 0 to 10 m, and are, by and large, correlatable with SPT values at the corresponding depths in the nearby borehole data.

Soil & Rock Properties:

- Properties of top soil (clay / silty clay / silty sand) can be summarized as follows:

Parameter / Property	Value
IS Classification (IS 1498)	CH / CL / SM
Dry density, kN/m^3	16.0 – 17.2
Specific gravity	2.64 – 2.69
Liquid limit, %	33 – 65
Plastic limit, %	18 – 34
Cohesion, kN/m^2	35 – 59
Angle of Internal Friction, Φ, deg.	0 – 10
Compressibility	0.23 – 0.35
CBR (Soaked)	3.0 – 4.0

- Properties of clayey gravel / silty gravel are as follows:

Parameter / Property	Value
IS Classification (IS 1498)	GC / GM
Unit weight, kN/m^3	17.9 – 19.3
Specific gravity	2.65 – 2.67
Liquid limit	NP
Plastic limit	
Cohesion, kN/m^2	10 – 35
Angle of Internal Friction, Φ, deg.	29 – 35

- Properties of rock are as follows:

Parameter / Property	Value
IS Classification (IS: 12070)	Very Poor to Poor Rock – Classification No. V / IV
Dry Density, g/cm^3	2.71 – 2.73
Porosity, %	2.38 – 3.21
Water Absorption	1.79 – 2.93
Un-Confined Compressive Strength, kg/cm^2	550 – 910

FOUNDATIONS:

Open foundations:

- Open (Footings / raft) foundations are recommended.
- Safe Bearing Capacity (SBC) is recommended as follows:

B H No	Ground Level, m +	Soil Profile	SBC at Depth, m (t/m^2)							
			2.0	3.0	3.5	4.0	4.5	5.0	5.5	6.0
1	5.3 1	0 – 4 m Silty clay 4 – 6 m Clayey gravel	8	10	12	12	12	15	15	15
2	3.91	0 – 1.2 m Silty clay 1.2 – 2 m Clay 2 – 3.3 m Silty clay 3.3 – 6 m Clayey Gravel	8	10	12	15	15	15	20	20
3	4.45	0-1.1 m Silty sand 1.2 – 3.4 m Clay 3.4 – 7.5 m Clayey gravel	8	10	10	15	15	15	20	20
4	4.25	0– 1.5 m Silty clay 1.5– 2 m Clay 2 – 4 m Silty clay 4 – 6 m Silty Gravel	8	10	10	15	15	15	20	20
5	4.41	0-1 m Silty clay 1 – 5.2 m Clay 5.2– 6 m Clayey gravel	8	10	10	10	10	10	20	20
6	3.85	0-1 m Silty sand 1 – 5.6 m Clay 5.6 – 8.0 m Clayey gravel	8	10	10	10	10	10	15	20
7	6.55	0-4.3 m Filling 4.3 – 5.8 m Silty sand 5.8 – 9.4 m Clay	Fill	Fill	Fill	Fill	10	10	10	10
8	3.85	0-1.6 m Silty sand 1.6 – 6.5 m Clay	8	10	10	10	10	10	10	10
9	5.56	0-1.2 m Silty sand 1.2 – 3.7 m Clay 3.7 – 6.0 m Clayey gravel	8	10	10	15	15	15	20	20

Notes:

1. Ground level refers to MSL.
2. Ground water level is generally at 0 – 2 m below the present GL.
3. All foundations resting in clay / silty clay should be placed in sand bed.
4. Typical calculations for SBC are given in Appendix-1.

Pile foundations:

- Alternatively, Pile foundations may be considered.
- Pile Capacities for different lengths and diameters are given separately for each bore hole in the following table.

B H No	Ground Level, m +	Soil Profile	Pile capacity			Safe lateral pile capacity, tonnes
			Length, m	Dia, mm	Vertical Capacity, tonnes	
1	5.31	0 – 4 m Silty clay 4 – 6 m Clayey gravel 6 - 11.5 m Gravel N=38 - 56 11.5 – 12.0 m SDR N>50	10 10	450 650	50 75	7 11
2	3.91	0 – 1.2 m Silty clay 1.2 – 2 m Clay 2 – 3.3 m Silty clay 3.3 – 6 m Clayey Gravel 6 -12 m Gravel N= 51-81 12-14 m SDR N=88 -100 14 -15 m Rock	10 10	450 650	50 75	7 11
3	4.45	0-1.1 m Silty sand 1.1 – 3.4 m Clay 3.4 – 7.5 m Clayey gravel 7.5 – 11.4 m Gravel N=57-70 11.4 -14.6 m SDR >50 14.6 -17.6 m Rock	10 10	450 650	50 75	7 11
4	4.25	0– 1.5 m Silty clay 1.5– 2 m Clay 2 – 4 m Silty clay 4 – 6 m Silty Gravel 6 -10 m Gravel N =49-65 10-15 m SDR N 73-100	10 10	450 650	50 75	7 11
5	4.41	0-1 m Silty clay 1 – 5.2 m Clay 5.2– 6 m Clayey gravel 6- 9 m SDR N = 91-94 9- 10 m Rock	10 10 ***See Note6***	450 650	50 75	7 11
6	3.85	0-1 m Silty sand 1 – 5.6 m Clay 5.6 – 8.0 m Clayey gravel 8-9.8 m Gravel N =56 9.8–14.8 m SDR N=50 – 96 14.8 -17.8 m Rock	10 10	450 650	50 75	7 11

B H No	Ground Level, m +	Soil Profile	Pile capacity			Safe lateral pile capacity, tonnes
			Length, m	Dia, mm	Vertical Capacity, tonnes	
7	6.55	0-4.3 m Filling 4.3 – 5.8 m Silty sand 5.8 – 9.4 m Clay 9.4 -13.2 m Clayey gravel (N= 50-85) 13.2 -15 m SDR N>50	10 10	450 650	50 75	7 11
8	3.85	0-1.6 m Silty sand 1.6 – 6.5 m Clay 6.5 - 8 m Clayey gravel 8 – 10.6 m Gravel N = 31-60 10.6 – 14 m SDR N=50-94	10 10	450 650	50 75	7 11
9	5.56	0-1.2 m Silty sand 1.2 – 3.7 m Clay 3.7 – 6.0 m Clayey gravel 6.0 – 6.7 m Gravel 6.7 – 9.0 m SDR N=50-85 9-10 m Rock	10 10 ***See Note6***	450 650	50 75	7 11

SDR … Soft Disintegrated Rock

Notes on Pile foundations:

1. Ground level refers to MSL.

2. Groundwater level is generally at 0 – 2 m below the present GL.

3. Typical calculations for Pile capacities are given in Appendix – 2.

4. Lateral Pile capacity is taken as 15% of Vertical capacity.

5. All Piles considered to be of length 10 m, resting in gravel for 3 m depth.

6. (a) In BH-5 and BH-9, SDR is seen at a depth of 5 to 7 m.

(b) If SDR is reached earlier than 10 m, Piles may be rested in SDR strata, with an embedment of 1.5 m.

(c) Suggested minimum length of socket is as follows:

Rock Type	Embedment Length
Sound Rock	1 – 2 D
Moderately weathered rock	2 – 3 D
Soft Rock	3 – 4 D

where D is the diameter of Pile.

7. All requirements of IS Code: 2911 shall be adhered to.

8. For other Pile Capacities, Pile dia / length may be modified.

Boundary wall foundations

Specific Recommendations for Boundary Wall Foundation:

The soils from 0 – 7 m are weak and soft soils (Clay /silty clay/silty sand). N values are less than 10.

Considering the soft soils, the following alternatives are suggested:

- Open foundations at a depth of 3 m with SBC of 10 t / sq m, and sand bed. SBC calculations are given in Appendix – 1
- Alternatively, 10 m long Piles may be used. Pile dia may be 300 mm with a vertical pile capacity of 20 tonnes. Pile capacity calculations are given in Appendix-3.

PAVEMENT:

- It should be noted that the top soil essentially consists of clay / silty clay / silty sand. Thickness of this layer varies from 3.0 m to 9.5 m below existing ground level in different boreholes.
- Filled up soil of thickness 4.3 m exists in the area of Bore Hole-7.
- Soaked CBR values of the top soil (clay/silty clay/silty sand) are quite low (3% to 4%).

Design:

- As per Tender Document, Axle load transferred for each side of front axle of container handling 'Reach Stacker' equipment is taken as 50 MT.
- Sri Mohan Kumar, Manager, Railway Division, AARVEE Consultants, has given Cumulative Standard Axles as 1.971 million times with full load over the surface.
- From IRC: 37 – 2001 (Guidelines for Design of Flexible Pavments), Fig. 1 (Pavement design Thickness Chart),

  For CBR = 3 %, and Cumulative Standard Axles = 2 million,

  Total Pavement Thickness T = 580 mm, say 600 mm

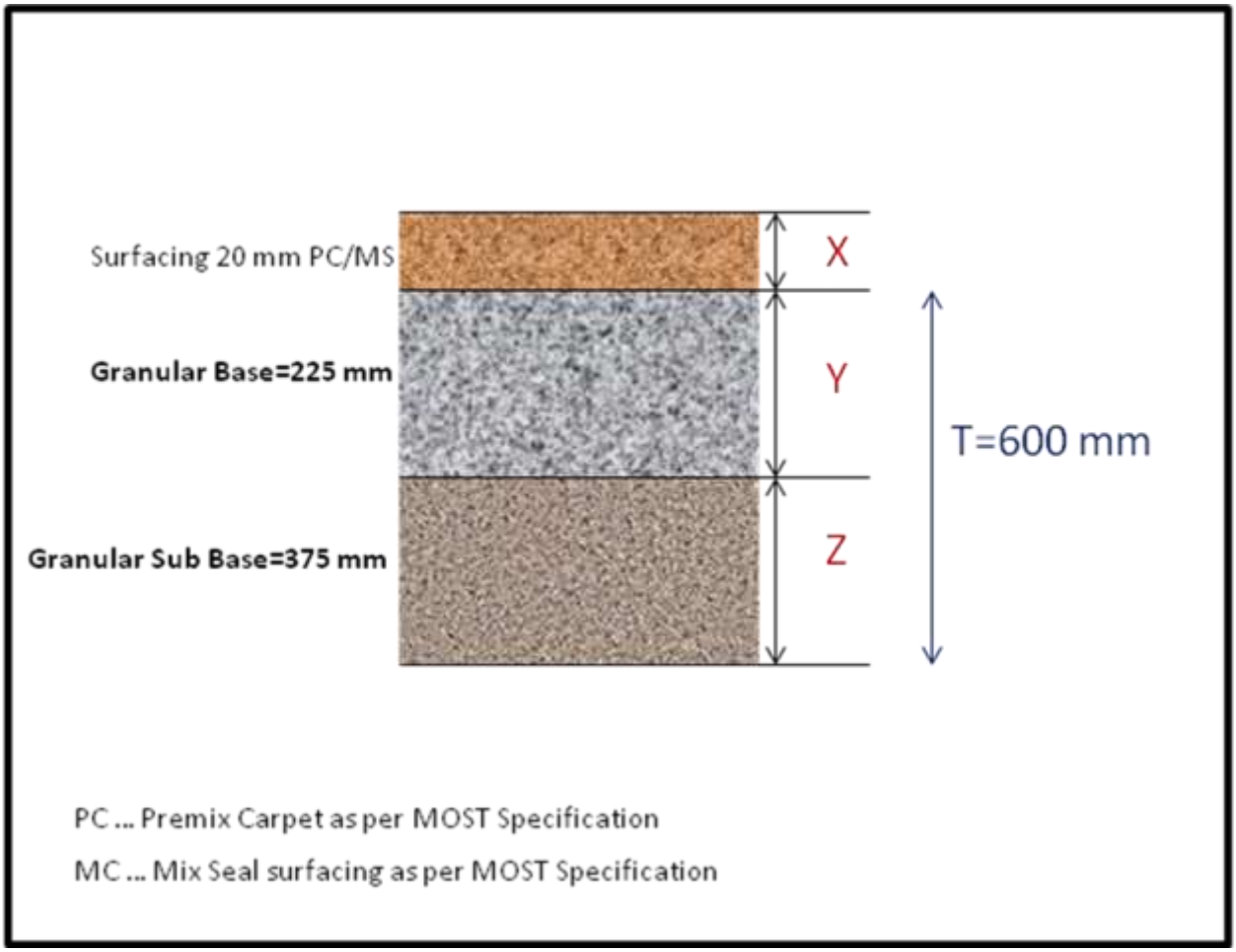
- Pavement design of Combination Block for 2 million Cumulative Standard Axles is as follows (IRC: 37 - 2001):

  Total Pavement Thickness T = Y + Z = 600 mm

  Where Y = Thickness of Granular Base = 225 mm

  Z = Thickness of Granular Sub Base = 375 mm

  X = Thickness of Surfacing = 20 mm



Base Material:

- This requires the load spreading properties to reduce the stresses on the subgrade. This has an important bearing on the performance of block pavement. Since the available strata are unsuitable, base course should consist of unbound crushed rock, water bound macadam, wet mix macadam, cement-bound crushed rock / granular materials, and lean cement concrete.
- In broad terms, whenever the subgrade is weak (with CBR < 5 %, as in the present case), use of bound granular materials like cement treated crushed rock, requiring a relatively thinner base, is recommended.

Sub - base Material:

- The quality of sub-base materials includes natural gravels, cement treated gravels, sand stabilized sub grade materials. The quality of sub grade materials should be in conformance with IRC: 37 -2001 (Guidelines for the Design of Flexible Pavements).

***Drainage*:**

- Drainage of the pavement structural section improves its performance. Adequately designed sub – surface drainage system consisting of an open graded drainage layer with collector and outlet pipes should be provided (IRC: 37- 2001).