



Design, Supply, Installation, Testing & Commissioning of over ground and underground external Fire Hydrant system surrounding SDF and CFB, supply and installation of Automatic Fire Detection and Alarm System and Augmentation and refurbishing the existing fire pump house at Manikanchan Special Economic Zone, Block – CN1, Sector V, Salt Lake City, Kolkata-700 091.

At

**MANIKANCHAN SPECIAL ECONOMIC ZONE
BLOCK – CN1, SECTOR V, SALT LAKE CITY
KOLKATA 700 091.**

**Promoted by
West Bengal Industrial Development Corporation Ltd.**

Tender Reference No. : WBIDC/IP/MK/FireSystem/01

E-Tender ID No. : 2015_WBIDC_56096_1

Tender Issue Date : 15/10/2015

Tender submission due Date : 23/11/2015

TENDER DOCUMENT

October, 2015.

**West Bengal Industrial Development Corporation Limited
23, Abanindranath Thakur Sarani, Kolkata 700 017**



LIST OF IMPORTANT DATES

PRESS NOTICE

NOTICE INVITING e-TENDER (NIT)

Tender Reference No. WBIDC/IP/MK/FireSystem/01

E-Tender ID No. : 2015_WBIDC_56096_1

List of Important Dates of Bids

- Design, Supply, Installation, Testing & Commissioning of over ground and underground external Fire Hydrant system surrounding SDF and CFB, supply and installation of Automatic Fire Detection and Alarm System and Augmentation and refurbishing the existing fire pump house at Manikanchan Special Economic Zone, Block – CN1, Sector V, Salt Lake City, Kolkata-700 091.**
1. Name of work : **Automatic Fire Detection and Alarm System and Augmentation and refurbishing the existing fire pump house at Manikanchan Special Economic Zone, Block – CN1, Sector V, Salt Lake City, Kolkata-700 091.**
 2. Completion period for construction : **Within 3 (three) months from the date of receipt of Work Order.**
 3. Date of issue of Notice Inviting Bid : **15/10/2015**
 4. The total Tender Document can be downloaded from the e-procurement portal www.wbtenders.gov.in / www.wbidc.com from **15/10/2015 after 18.00 hours.**
 5. Time and Date of Pre-Bid Meeting : **04/11/2015 at 15.30 hours**
 6. Venue of Pre-Bid Meeting : **OFFICE OF WEST BENGAL INDUSTRIAL DEVELOPMENT CORPORATION LIMITED (WBIDCL), 23, Abanindranath Tagore Sarani (Camac Street), Kolkata-700 017.**
 7. Bid uploading Date : **13/11/2015 at 18-00 hours**
 8. Last Date for online Submission of Bid(s) : **23/11/2015 at 05-00 P.M.**
(As per server clock).
 9. Time and Date for opening Technical Bid/Bids : **24/11/2015 at 15-00 hours and onward** (as per server clock).
Place: WBIDCL at 23, Abanindranath Tagore Sarani (Camac Street), Kolkata-700 017.
 10. Time, Date and Place of opening Financial Bids : Will be intimated later to the technically qualified bidder(s)
 11. Last date of Bid validity : **180 (one eighty) Days** from the last date of bid submission.



Press Notice

Tender Reference No. : WBIDC/IP/MK/FireSystem/01
E-Tender ID No. : 2015_WBIDC_56096_1

The Managing Director, West Bengal Industrial Development Corporation Limited (WBIDCL) invites item rate e-tenders from renowned and eligible Contractors for undertaking the following work:

1.	Place : Manikanchan SEZ, Block CN1, Sector V, Salt Lake, Kolkata – 700 091
2.	Name of the work: Design, Supply, Installation, Testing & Commissioning of over ground and underground external Fire Hydrant system surrounding SDF and CFB, supply and installation of Automatic Fire Detection and Alarm System and Augmentation and refurbishing the existing fire pump house at Manikanchan Special Economic Zone, Block – CN1, Sector V, Salt Lake City, Kolkata-700 091.
3.	Estimated cost of Commissioning : Approximately Rs. 87.00 Lakh
4.	Earnest Money : Rs. 02,00,000/- (Rs Two Lakh only) through RTGS/NEFT.
5.	Time allowed for completion : 3 (three) months from Date of issue of Work Order.
6.	The total Tender Document can be downloaded from the e-procurement portal www.wbtenders.gov.in and wbidc website: www.wbidc.com from 15/10/2015 from 18.00 hours.
7.	Time, Date and Place of Pre-Bid Meeting : On 04/11/2015 at 15.30 hrs. at WBIDCL Office at 23, Abanindranath Tagore Sarani (Camac Street), Kolkata-700 017.
8.	Last date and time for submission of Online Bid : 23/11/2015 within 17.00 hrs.



NOTICE INVITING e-TENDER

Sealed Design Built Lump Sum Turnkey rate e-tenders are invited on behalf of WBIDC by Managing Director, WBIDC, PROTITI, 23, Abanindranath Tagore Sarani Kolkata – 700 017 for the following work:

1.	Name of work	Design, Supply, Installation, Testing & Commissioning of over ground and underground external Fire Hydrant system surrounding SDF and CFB, supply and installation of Automatic Fire Detection and Alarm System and Augmentation and refurbishing the existing fire pump house at Manikanchan Special Economic Zone, Block – CN1, Sector V, Salt Lake City, Kolkata-700 091.
2.	Location of work	Manikanchan SEZ, Block CN1, Sector V, Salt Lake, Kolkata – 700 091.
3.	Estimated cost of Work	Rs. 87.00 lakh (Rupees sixty lakh)
4.	Time of completion	Within 3 (Three) months from Date of issue of Work Order.
5.	Qualification criteria	<p>A. The bidder must be a reputed and reliable company having the following credentials:</p> <ul style="list-style-type: none">a. The bidder should have experience of Design, Supply, Installation, Testing & Commissioning of Fire Hydrant and Automatic Detection System etc. Including Augmentation at Manikanchan Special Economic Zone, Block – CN1, Sector V, Salt Lake City, Kolkata-700 091. Reference List with documentary proof to be attached on work of similar nature within the past 3 (three) years and details of current work in hand.b. For the purpose of the tender, similar works will mean- Design, Supply, Installation, Testing & Commissioning of Hydrant and Automatic Detection System etc. Including Augmentation having similar experienced of the proposed Work.c) To qualify technically in the EOI, each bidder should have the following criteria :<ul style="list-style-type: none">i) The bidder should have a minimum average turnover of at least Rs. 2.00 Crores in the last three preceding years.ii) The bidder should have successfully completed at least one similar type of works during last three years.iii) The bidder should have sufficient technical experts for the said work. <p>B. Each bidder must produce:</p> <ul style="list-style-type: none">(i) The P/L & Balance Sheet of the last three years (2014-15, 2013-14, 2012-13) ;(ii) An affidavit that the information furnished with the EOI documents is correct in all respects;(iii) PAN Card Xerox copy.(viii) Power of Attorney in favour of the authorized representative



		signing the EOI. C.. Bidder should not be black listed with any Govt./State Govt./ Statutory bodies/Organizations.
6.	Earnest Money	Rs. 2,00,000/- (Rupees two lakh) only through RTGS/NEFT, the details of which is as follows : Account Name : WEST BENGAL INDUSTRIAL DEVELOPMENT CORPORATION LIMITED Account Number : 011010200021340 Bank's Name : Axis Bank Limited. Branch Name : Golpark, Kolkata-19. IFS Code : UTIB0000011 The scanned copy of the RTGS/NEFT details must be uploaded at the time of submission of bid through e-tender.
7.	Availability of Tender Documents	Tender documents will be available on. 15/10//2015 from the e-procurement portal www.wbtenders.gov.in/www.wbidc.com .
8.	Site Visit	Bidders are advised to visit the site before submission of bid.
9.	Pre-Bid Meeting:	04/11/2015 at 15.30 hrs at WBIDCL Office at 23, Abanindranath Tagore Sarani (Camac Street), Kolkata-700 017
10.	Submission of tender	Bidding documents, signed by authorized person of the bidder, must be submitted online on or before 23/11/2015 within 17.00 hours (as per server clock).
11.	Procedure for submission of tender	Bidders are requested to submit their tenders through e-procurement portal www.wbtenders.gov.in . If required, the bidders may be requested to submit the hard/original copy of the technical bid at the time of verification of the documents
12.	Date, time and venue of opening of Technical Bid	24/11/2015 at 15-00 hours (as per server clock). Place: WBIDCL Office at 23, Abanindranath Tagore Sarani (Camac Street), Kolkata-700 017. If the office happens to be closed on the date of opening of the bids as specified, the bids will be opened on the next working day at the same time and venue.
13.	Opening Date & Time of Financial Bid	Date and time of opening of Financial Bids will be intimated later to the technically qualified bidder(s).
14.	Validity of the bid	180 (one eighty) days from the date of submission of tender. If any bidder/tenderer withdraws his bid/ tender before the said period or makes any modifications in the terms and conditions of the bid, the said earnest money shall stand forfeited
15.	Taxation	Taxes on materials and/or finished work like works, contract tax, etc. in respect of this contract whether in vogue or may be imposed in future shall be payable by the contractor and WBIDC will not entertain any claim whatsoever in this respect. However any benefit due to reduction of taxes etc. shall be passed on to WBIDC.

NOTE : Other details can be seen in the bidding document. WBIDC reserves to itself the right to reject any or all the tenders received without assigning any reason thereof.



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SECTION A – TECHNICAL SPECIFICATION

1. SCOPE OF WORK

Work under this scope shall consist of design, supply, installation, testing & commissioning of all labour, materials, equipment and appliances necessary for fire protection & fighting systems described in this specification, schedule of quantities, drawings etc.

Without restricting to the generality of the foregoing works, the scope of work shall include the following -

- Design, Supply, Installation, Testing and Commissioning of underground and over ground Ring main of Hydrant & Sprinkler pipelines originating from existing underground fire pump house till connecting point of existing wet riser mains in the SDF and CFB at ground floor level.
- The Hydrant and Sprinkler pipe ring main will be installed over ground. Underground ring main will be done only wherever necessary.
- External firefighting lines related works, including supply and fixing of hydrant around the buildings and isolation valves, fire service inlets, alarm control valves, hose cabinets, hoses and branch pipes
- Supply, Installation, Testing and Commissioning of Swinging Types Hose Reels internal to buildings in the SDF and CFB including air vent valves in the terminating points of wet riser mains
- Augmentation, repairing and Commissioning of existing fire pumps including instrumentation
- Analogue addressable type Fire detection & alarm system along with all other relevant accessories.
- Portable First Aid Fire Extinguishers

2. SPECIFICATIONS

2.1 Work under this scope shall be carried out strictly in accordance with specifications attached and all relevant latest Indian standards, National building code (NBC) – 2005, Part - IV, local fire approval authority and any other statutory bodies.

2.2 Items not covered under these specifications shall be carried out as per specifications of the latest local fire officer's regulations with latest amendments as applicable in the contract.

2.3 Works not covered under Para 2.1 and 2.2 shall be carried out as per latest relevant Indian standards. In the event of the works not covered by Indian standards, British / American Standards shall be followed.

3. EXECUTION OF WORK

The work shall be carried out in conformity with the firefighting system drawings.

4. REFERENCE POINTS

Reference points shall be in relation to the levels and locations given in the firefighting drawings.



5. TESTING

- 5.1 Piping and drainage works shall be tested as specified under the relevant clauses of the specifications.
- 5.2 All materials and equipment found defective shall be replaced and whole work tested to meet the requirements of the specifications.

6. PIPES AND FITTINGS

- 6.1 Pipe for firefighting shall be M.S. pipe conforming to IS: 1239: 2004 (Heavy Grade) including all fittings like bends, elbows, tees, anchor fasteners, couplings etc., and shall be of reputed make.
- 6.2 Pipe for Internal Work
 - 6.2.1 All pipes within the building in exposed locations, shafts, under ceiling and service tunnels including connections buried under floor shall be M.S. tubes of class and thickness specified. Pipes 150 mm diameter and below shall conform to IS: 1239: 2004. Pipes 200 mm diameter and above shall be rolled and welded conforming to IS: 3589: 2001 with 6 mm wall thickness or as specified in the schedule of quantities. The pipe/tube supplied shall be as per the vendor list provided.
 - 6.2.2 For Pipes 50 mm diameter and below, Socket welded fittings shall be used for jointing. For Pipes 65 mm diameter and above Butt welded fittings shall be used for jointing.
- 6.3 For External Work
 - 6.3.1 All pipes outside the building shall be M.S. heavy grade pipes conforming to specification.
 - 6.3.2 Fittings for M.S. heavy grade pipes shall be similar to those used for internal work.
- 6.4 Pipe Joining
 - 6.4.1 M.S. Pipes 50 mm diameter and below shall be provided with socket welded joints.
 - 6.4.2 Pipes 65 mm diameter and above shall be joined by electrical resistance welding. Joints shall be butt welded between pipes and pipes & fittings.
 - 6.4.3 Flanges shall have appropriate number of holes as per the relevant IS Standard fastened with nuts, bolts and 3 mm thick compressed asbestos gasket.

7. PIPE PROTECTIONS

- 7.1 All pipes above ground and in exposed locations shall be painted with one coat of red oxide primer and two coats of synthetic enamel paint of fire red colour.
- 7.2 All pipes under floors or below ground shall be protected against soil corrosion by wrapping and coating material as per 10221: 1982.
- 7.3 Supply and providing pipe coating and wrapping as follows:-
 - 7.3.1 The pipes (buried) should be initially brushed to remove all foreign materials.
 - 7.3.2 Apply a coat of fibre, coal tar and solvent-based primer. The primer shall be allowed to dry until the surface becomes tacky. The primer shall be applied by brushing so as to produce effective bond between metal and subsequent coating.
 - 7.3.3 The tape 4mm thick and 150 / 250 mm wide, comprised of tar based polymeric mix supported on a fabric of high tensile strength fibre glass shall be wound spirally using thermos fusion process to completely adhere with the primer-coated surface and overlaps of 12mm as per IS 10221 : 1982 should be maintained.
- 7.4 Each end of the pipe left uncoated for welding purpose shall be hand coated and wrapped after field welding is completed and surface cleaned.



8. HOLIDAY TEST

On completion of the wrapping & coating, it shall be tested using efficient high voltage holiday detectors, operating at a voltage high enough to jump an air gap the length of which is equal to the thickness of the coating. All holidays found shall be repaired and the repairs shall be retested with holiday detector to ensure that adequate repairs have been made. Holiday testing shall be carried out by flexible and detachable ring probe, which shall enable the entire 360 degree of the surface of the pipe to be scanned.

9. PIPE SUPPORTS

9.1 All pipes shall be adequately supported from ceiling or walls by structural clamps fabricated from M.S. structural e.g. rods, channels, angles and flats or by using anchor fasteners type as per details given in drawings/as per site conditions. All M.S. structural shall be painted with one coat of red oxide and two coats of Red Synthetic enamel paint.

10. FIRE HYDRANTS

- 10.1 The general design of landing valves shall confirm to IS: 5290: 1993 and shall be suitable for indoor / outdoor operations as stated in NBC 2005 Part IV. The landing valves shall be installed at one metre above ground level as per fire brigade regulations. The yard hydrant valves shall be provided with stand post. The yard hydrant is of single outlet, instantaneous & oblique type. Hydrant valve shall be protected from vehicle hitting by means of a barricade post such as bollard pipes with necessary arrangements wherever installed near roadside. All jointing material such as bolts, nuts and gaskets are required for fixing. The isolation valves shall be provided in hydrant ring mains for maintenance.
- 10.2 Hydrant valve body, Stop valve, Check nut, instantaneous female outlet and blank cap shall be made either of leaded-tin-bronze conforming to grade LTB-2 of IS 318: 1981.
- 10.3 The Valve spindle shall be made up of Brass rod confirming to IS 320: 1980 or IS 319: 2007 for use with body of leaded tin bronze.
- 10.4 The Hand wheel shall be made of mild steel conforming to IS 226: 1975 or cast iron confirming to IS 210: 1978.
- 10.5 The valve top except the face of the flange and the instantaneous outlet shall be painted fire red of shade No 536 of IS 5: 2007. The outside of instantaneous outlet shall be highly polished. The hand wheel shall be painted black. Paints shall confirm to IS 2932: 1974.
- 10.6 External fire hydrant of with hose cabinet shall be provided, complete in all respects outside the building. Each fire hose box shall adhere to the following;
- 10.6.1 Hose cabinets shall be M.S type with single or double glass front door and locking arrangements with breakable glass key access arrangement duly painted red with stove enamelled paint (overall size 750 x 600 x 250 mm deep) and fixed to wall or self-supported on floor as per site conditions.
- a) External hose boxes for yard hydrants shall contain 2 Nos. of 15m long hoses with gunmetal male and female instantaneous type couplings machine wound with G.I. wired along with gunmetal branch pipe with nozzle.
- b) Reinforced Rubber Lined Hose shall be as per IS 636: 1988 Type - A and couplings, gunmetal branch pipe with nozzle shall be as per IS 903: 1993.
- 10.7 Internal fire hydrant with hose reel drum shall be provided at all FEA shafts (inside the building).
- 10.7.1 Hose reel drum with 19mm rubber hose of 36m length and 32mm diameter globe valve shall be conforming to IS:884 - 1985 & as per the requirement of local fire service department.



10.7.2 All internal hydrant system shall be confirming to IS 3844 : 1989, shall contain 2 Nos. of 15m long hoses with gunmetal male and female instantaneous type couplings machine wound with G.I. wired along with gunmetal branch pipe with nozzle. Spindles will be provided to hold fire hoses.

11. VALVE CHAMBER

Valve chamber shall be suitable brick masonry chamber in cement mortar 1:5 (1 Cement: 5 coarse sand) on cement concrete foundations 150 mm thick in 1: 5: 10 mix (1 Cement: 5 fine sand: 10 graded stone aggregated 40 mm nominal size) 15 mm thick plaster inside and outside finish with a floating coat of neat cement inside with R.C.C cover slab, including excavation, back filling complete.

12. VIBRATION ELIMINATORS FOR FIRE PUMPS

Double flanged reinforced neoprene flexible pipe connectors shall be provided on all delivery lines. Connectors shall be suitable for a working pressure of each pump. Length of the connector shall be as per manufacturer's details.

13. AIR VESSELS FOR FIRE PUMPS

Air vessel fabricated from 6 mm M.S. sheet with dished ends and suitable supporting legs shall be provided with a 25 mm diameter connection from fire pumps common delivery header, one 25 mm diameter drain with isolating valve, one gunmetal water level gauge and 25 mm sockets for pressure gauge. The vessel shall be 300 mm diameter x 1500 mm height and tested to 1.5 times pumps head.

14. SPECIFICATION OF WELDING ELECTRODES & QUALITY CONTROL FOR WELDING

14.1 Quality Control for Welding

14.1.1 Welding machines mobilised shall be in good working condition and shall have proper control for regulating current. Adequate spares shall be kept in stock at site during the execution of the work for routine maintenance. Location of welding machines and the distribution boards to be connected with them shall be decided in consultation with site electrical supervisor to avoid overloading of the distribution boards, cables and electrical power sources.

14.1.2 For executing site fabrication/ welding the electric cables, distribution boards and connections for machines shall be carefully checked once a week and maintained in good working condition. Welding cables used shall have proper insulation throughout the length. The cables shall be carefully examined and repaired as necessary every day.

14.1.3 All welding shall be performed strictly in accordance with the welding requirements detailed in approved WPSs and ASME Boiler and Pressure vessel code Section IX. Suitable WPSs to be adopted for welding are required to be qualified.

14.2 Welding Electrodes:

Generally all welding shall be performed using Shielded metal arc welding (SMAW) process using cellulosed-coated electrode (E 6013 type) for root run and subsequent passes

14.2.1 Storing of Welding Electrodes:

Welding electrodes shall be stored indoors free from moisture. The package of the welding electrodes shall not be opened until immediately before use.



14.2.2 Handling of Welding Electrodes:

During welding work, welding electrodes shall be stored in heated quivers. The lid of the quiver shall be kept closed to ensure that the electrodes are not exposed to moisture in the atmosphere.

14.2.3 Brands of Welding Electrodes:

The following approved makes of welding electrodes shall be used during fabrication and erection work:

1. Ador Welding
2. ESAB

Use of any other brand of electrodes is subject to approval by client.

14.2.4 No welding shall be done if there is impingement of any rain, or high winds on the weld area except when suitable protection or shield against the rain or wind is provided.

14.2.5 Tack welds may be done either with full penetration or as bridge tacks. If full penetration tacks are made, the ends shall be ground to featheredge and inspected for presence of any defect. If tacks are cracked, these shall be completely removed by grinding and the area shall be inspected by Dye Penetration examination to ensure freedom from defects.

14.2.6 Before welding, the ends shall be cleaned by wire brushing, filing or grinding. Each weld-run shall be thoroughly cleaned to remove the slag, irregularities and any defects, before the next run is deposited.

14.2.7 Welding of any joint shall be completed and uninterrupted. If this cannot be followed for some reason, at least first two passes shall be welded prior to interruption.

14.2.8 Control of Welders

i. Qualification of welders

Qualified and certified welders only shall do welding. All welders assigned to the work shall be qualified by test as per the WPSs in accordance with ASME code Sec. IX and approved by QA/QC Engineer. Welders deployed for welding piping joints shall have qualification in SMAW process in 6G positions in accordance with ASME code Sec. IX. Qualified welders whose qualification is still valid, may be deployed subject to the engineer-in-charge approval. Welding qualification records shall be maintained at site for reference of client at any time.

ii. Instruction to Welders

Welding procedure and other related requirements should be fully explained to each welder and fitter prior to welding work. Welding shall not be started if bevel preparation and fit up of the base materials to be welded is not correct.

iii. Identification of Weld

An identification number shall be given to each welder. Each weld shall be identified by marking the welder's identification number given. This shall be marked on the welded seam or at an adjacent location with metal marker.

15. ENAMEL PAINTING

15.1 Application:

Paints shall be thoroughly stirred before pouring in small containers and while applying, to ensure uniform consistency. The operation for each coat shall consist of a stroke of the brush given from the top downwards, another from the bottom upward over the first stroke and similarly sideways before it dries. No brush marks, hair marks or clogging of paint puddles shall be left. Each coat shall be allowed to dry before the next coat is applied. After the work is complete, the brushes shall be cleaned of paint and linseed oil by rinsing with turpentine.



15.2 Requirements:

Characteristic	Requirement
Water content percent by mass	0.5
Drying Time	
a) Surface dry	< 6 hrs
b) Tack free	<12 hrs
c) Tack free	<24 hrs
Mass in Kg/10 L under coat	12
Mass in Kg/10 L finishing coat	8.5

16. PORTABLE FIRST AID FIRE EXTINGUISHERS

16.1 Fire Extinguishers:

16.1.1 Portable extinguishers are used to fight fires at incipient stages. The various types of Extinguishers that shall be distributed according to the nature of hazard in this building are Water expelling type, Carbon dioxide type, Foam type and ABC type extinguishers.

16.1.2 Hand fire extinguishers shall be enamel alloy steel cylinder, provided with a trigger or seat type valve locking pin or a seal and discharge horn.

16.1.3 The contents of the extinguisher may be carbon dioxide or powder depending on fire class and storage location. The contents shall be such that no poisonous fumes or dangerous acids shall be produced in any case.

16.1.4 Size and type of hand fire extinguishers shall be subject to approval by the local fire service department. Shall conform to IS 2190:2007 and IS 15683:2006.

16.1.5 Fire Extinguishers shall be fire red finished and provided with labels indicating dates of filling and renewal & IS codes No. etc. All Fire extinguishers shall have ISI Mark certification.

17. FIRE BRIGADE INLET

17.1 A two – way / four – way collecting head with built-in non-return valves fitted to the Wet-riser riser main, so that in case of need, the fire brigade can directly pressurize the system with their pump.

17.2 Fire brigade inlet consists of 2 1/2” (63 mm) male instantaneous coupling for feeding water into Wet Riser pipe having outlet of 6” (150 mm) NB as per ANSI-B-16.5B 150#.

17.3 Fire brigade inlet is made up of Bronze / C.I material as per IS: 1865:2005. And the entire body should be painted red.

17.4 Drain valve should be provided along with Fire brigade inlet neck for maintenance purpose.

18. STRAINER

Strainer will be of pot-strainer type with flanged ends and construction shall be as per relevant IS. The pot strainer shall be designed so as to enable blowing out accumulated dirt and facilitate removal and replacement of screen without disconnection of the main pipe.

19. PRESSURE GAUGE & PRESSURE SWITCH

The range of pressure gauge, pressure switch and differential pressure switch will be from 0 to 21 Kg/Sq.cm and shall have all required fittings, accessories and valves.



20. GENERAL

- 20.1 Cost of painting of all equipment, piping, etc. shall be included in each item as given in the specifications.
- 20.2 The contractor shall provide all anchor fasteners and their installations for successful completion of work.

SECTION B – LIST OF CODES FOR FIRE FIGHTING SERVICES

LIST OF CODES FOR FIRE FIGHTING SERVICES

1. Part IV – 2005 National building code of India – Fire and Life Safety
2. IS: 1239 -2004 Specifications for mild steel tubes, Part I & II) tubular and other wrought steel fittings.
3. IS: 3589 -2001 Specifications of steel pipes for water and sewage (168.3 to 2540 mm outside Diameter)
4. IS: 778 -1984 Specifications for copper alloy gate, globe and check valves for water works purposes.
5. IS: 14846 -2000 Specifications for sluice valves for water works purposes (50 to 1200 mm size).
6. IS: 5312 – 2004 Specifications for swing check type reflux (Non- return) Valves for water works purposes
7. IS: 5290 – 1993 Specifications for landing valves.
8. IS: 884 – 1985 Specifications for first-aid hose reel for fire fighting
9. IS: 903 – 1993 Specifications for fire hose delivery couplings, branch pipe, nozzles and nozzles spanner.
10. IS: 2190 – 2010 Code of practice for selection, installation and maintenance of portable first-aid fire extinguishers.
11. IS: 2878 – 2004 Specifications for fire extinguisher Carbon dioxide type.
12. IS: 3844 – 1989 Code of practice for installation and maintenance of internal fire hydrants and hose reels on premises.
13. IS: 2189 – 2008 Code of practice for selection and maintenance of automatic fire detection and alarm system.
14. IS: 15105 – 2002 Design and Installation of fixed Automatic sprinkler fire extinguishing systems
15. IS: 1538 – 1993 Specifications for cast iron fittings for pressure pipes for water, gas and sewage.



SECTION C – LIST OF PREFERRED MAKES

<u>Sl.No.</u> <u>Description</u>	<u>Preferred Brand</u>
1. G.I. AND M.S. PIPES	TATA / JINDAL
2. FIRE HOSE PIPES / R R.L. HOSE - PIPE	NEWAGE / CRC / PADMINI / FIRE SHIELD.
3. FIRST AID FIRE HOSE REEL WITH BRACKET, DRUM AND NOZZLE	PADMINI / EVERS SAFE / NEWAGE / FIRESHIELD
4. G.I. AND M.S. FITTINGS	KS / UNIK / DRP / ZOLOTO.
5. C.I.DOUBLE FLANGED SLUICE / GATE VALVE / NON-RETURN VALVES -	H.SARKAR/ SANT/KALPANA/ KARTAR. FLUIDTECH
6. SLIM SEAL BUTTERFLY VALVES (PN-1.6)	AUDCO / SANT / C&R / KSB / INTERVALVE / CASTLE/ ARROW/FLUIFTECH
7. C. I. BODY BUTTERFLY VALVE	AUDCO / SANT / INTERVALVE / CASTLE / ARROW / DANFOSS/FLUIDTECH
8. QB. SPRINKLER	TYCO / GRINNEL / VIKING/ NEWAGE / HD
9. WRAPPING AND COATING	PYPECOAT / RUSTECH / COALTEK.
10. FABRICATED FIRE HOSE CABINET	GEI / ZENITH / FIRE SHIELD.
11. BRANCH PIPE / NOZZLES (STAINLESS STEEL)	NEWAGE / GEI / SAFE GUARD /EVERSAFE
12. FIRE EXTINGUISHERS	SAFE GUARD / MINIMAX
13. FIRE BRIGADE CONNECTION	NEWAGE / SUPEREX / GEI /EVERSAFE.
14. SUCTION STRAINER	KOLEY / KALPANA / SARKAR /KARTAR.
15. VIBRATION ELIMINATOR CONNECTORS	RESISTOFLEX / KHANWAL / D. WREN.
16. SINGLE PHASING PREVENTOR (CURRENT OPERATED)	L & T / SIEMENS / MINILEC.
17. FLOW METER	SCINTIFIC EQUIPMENT. (P) LTD. SHALI BANDA HYDRABAD – 500263.
18. ELECTRICAL SWITCHGEAR STARTERS	SIEMENS / L & T / ABB 24 CABLES & SKYTONE / GLOSTER / NICCO / ASIAN / (RPG) UNIVERSAL / POLY CAB.



19. FLOW SWITCH

POTTER / SYSTEM SENSOR / JHONSON CONTROL.

20. PRESSURE SWITCHES

INDFOSS / SWITZER/ POTTER

21. PRESSURE GAUGE

H.GURU / FIEBIG / WICA.

22. BATTERY

EXIDE / PRESTOLITE.

23. PAINT ENAMEL OF PIPES ETC.

J&N / ASIAN / NEROLAC / BERGER.

24. FIRE ALARM SYSTEM AND SYSTEM COMPONENT

HONEYWELL / MORAY IAS / ESSER / SIEMENS / GST / EDWARD.



SECTION D – SCHEDULE OF QUANTITIES

Sl.	Particulars of Item	Unit	Quantity			
			SDF	CFB	PH	Total no.
1.0	OVER GROUND PIPING for HYDRANT & SPINKLER SYSTEMS					
	Providing, laying, testing and commissioning, of the following sizes Class C ERW (heavy duty) MS pipe conforming to IS:1239/3589 including fittings like elbows / tees/flanges/tapers/nut & bolts/gaskets etc. on surface and providing cement concrete blocks as supports and painting with one coat of metal primer and two or more coats of synthetic enamel paint of required shade complete as required. For the entry gate the same pipes shall be laid underground as per guidance of engineer - in charge with Hume pipe and pipe coat as require.					
2.1	200mm diameter	Rmts	390	0		390
	150 mm diameter	Rmts	278	72		350
	100mm diameter	Rmts	42	0		42
	80mm diameter	Rmts	60	64		124
3.0	Supply, installation, testing and commissioning of Yard Hydrants comprising of the following:(a) 80mm diameter pipe fitted with Single headed 63mm diameter landing valve	Nos	18	8		26
4.0	Supply, Installation, Testing and Commissioning of Break Glass open type MS Hose with Double Door, Break Glass open type MS Hose Box 18 SWG CRCA sheet of Size 700 mm X 600 mm X 250 mm size with Double Door, Front open type	Nos	18	8		26
5.0	Supply, Installation, Testing & Commissioning of 15mtrs. 63mm dia. reinforced rubber lined hose with instantaneous male and female coupling.	Nos	36	16		52
6.0	Supply, Installation, Testing & commissioning of stainless steel branch pipe with nozzle (63mm x 20mm) with stainless steel gate/ ball valve (20mm)	Nos	18	8		26
7.0	Supply, Installation, Testing & Commissioning of 19mm dia. Swinging hose reel 30m length as per IS 5132 fitted with 6.35mm dia. nozzle and shut off valve (IS 884 - 1969) . The hose reel shall be recessed swing type with reel drum & ball Valve. The hose shall be provided with coupling as per detailed specifications.	Nos	14	6		20
8.0	Supplying, installing ,testing and commissioning of MS air cushion tank on top of each riser fabricated from 6mm thick MS plate, 200 mm in diameter and 1.2 m in height with dished ends fabricated from 8mm	Nos	4	2		6

	thick MS plate with Air release valve with stop cock, flanged inlet connection and drain arrangement with 25mm dia. valve, pressure gauge with gun metal stop cock complete with all accessories as required and conforming to IS 4736-1968.- Terrace floor					
9.0	Supply, installation, testing and commissioning approved make lever type CI butterfly valves with vertical/horizontal gear unit with appropriate handle conforming to IS: 13039 with necessary companion flanges, neoprene gaskets (16Kg/sq.cm. pressure rating), nuts and bolts including all the accessories to complete as per the specifications.					
9.1	150 mm diameter	Nos	8	4		12
10.0	Supply, fixing, testing and commissioning of Installation Control Valve consisting of - 1 no. Alarm valve, 1 no. Main stop valve, 1 no. water meter with alarm gong, Pressure gauge drain valve and drain piping etc., as per specification.					
10.1	150 mm diameter	Nos	2	1		3
11.0	Supplying, installing ,testing and commissioning of Pressure gauges of suitable range for pump sets and pipe lines for the respective floors near to the flow switches with Ball valves, siphon, Fittings like unions / colours / reducers etc.	Nos	4	2	6	12
12.0	Supplying, installing ,testing and commissioning of 4 Way fire Brigade inlet with GM coupling	Nos	4	2		6
13.0	Supplying, installing ,testing and commissioning of Pressure switches of suitable range for pump sets with Ball valves, Fittings like unions / colours / reducers etc.	Nos			5	5
14.0	Supplying, installing and commissioning of fire brigade inlet connection conforming to IS 5290 comprising of 4nos. 63mm dia instantaneous couplings complete with CI non-return valve, CI butterfly valve, connected to 150mm dia. Fire hydrant ring main and fire hydrant wet riser pipe.	Nos.	4	2		6
15.0	Repairing, testing and commissioning of Electric Motor Driven Fire pump complete with pump set, electric motor, Base frame and all accessories like NRV, Isolation valve, pressure switch ,pressure gauges ,flanged end joints, PCC foundation and foundation bolts as per specifications in duty conditions.	Nos	0			2.00
16.0	Repairing testing and commissioning of Diesel engine Driven Fire pump complete with pump set, Diesel engine, Base frame and all accessories like NRV, Isolation valve, pressure switch, pressure gauges, flanged	Nos	0			1.00

	end joints, PCC foundation ,35M length exhaust pipes with cladding and foundation bolts as per specifications in duty conditions.					
17.1	Repairing, testing and commissioning of Electric Motor Driven Jockey Pump complete with Pump Set, Electric Motor, Base Frame and all accessories like NRV, Isolation valve pressure switch, pressure gauges, flanged end joints, PCC foundation and foundation bolts as per specifications in duty conditions.	Nos	0			1.00
17.2	Repairing testing & commissioning of electrical motor driven Booster pump of monoblock Pump. The pump coupled to TEFC motor. The repairing shall be complete with necessary pressure gauge with gun metal shut off cock on suction & delivery side flanged end joints. The quoted rate shall include providing & fixing of RCC foundation(as recommended by manufacturer)anti vibration pad and suitable size of metal expansion bellows at suction & delivery side of the pumps and Foundation bolts etc.	Nos.	1	1		2.00
17.3	Repairing, testing and commissioning of Fire Pump MCC panel with all cabling connected with pump motors and instrumentation items as required to complete working of system.	Nos	0			1.00
18.0	FIRE EXTINGUISHERS					
18.1	Providing and fixing ABC stored pressure dry chemical powder (mono ammonium phosphate) Fire Extinguisher IS : 15683 latest revision manufacturer and of CRCA sheet in welded construction, finish with epoxy polyester powder coated complete with brass forged ball valve, gun metal cap and nozzle, including initial filled and wall suspension bracket (suitable for fighting in class 'A', B & 'C' that is wood, textile, flammable liquid, electric and gases.					
a)	Capacity 4 Kg	Each	20	16		36.00
18.2	For Electrical Installation area in each floor and services area Providing and fixing Carbon-di-oxide fire extinguishers consisting of welded M.S cylindrical body, squeeze lever discharge valve fitted with internal discharge tube, 30cms long ISI marked high pressure discharge hose, discharge nozzle, suspension bracket, confirming to IS: 934 finished externally with red enamel paint and fixed to wall with brackets with rawl plug/dash fasteners complete with internal charge.					
b)	Capacity 4.5Kg ISI Marked. (IS : 15683:2006)	Each	15	12	1	28.00
18.3	Providing and fixing mechanical foam type					

	(IS:15683:2006) fire extinguishers consisting of welded M.S. cylindrical body squeeze lever discharge valve 30 cm long high pressure discharge hose, discharge nozzle suspension bracket ISI marked as per IS 933 finished externally with red enamel paint and fixed to wall with brackets complete with internal charger.					
a)	9 litres capacity.	Each	1	1	1	3.00
18.4	Ceiling / Wall mounted Illuminated exit signage with CFL Lamp encased in 16 gauge MS boxing and 4 mm thick acrylic sheet front cover connected to external power supply with 7 Ah SMF Battery Backup.	Each	20	16		
18.5	Supplying and installing at approved location approved make fire buckets of 24 gauge galvanized steel sheet, standard 9 litres capacity and of round bottom shape, painted white inside and red outside and black on the bottom, inscribed with letter "FIRE" in black and gold. Cost shall be inclusive of providing MS stand duly painted over a coat of primer (one stand shall be suitable for hanging 5 buckets).	Each	4	4	4	
19	FIRE ALARM SYSTEM					
1.1	Supply, installation and testing of fire alarm control panels generally conforming to the intents of Supply, installation and testing of					
	i) Analogue addressable FACP with all in-built modules & displays.					
	ii) Battery and battery charger					
	iii) Public address microphone primary amplifier, section switches, talk-back features etc.					
	iv) All internal wiring.					
	v) Programming & setting up					
	vi) Programme diskettes					
	vii) Fault isolator module for every 15 detectors.					
1.1.1	4 loop FACP (Main Control Panel)	Each	1	1	0	
1.2.0	Supply, installation and testing of signal loop components in suitable galvanised steel junction box					
1.2.1	Monitor modules	Each	10	8	0	
1.2.2	Control modules with relays as shown and required.	Each	10	8	0	
1.2.3	Relay Module(to trip all AHU's through detectors)	Each	10	8	0	
1.2.5	5W Loop Powered Hooter with strobe	Each	10	8	0	
1.2.6	Zone Module for rented offices	Each	31	22	0	
1.3.2	Microprocessor based Addressable intelligent smoke detectors, High Performance Optical type, Photo Electric type below False Ceiling with sounder base	Each	232	112	0	



1.3.3	Microprocessor based Addressable intelligent heat detectors similar to SIGA-HRS of Edwards. (below false ceiling)	Each	36	24	0	
1.3.4	Microprocessor based Addressable intelligent break glass unit similar to SIGA-270 of Edwards with talk back facility.	Each	20	16	0	
1.4	2 Cx1.5 Sq.mm Armoured twisted FRLS Copper cable including all clamping arrangements Connector box etc. as required	Mtr.	3400	2150	0	
1.7	Supply, installation, testing & commissioning of Repeater panels along with termination of all the control/ signal cables with all the required components and accessories to complete the item.	Each	1	1	0	
1.8	Supply, laying and earthing of galvanised conduit installation complete with all conduit accessories, JB's boxes, fish wire etc	JOB	1	1	0	

SECTION E – TERMS AND CONDITIONS OF CONTRACT

1. SCOPE OF WORK

The scope of work includes complete design, supply, installation, erection, testing, commissioning of fire protection works in the Standard Design Factory and Common Facility Building of Manikanchan SEZ, with all necessary accessories including augmentation and in conditioning existing fire pumps as per requirements of West Bengal Fire & Emergency Services. The scope also includes rectification of system breakdown during the **Defect Liability Period for 2 years & Restoration of break down shall have to be attended immediately after report**

The contractor shall submit all relevant Shop drawings, Data sheet, Samples, Test Certificates etc. immediately for getting approval from WBIDC (or) authorized representative prior to supply of materials/Installation works. The work shall be commenced only after the approval of drawing by the consultants/statutory bodies.

Approval/Comments from WBIDC (or) authorized representative shall be obtained within 1 month from date of submission, subject to the compliance of technical specification and requirements of the project & acceptance by WBIDC (or) representative.

The works shall be in full compliance with the technical specifications, relevant codes, and to the entire satisfaction and approval of WBIDC / Engineer – In charge.

The works to be carried out under this contract shall include detailed engineering for execution, complete procurement of materials required for the works, fabrication, quality assurance, transporting to site, supply, storage, erection, painting and finishing and all necessary labour and supervision for completion of the works in every detail irrespective of whether each and every item is specifically mentioned or not.

All works, covered in the schedule of work shall be completed in all respect and any material required for total completion of each item shall be included in the rates, specifically mentioned or not in the schedule of work.



It is the responsibility of the contractor to carry out all connected minor civil works like wall/floor chipping, rough plastering, etc. related with the installation. Only final touch up, wall finishing related with interior work, etc., will be done by other agency.

Due care to be given for not spoiling/breaking/making any other type of damage to the floor/structure except in the places needed. In the event of damages noticed in the floor, the rectification cost towards the same will be deducted from the contractor who is responsible for the damage and vice versa for damage to vendor property.

The total work to be completed as specified in the commercial document. The work has to be done in nights or at late in the evening, holidays, etc., besides regular day work to achieve the target. The rates quoted shall be for this kind of work.

The Engineer In-charge reserves the right to amend / modify the above scope and delete any item of work from your scope, if desired by WBIDC / authorized representative.

Charges for any extra non BOQ item will be paid as per approval of WBIDC.

2. VARIATION IN THE SCOPE

As per site/client requirement & drawing approval

3. DELIVERY / COMPLETION SCHEDULE

Time is the essence of the contract. The completion schedule will be discussed during the meeting keeping the time frame for completion of work as well as completion of work as mentioned in relevant clause of the tender document. However, the exact completion of the work shall be as per site progress. You shall upon signing the LOI, meet our Construction Manager at site and draw out a detailed programme of your works in conjunction with the Master programme. You shall be submitting the method statement for your scope of works.

Completion Date:

Time is the essence of the Contract. The Job shall have to be completed within schedule time mentioned in the contract.

Commence of work:

The contractor shall have to commence the work within 15 days from the date of placement of work order or within 7 days from the date of handing over the site whichever is earlier.

4. PRICE BASIS

Price shall remain firm & fixed and shall not be subject to any variation till the completion of work. Price is inclusive of Packing, Forwarding, Freight & Insurance, Installation & Commissioning charges and on F.O.R site basis. **Price Bid will be submitted by the contractor in two parts. Part-I is for Supply of Materials inclusive of Packing, Forwarding, Freight, Insurance and taxes, if any. Part –II is for Installation and Commissioning charges including labour and service tax.**



5. ADVANCE

No mobilization advance will be paid.

6. PAYMENT TERMS

The payment shall be as per below –

1. 60% of the total order value against supply on pro-rata basis payable within 60 days of bill certification
2. 20% of the total order value against erection on pro-rata basis payable within 60 days of bill certification
3. 10% of the total order value against testing, commissioning within 60 days of bill certification
4. 5% of order value against handing over of total fire protection works within 60 days of bill certification.
5. 5% of the total order value after 6 months of successful operation & supply of as built drawing of the total fire protection works after handing over.

Final Bill

The final bill should be submitted within 30 days of completion of work with all relevant documents including reconciliation statement of materials, as built drawings, etc. and will be cleared within 60 days from the date of submission of the bill. The maintenance period shall commence from the date of acceptance of measurements and abstract of final bill. All the bills shall be submitted in the Performa approved by the Employer. All the running and final bills of the Contractor shall be subjected to technical check and audit and corrections suggested shall be carried out in the subsequent bills.

Retention Amount:

Retention money shall be deducted @ 5% (five percent) from each R.A. Bill and shall be retained as security against non-compliance and for rectification of defects till completion of defects liability period. The employer shall be free to set off the retention money against expenditure incurred by him in rectification of defects if the contractor fails to attend to same to the satisfaction of the employer. This balance retention money shall be refunded within one month of completion of maintenance period as specified in the contract.

7. TAXES AND DUTIES

As the work to be executed in West Bengal, you need to provide your registration reference details as secured from the VAT/Sales tax authorities in West Bengal. We shall not provide any road permits, declaration forms either under West Bengal VAT/Sales Tax Act or Central Sales Tax Act, 1956.

VAT / SALES TAX: You shall secure VAT / Sales tax registration under the West Bengal state Act as well as the central sales tax act 1956. You shall produce proof of the above prior to commencement of work. Rates shall be included in the order value. Excise Duty shall be included in the order value.



Works contract Tax/VAT:

As the work is to be executed in West Bengal, you shall provide your registration reference details as secured from the State Sales Tax authorities. In case you fail to provide proof of your tax registration as per the LOI requirement, we reserve our right to deduct appropriate tax liability amount at the applicable rate on the LOI value which will be equivalent to the tax demand devolving on us. The said deduction will be effected proportionately commencing from payment of first bill onwards OR any time during the course of execution and once the tax discharged by us, same will not qualify for refund.

We will not provide any declaration forms either under the State Sales Tax Act, or Central Sales Tax Act, 1956. No Form 'C' will be issued.

Monthly Tax invoice along with necessary declaration form has to be submitted to our project office.

Service Tax:

Service tax is exempted: Vendor to avail exemption as per the ACT. Required document for the above may kindly be obtained from project site.

Prices shall be inclusive of all applicable taxes and duties. VAT and service tax quantum to be indicated separately.

8. INSURANCE

You shall, at your own cost, insure your men, materials and machinery as may be needed. You shall cover your workmen under the workmen's compensation insurance.

9. STATUTARY DEDUCTION

Applicable tax deducted at source shall be recovered as per the act. Necessary certificate to that will be issued by our site project accounts.

10. EARNEST MONEY DEPOSIT

- a) Bidders shall be required to deposit with their bids an Earnest Money Deposit (EMD) of Rs. 2,00,000/- (Rupees two lakh) only through RTGS/NEFT as details mentioned in the NIT. The scanned copy of the RTGS/NEFT details must be uploaded at the time of submission of bid through e-tender.
- b) EMD shall be returned to unsuccessful Bidders within a period of 1 (one) month from the date of signing of Agreement between WBIDC and the successful Bidder. EMD will be converted into initial amount of the Performance Bank Guarantee for the successful bidder.
- c) EMD shall be forfeited in the following cases:
 - i) If any information or document furnished by the bidder turns out to misleading or false in any material respect.
 - ii) If the successful Bidder fails to execute the Agreement within the stipulated time or any extension thereof provided by WBIDC or if the bidder withdraws the contract proposal even after execution of agreement.



10. PERFORMANCE BANK GUARANTEE

The contractor is required to submit initial deposit of 5% (five percent) of contract value within 15 days of award of work or issue of WO in form of bank guarantee from an approved bank valid till the completion of DLP. The earnest money deposited with the tender shall form part of security deposit. Performance Bank Guarantee valid up to DLP Period.

The said Security deposit bank guarantee shall be discharged and returned to the contractor on satisfactory completion of work and acceptance of final bills and on submission of **No Claim Certificate**.

11. DEFECTS LIABILITY PERIOD (DLP)

The contractor shall guarantee against defects for all the works executed under this contract for a period of **24 (Twenty four) months** from the date of acceptance of measurements and final bill and shall repair the same without any cost to the owner within the defects liability period. If the Contractor fails to do such repair works, the Employer shall be entitled to carry out such works at the risk and cost of the Contractor including recovering of supervision and overhead charges from the amounts due to the Contractor.

12. LIQUIDATED DAMAGES

In case the completion of work is delayed, in whole or in part, beyond the stipulated time period, liquidated damages shall be levied @ 1% (one percent) of the contract value per week or part thereof subject to a maximum of 5% (Five percent) of contract value. In case extension of time is granted, it shall be subject to imposition of liquidated damages unless specifically waved off by Engineer. Alternatively, the work shall be withdrawn and got done through other agencies at the cost and risk of the Contractor if the Employer finds the progress of work so slow that it may not be in the capacity of the Contractor to make up the backlog.

Progress will be reviewed in weekly site meetings and assessed in detail on monthly basis as per the mutually accepted time schedule forming part of the contract. In case the progress falls behind schedule persistently, the Engineer-in-charge may propose levy of liquidated damages from the next payment. However, in case the short fall as per the original targets is made up before the next monthly assessment and progress is brought to as per the agreed time schedule, the amount earlier deducted will be refunded in the next bill itself.

13. MATERIALS

Materials/items for the above shall be as per the approved makes list annexed to you along with the enquiry.

14. WORKMANSHIP, CODES & STANDARDS

Workmanship shall be the best in the industry. The works shall be carried out as per the specifications laid down by the tender document / by the client / Consultants and approved drawings and specifications.

In the absence of specifications, relevant Indian Standard Code of practice together with their latest revisions/amendments as applicable on the date of LOI shall be followed. In the absence of the



relevant I.S. code of practice, the instructions of the Construction Manager and/or standard engineering practice shall be adopted. In case of contradictions/conflicts between the specifications, the interpretation of the Engineer in Charge shall be final and binding. Method statement shall be prepared for all items of work and Engineer in Charge shall approve the same. Standby machinery shall be maintained at site for any breakdown requirements. You shall prepare shop drawings for all such items of work desired by Engineer in Charge, which shall be duly approved before commencement of such items of work. Our Engineer in Charge shall introduce to you our ISO formats for the project. You shall co-operate completely to bring about overall quality of the project.

15. SAMPLE APPROVAL

Necessary sample approval has to be taken from WBIDC before start of installation/commissioning.

16. INSPECTION & TEST CERTIFICATES

Material shall be thoroughly tested by us at your works before dispatching to site. Materials will also be inspected again on receipt at site. In case of any defects, the same shall be rejected and the same shall be replaced at free of cost to us within One week's time. All test certificates shall be produced at the time of delivery at our site along with the materials.

17. DRAWINGS & DOCUMENTATION

Drawings/Catalogue shall be submitted by you immediately after receipt of the order. The drawings & QAP once approved by client have to be strictly followed by you and no deviation from the drawings & approval will be allowed. You shall submit the test certificate & inspection report as mentioned in the QAP along with dispatch documents. QAP shall indicate all routine test as per IS/relevant standard.

18. MANUALS

You are required to submit the manuals of all the items supplied by you to the Engineer in Charge at the time of delivery / installation & commissioning.

19. QUALITY OF WORK

QAP for all systems and peripherals shall be submitted by you immediately from the date of the LOI. The QAP once approved by WBIDC have to be strictly followed by you and no deviations will be allowed.

20. RISK PURCHASE

In the event of your failure to execute our order exactly as per delivery schedule stipulated, we reserve the right to cancel the order in part or in full subject to Force Majeure clause and procure such cancelled item/items from alternative sources at your risk and cost. Any extra cost incurred by us on such procurement will be recovered by us either by way of deduction from your pending bills or by means of separate remittance from you within 15 days of receipt by you of our debit note/ notes.



21. FORCE MAJEURE

Any delay or impediment in the fulfilment of its obligation by either party by reason of force majeure, such as acts of nature like floods, earthquake, epidemics, acts of war, civil war and transport strike shall constitute excusable delay and no compensation or idle time payment shall be made for such delays but extension of time for such period shall be granted by us after examining the merit of the case for such each individual happenings.

22. RESOLUTION OF DISPUTES

Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, design, drawings and instructions here-in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:

If the contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer-in-Charge on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable, he shall promptly within 15 days request the Project engineer in writing for written instruction or decision. Thereupon, the Project engineer shall give his written instructions or decision within a period of one month from the receipt of the contractor's letter.

If the Engineer in Charge fails to give his instructions or decision in writing within the aforesaid period or if the contractor is dissatisfied with the instructions or decision of the Engineer in Charge, the contractor may, within 15 days of the receipt of Engineer in Charge decision, appeal to WBIDC who shall afford an opportunity to the contractor to be heard, if the latter so desires, and to offer evidence in support of his appeal. WBIDC shall give his decision within 30 days of receipt of contractor's appeal.

Except where the decision has become final, binding and conclusive in terms of Sub Para (i) above, disputes or difference shall be referred for adjudication through arbitration by a sole arbitrator appointed by WBIDC. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever, another sole arbitrator shall be appointed in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

23. ARBITRATION

In the event of any dispute or difference arising out or in connection with this agreement shall be settled amicably by negotiations between the authorized representatives of both the parties failing which such dispute or difference shall be resolved by an Arbitral Tribunal consisting of a Sole Arbitrator mutually appointed by parties. Failing such agreement, each party shall appoint their Nominee Arbitrator and both the Arbitrators shall appoint the third Arbitrator who shall act as the Presiding Arbitrator. The arbitration proceedings shall be conducted in accordance with the Arbitration and Conciliation Act, 1996 and/or any statutory modifications thereof as applicable in India and the Award rendered by the Arbitral Tribunal shall be final and binding on the Parties. The



venue of Arbitration shall be Kolkata, India and the language used shall be English. This Agreement shall be governed by the substantive laws of India.

24. TERMINATION OF CONTRACT

If your progress is consistently found to be below the accepted construction program, and if the quality of work being executed by you falls below the expected standards laid down by us, in such cases, in the interest of timely completion of the project and to maintain, the high quality of work, we reserve the right to delete any part of the scope of work or, the entire balance work to be taken away from you, and get such works executed by other agencies, as you risk and costs. For all work being executed by us, we shall debit additional 20% as our overheads over and above the cost. In such a case, we shall make no compensation or extra payment to you. Any extra cost incurred by us on such purchases including the penalty imposed shall be recovered from your pending bills or by means of a separate remittance from you within 15 days from our debit notes.

25. LABOUR LAWS

You shall comply with all the labour laws of the State Government, Central Government and Local authorities as applicable from time to time at the place of work. You shall cover all your workmen under PF / ESI/ WC. All records to be maintained under these laws shall be maintained by you and produced to the concerned authorities as and when directed to do so. No extra payment will be made on the ground of complying with these labour laws by us. In case if you fail to provide any of the above facilities, appropriate liability amount devolving on us will be deducted from your bills.

26. SAFETY RULES & REGULATIONS

You shall strictly abide by all safety standards, specification, practices, rules and regulations in construction meeting to the satisfaction of engineer in charge and also the instruction of our safety engineer at site. Your workmen at site must follow strict adherence to the said safety rules. Any kind of unsafe action or unsafe method of work by you workmen, which may lead to injury to your workmen, will be viewed seriously and penalty for the same will be levied on you for such unsafe actions. You are responsible for the safety of your staff and employees and also employees of other agencies working in your area of operation. You shall delegate the responsibility of implementation of safety rules to one of your staff. All safety appliances required like safety helmets, safety belts, shoes other safety PPE etc. shall be arranged by you at your cost.

All the working area will have to be properly maintained and proper access to be provided for all the people. Also proper housekeeping has to be maintained in the areas of work.

In case of repeated violation of safety rules and precaution by any of your workman, he will not be permitted inside the site of work. Your authorized representative shall attend all safety meetings convened by ECC's site safety engineer and abide by his instructions and follow the site safety practices without failure.

27. FACILITIES

All facilities required for the above job scope of works is included in the subcontractor account.



28. CONTRACTOR'S OBLIGATIONS

All materials necessary for the works, all Tools and Tackles and necessary equipment and Labour and Consumables will be provided by you and adequacy of the same shall be ensured at all times during the tenure of this contract. Plant / Equipment, Tools and Tackles shall not be removed without our express permission.

- You shall provide all skilled and unskilled labour and supervisory staff necessary for the satisfactory completion of this work.
- Transport of your men, materials, machinery, tools and tackles is your responsibility.
- Telephone and fax facilities shall be provided by you.
- Responsibility for unloading of your material, its storage and shifting to the work place shall be part of your scope.

You shall arrange for the accommodation of your staff and workmen at your cost.

In case if any material / Consumable / Tool etc., is issued by us for carrying out the works under your scope, the same shall be charged at actual cost plus 20% Overheads. The same is applicable for labour also.

All installations shall strictly adhere to statutory norms governed by statutory bodies for the FPS works.

Water, power and distribution lines as required for all for the satisfactory / completion of works under your scope. Power & Water will be provided by WBIDC at one point.

Storage space for storing your materials will be provided by WBIDC. However we shall not be responsible for any loss or damages due to any reason whatsoever and you shall safeguard all the materials including the free issue materials at your cost.

All types of Crane requirement needed for the completion of your works as per WBIDC requirement shall be in your scope.

- Minor civil works will be in your scope.
- Labour & staff accommodation shall be in your scope.
- Scaffolding including Installation/Erection will be done by subcontractor.

29. COORDINATION WITH ALL AGENCIES

You shall work in close co-ordination with all other agencies working at the site without any damage to others works and material.

30. EXTRA CONDITION

WBIDC shall have the right to accept and reject any bid and to cancel the bidding process and reject all bids at any time prior to the award.



SECTION F – DIFFERENT FORMS INCLUDING FORM OF BID

Standard Forms

(a) Standard Form of Agreement

Notes on Standard Form of Agreement

The Agreement should incorporate any corrections or modifications to the Bid resulting from corrections of errors (Instructions to Bidders, Clause 25).

Standard Form: Agreement

Agreement

This agreement, made the _____ day of _____ 20_____,
between _____
_____ [name and address of Employer]

(Hereinafter called "the Employer") of the one part, and _____
_____ [name and address of
Contractor] (hereinafter called "the Contractor" of the other part).

Whereas the Employer is desirous that the Contractor execute

_____ [name and identification number of Contract] (hereinafter called "the
Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such
Works and the remedying of any defects therein at a cost of Rupees.....

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.



4. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:
- i) Notice to proceed with the works (Letter of Intent/Work Order);
 - ii) Contractor's Bid;
 - iii) Conditions of Contract
 - iv) Specifications;
 - v) Drawings; and
 - vi) Any other document listed in the Bid Document as forming part of the contract.

In witness whereof the parties thereto have caused this Agreement to be executed the day and year first before written.

The Common Seal of _____

was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said _____

in the presence of:

Binding Signature of Employer _____

Binding Signature of Contractor _____



(b) FORMAT OF BANK GUARANTEE AS PERFORMANCE /SECURITY DEPOSIT

To

West Bengal Industrial Development Corporation Limited
23 Abanindranath Thakur Sarani
Kolkata – 700 017.

Telephone no. 033 2255 3700

Fax no. 033 2255 3737

WHEREAS _____ (Name and Address of Contractor)
(hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated
_____ to execute _____ (Name of Contract and brief description of works)
herein after "The Contract."

AND WHEREAS it has been stipulated by you in the said contract that the Contractor shall furnish you with a bank guarantee by a Nationalised Bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract.

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE, we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up-to a total of _____ (amount of guarantee) _____ (in words), such sum being payable in the types and proportions of currencies in which the Contract price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ (amount of guarantee) as aforesaid without your needing to prove or to show grounds or reasons for a demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the works to be performed hereunder or of any of the Contract documents which may be made between you and the Contractor shall in anyway release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This Guarantee shall be valid until a date 45 days after the expiry of defect liability period of 18 months after intended completion date.

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____



Form of Bid

Notes on Form of Bid

The Bidder shall fill in and submit this Bid form with the Bid.

_____ [Date]

To

West Bengal Industrial Development Corporation Limited
23 Abanindranath Thakur Sarani
Kolkata – 700 017.

Telephone No. (s): Office: 033 2255 3700

Facsimile (FAX) No. 033 2255 3737

Description of the Works: _____

1. I/We offer to execute the works described above and remedy any defects therein, in conformity with the Conditions of Contract, specifications, drawings, Bill of Quantities and Addenda for Item Rate Contract of Total Bid Price of Rs. _____ (BOTH IN FIGURES AND WORDS)
2. We undertake to commence the works on receiving the Notice to Proceed with work in accordance with the contract documents.
3. This Bid (including all amendments and minutes of pre-bid meeting) and your written acceptance of them shall constitute a binding Contract between us.
4. We understand that you are not bound to accept the lowest or any Bid you receive.

We hereby confirm that this Bid complies with the Bid validity and Earnest money required by the bidding documents and specified in the Instructions to Bidders (ITB).

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Bidder: _____

Address: _____

By Order
Managing Director