



PREBID REPLY

Date : 24.04.23

Project : FIRE HYDRANT SYSTEM, COCHIN DIVISION

Tender no : 04085/2023-2024/E27127

Sr. No.	Document	Page No. & Clause	Clause	Bidder Queries	Pre bid Reply
Bidder 1 :					
1	Tendernotice_1 Tender_docs	Pg 101 Pg 102 Pg 156	Period of contract – 4 months 3.1.0 All surfaces to be painted shall be free from rust, oil, grease, dust, stain, moisture or any other foreign material/contamination, as per IS 1477 Part I. 6.1.3 Painting shall be carried out only under favourable conditions. Painting shall not be carried out in dusty and draught conditions in damp areas and during rainy . 3.9.3. Blasting operations shall not be carried out during rain, snow, or strong winds.	Request to please consider time of 12 months for execution considering the following: 1. Supply of items like monitors – take about 3 to 4 months after technical clearance. 2. Making approximately 1,000 pedestals for pipe supports 3. Monsoon – which will hamper welding and painting as moisture beyond permissible limits could be present and also as per specifications	<i>Tender condition shall prevail</i>
2	NA	NA	NA	Please clarify that entire P&ID, design and layout for mechanical, electrical, instrumentation, etc. systems is in the scope of FACT. Contractor must only prepare fabrication drawings.	<i>Contractor shall prepare fabrication drawing, as built drawings and other documents as per VDR based on tender drawings and site condition. The same shall be submitted for approval from FEDO/Client before further proceedings.</i>
3	NA	NA	NA	No work and cost related to liaison and obtaining fire NOC from fire department is in the scope of contractor. Please review and confirm.	<i>Liaisoning and obtaining NOC from fire department is not envisaged in contractor scope. However the necessary drawings and engineering documents for the same shall be in the scope of contractor.</i>
4	NA	NA	NA	We request that all drawings, details, etc. should be released within the 1 st week of acceptance of LOI / WO. Material / items in scope of FACT will be available within 15 days of placement of LOI / WO. We assume that entire work front will be available at the time of placement of LOI / WO by FACT	<i>Refer reply to point 2of this document.</i> <i>Refer to clause no.4 of SPECIAL REQUIREMENT FOR THE PROJECT(PIPING) 32536-03-TS-003 SP.</i> <i>Refer to clause no.13 of SPECIAL REQUIREMENT FOR THE PROJECT(PIPING) 32536-03-TS-003 SP.</i>
5	NA	NA	NA	1. In the interest of work to meet the schedule, we may have to deploy machines (like JCB) for digging for support for pedestals, road crossings, etc. Permission for same should be given. In case permission is not granted, suitable time extensions to be provided to do the work manually. 2. Underground utilities, if any, will be informed by FACT. 3. Additionally, it has been our experience that in case of bitumen roads, bitumen is available only in truck loads. In such case we may have to do multiple road crossings simultaneously and we will make good the same at one time, and not one at a time. Such road crossings will be mutually decided between FACT EIC and contractor Site-In-Charge. Please review and approve the above.	<i>Machines (like JCB) for digging for support for pedestals, road crossings, etc can generally be permitted subject to clause no.13 of SPECIAL REQUIREMENT FOR THE PROJECT(PIPING) 32536-03-TS-003 SP.</i> <i>Contractor has to co-ordinate with FEDQ/FACT in charge before proceeding with execution of work at site.</i> <i>In case of Underground road crossing,the required portion of road shall be excavated to the specified depth and after laying of pipes shall be properly backfilled and compacted and finished with a concrete pavement. Qty for the same has been considered in the schedule.</i> <i>Refer Corrigendum in this regard</i>
6	Tender_docs	Pg 5 Clause 9.0	GST: The basic rate quoted by the Bidder for all the works as per this tender shall be exclusive of applicable GST. GST rates applicable for each item shall be quoted separate in the BOQ.....	We will mention GST % and SAC code as of the time of submission of bid. In case of a change of GST % or SAC code at the time of billing the same will be billed accordingly. Also, in case of revision of GST % the applicable GST % at the time of billing will be billed and the same is to be paid. Please review and confirm.	Confirmed.
7	Tender_docs	Pg 6 Clause 9.8 Pg 5 Clause 9.0 Pg 62 Clause – 3 V	...If the GST is to be paid by the Contractor as per the relevant notification, he shall arrange to remit the same to the concerned authority and FACT shall reimburse the same to the Contractor based on documentary evidence.... GST charged by the supplier/contractor shall be released separately to the supplier/contractor only after filing of the outward supply details &the monthly return on GSTN portal by the supplier/contractor and (ii) on matching the Payment towards GST portion shall only be released after uploading of invoice details by the contractor and the same is reflected in GSTR2B	Please be advised that we are collecting GST on behalf of Govt. We raise GST invoice in GST portal.GST becomes payable after invoicing.Request you to please pay GST mentioned in the bills and not wait until it is reflected in GSTR2B as that may take upto 50 days from the date bill is raised.We will submit to FACT documents as and when available from GST portal.We request FACT to not hold release of GST till submission of documentary evidence /reflection in portal.The same is being followed by other PSU's or similar we have worked and are working with.Otherwise, it will cause serious cash flow issues as we will have to arrange for additional capital equivalent to the amount of GST in bills raised.	<i>Tender condition shall prevail. Payment towards GST portion shall only be released after uploading of invoice details by the contractor and the same is reflected in GSTR2B.</i>
8	Tender_docs	Pg 7 Clause 10.5	10.5 Bids without EMD shall be rejected except in the following cases: EMD will be exempted for Govt. Depts. / firms, public sector units, MSE units registered under MSME Act (subject to Declaration of Udyam Registration Numbers by the vendors on CPP Portal.....	Request to please confirm that tender fee and EMD are exempted for MSME registered parties.	<i>EMD is exempted for Micro and Small Enterprises. Tender fees is not applicable for this tender.</i>

9	Tender_docs	Pg 26 Clause 7.3	CONTRACTOR shall not change the Representative at SITE without prior written approval of FACT	People cannot be bound to work as per labour law. Hence, we will intimate in writing of change in representative at site or any person directly coordinating with FACT personnel. This is for your information and record.	Noted.
10	Tender_docs	Pg 30 Clause 12.8	FACT reserves the right to engage or for participation of representatives of FACT'S Licensor or collaborator or any third party inspection agency that FACT may appoint for the purpose, in inspection and testing of WORK and such representative may exercise with CONTRACTOR such authorities as FACT may delegate to them.	TPI for supply for some items is mentioned in BOQ. Other than those, please advise who will bear the cost of TPI including travel, lodging, boarding, etc. in case FACT appoints a Licensor or collaborator or TPI. In case it is to be borne by contractor, request to please specify the scope of items, scope of work (supply, erection, etc.) that contractor has to cover so we can include in our estimate accordingly.	Scope of TPI inspection is limited to items as mentioned in the tender document. Necessary expenses of the above shall be borne by the contractor.
11	Tender_docs	Pg 30 Clause 13.3 Pg 43 Cl. 32.1, 32.2 all prices shall remain firm till completion of WORK and shall not be subject to escalation of any description including those on account of delays due to Force Majeure,... Delay by FACT	For reasons beyond control of contractor (like Force Majeure, attributable to FACT, time extensions without penalty, etc.) price escalation should be provided to compensate for variations beyond control of contractor and on submission of documentary proof as the same cannot be estimated by the time of bid submission. FACT can decide on an Index or Modus Operandi to be followed.	Tender condition shall prevail
12	Tender_docs	Pg 31 Clause 14.3	Claims for part - payments shall not be more frequent than once a month....	As the project is to be completed in a short duration, substantial investment in material and labour will be required. Hence, request to please allow multiple bills in a month, though the minimum value of bill may be set to 30 lacs. Request to please review and approve.	Tender condition shall prevail
13	Tender_docs	Pg 34 Clause 18.1	FACT shall provide CONTRACTOR with supply of electric power at nominal supply voltage of 415 V in 3 phase 50 C/s, 4 wire system at one point	As the site is spread in a wide area, request for power at 200 mtr. at multiple places from working/testing point so we can lay cable safely, manage road crossings, entrances, etc. Request to please review and approve.	Tender conditional prevails. For field works DG power may be arranged by the contractor. Single point construction power supply will be given by FACT CD.
14	Tender_docs	Pg 34 Clause 18.3	OWNER / FACT shall provide CONTRACTOR with supply of water for use in WORK carried out at SITE at one point in....	As the site is spread in a wide area, request for water at 200 mtr. at multiple places from working/testing point so we can lay pipe safely, manage road crossings, entrances, etc. Request to please review and approve.	Tender condition prevails.
15	Tender_docs	Pg 41 Clause 28.6	Building and Other Construction Worker's Welfare Cess Act	Please confirm, BOCW will not be deducted by FACT. Contractor has to deposit BOCW and submit proof to FACT.	Confirmed. In case OWNER/FACT is called upon to pay any such expenses, these shall be reimbursed fully by CONTRACTOR and OWNER / FACT shall be entitled to recover the same from CONTRACTOR
16	Tender_docs	Pg 62 Clause 1, 2	No mobilization advance No secured advance	As completing the work in 4 months will require huge amount of capital investment for procuring material and also at least 1 – 2 months of labour salary, request you to please consider 10% mobilization advance against submission of Bank Guarantee. This will help bidders to submit a competitive bid and may also increase participation of bidders resulting in healthy competition.	Tender condition prevails.
17		Pg 63 Clause 3	3. PAYMENT I. 90% against the value of running bills after recovery of taxes, duties, etc within 15 days of receipt of invoice subject to certification of CONSULTANT/ OWNER. Balance 10% shall be released along with Final Bill against extension of Bank Guarantee submitted towards security deposit covering the defects liability period.	Since contractor will submit 10% Security deposit at the start of work, request to release 100% against running bills, as otherwise it will cause extra burden of additional capital requirement.	Tender condition prevails.
18	Tender_docs	Pg 79 Clause 4.0	The company reserves the right to terminate the contract partially or wholly at any time during the period of contract.	This is only applicable in case contractor is unable to fulfill obligations per contract terms Or Force Majeure.	Tender condition prevails.
19	Tender_docs	Pg 79 Clause 8.0	8.0 The Contractor is bound to do works in excess of that in the schedule of quantities or extra items of works necessitated during the actual execution of work and for such works payments will be made as per the agreed rates or at the rates based on which tender is issued plus or minus tender difference as the case may be.	Limited to + / - 25% of original contract value.	Refer to clause 3.2 of doc. 3901-32536-01-PS-003-SPL
20	Tender_docs	Pg 86	TPS - 3901-32536-01-PS-003 SW TPS No. 3901-32536-01-PS-003 Fire fighting equipment – diesel engine driven pumps, motor driven jockey pumps	We understand that only items against which " X " is marked in " Reqd " column is in the scope of contractor. Further these items are covered under BOQ, and if not additional item with mutual agreement of FACT and contractor will be formed and executed. Further - items 10, 11, 12, 14 of packing forwarding unloading transportation, consumables for erection and commissioning, erection and special tools is only limited to pipes, valves, etc. and is not referred to for pumps. Please review and confirm.	All items indicated as required in the scope of work by " X " mark are included in the scope of contractor, but not limited to. Also refer to clause 3.2 of doc. 3901-32536-01-PS-003-SPL The fire water pumps are already installed in the fire water pump house at phase 1 area.
21	Tender_docs	Pg 88	TPS - 3901-32536-01-PS-003 VDR MECH TPS No. 3901-32536-01-PS-003 Fire fighting equipment – diesel engine driven pumps, motor driven jockey pumps	Please be advised that vendors provide datasheets per specifications only after placement of order which can be done only on receipt of order from client by contractor. Hence, we understand that " S " mentioned in column " Offer " refers to post bid submission.	Tender conditions shall prevail.

22	Tender_docs	Pg 101 Clause 3.5.0 Pg 113	Painting 3.5.0 Hard and caked dust, mud, mill scale and rust shall be removed by mechanical means like wire brushing, sand blasting, shot blasting or grit blasting. Sand Blasting in painting specification (02ES023) shall be read as shot/grit blasting.	In our experience shot blasting is the only way to remove mill scales and rust. Other methods of manual cleaning like wire brushing, solvent cleaning, etc. are also mentioned in the specification. Request you to please review and confirm surface cleaning requirement as shot blasting, as it will have substantial financial impact on estimation compared to wire brushing.	Refer to clause 3.9.0 of doc. 02ES023/2010
23	Tender_docs	Pg 106 Painting Pg 104	NA	Please confirm if the following painting scheme is correct for Items under scope of this tender 1) Pipe and fittings Table 1 – Class I Sr. No. 1 – Uninsulated, Non corrosive atmosphere Operating temperature ≤ 65 Paint Sub class (1) N Primer → A.01 → 2 coats, 20 DFT / coat Finish → F.01 → 2 coats, 20 DFT / coat A.01 → Synthetic Zinc Phosphate Primer F.01 → Synthetic resin based enamel 2) Steel structure – same as pipe above.	Confirmed.
24	Tender_docs	Pg 113	Wrapping and coating of underground lines shall be as per specification 03ES012/15	Tender Spec mentions : Coal tar primer + coal tar enamel + fiber glass inner wrap + glass fiber felt outer wrap Humble request to consider IWWL specified along with 4mm coal tar base tap coating which is generally in use by various PSU clients presently.	Tender conditions shall prevail.
25	BOQ	NA	NA	Discrepancy in supply and erection quantities. Request to please review the items in BOQ and revert. Some examples are given below. Item 1 : Supply of single hydrant – 110 Nos Whereas erection includes Item 3, 4, 5 – 110, 17, 2 respectively Water monitor Item 2 – Supply – 4 nos – look in tech spec. for scope of monitor as well or only stand. Item 6 – Erection – 6 nos Item 7 – Erection of HVLRM – 3 nos. but supply is not mentioned. Pipe - 200 mm dia, 6 mm Item No. 11 : Supply - 3,900 mtr Item No. 72 : Installation - 3,480 mtr Request to please review and clarify the above and also other items having such discrepancy.	The relocation of some of the existing hydrants monitors and HVLRM are also included in the scope of contractor. The variation in the quantity of supply and erection of items is due to the accounting the relocation of existing items. Pipe supply is inclusive of spares.
26	BOQ	NA	Items 3 to 7 Erection/installation/assembly/relocation/replacement of following.....	Replacement means supply of new items and erections after dismantling of old item. Please clarify.	Confirmed
27	BOQ	NA	Items 10 Supply of CS PIPE, IS 3589 Gr.410, BE,ERW, ASME B36.10, 150 NB, SCH.40, Item 12 – Qty 788 mtr Supply of CS PIPE, IS 3589 Gr.410, BE,ERW, ASME B36.10, 350 NB, 6mm Thk, Item 13 Supply of CS PIPE, IS 3589 Gr.410, BE,ERW, ASME B36.10, 400 NB, SCH.20,	1. IS 3589 pipes are specified based on thicknesses. 2. 350 NB pipe → Thickness available are 5.6 and 8.0 mm. Estimating pipe with 8.0 mm thickness will substantially impact the offer. Request to please review the pipe supply items 8 to 13 with respect to specification, thickness, schedule, grade, etc and revert so we can incorporate accordingly in our offer.	Wall thickness of IS 3589 Gr.410, BE, ERW pipes are as follows 150 NB - 6.00 mm 200 NB - 6.00 mm 350 NB - 6.00 mm 400 NB - 7.94 mm IS 3589 Gr.410 pipes with these thicknesses are available in markets. Refer Corrigendum in this regard
28	BOQ	Items 8 to 62	NA	FACT has written all other materials required for completion of work shall be in scope of contractor. We would like to know what is "these materials" may be and how much quantity as you will appreciate sir, we cannot estimate and include in our quote which is not specified. Therefore, either we quote what is visible OR please specify the required items with specifications and quantity OR ignore these words.	This includes any small items which do not have any major cost implications and is necessary for the completion of work. Any major change in quantities etc. will be paid with similar items rate.
29	BOQ	Item 69 to 74	Installation of above ground pipeline	Request to please clarify the following: 1. Supply of structure for trunnion supports will be paid separately and additionally under structure item 100. 2. Concrete sleepers/pedestals will be paid separately and additionally under items 118 to 125, 127 3. Painting of trunnion supports will be included in pipe rate and not paid separately. 4. Temporary gaskets shall be used – please clarify the meaning.	1. Confirmed 2. Confirmed 3. Confirmed. 4. Temporary gaskets shall be used at the time of hydrotest.
30	BOQ	NA	Item 100	The quantity of 1.5 MT of structure for pipe supports looks less. Request to review and confirm.	Will go with the tender condition. If any additional quantity is required during erection, that will be paid under similar items.
31	BOQ	NA	Third party inspection (TPI)	TPI is mentioned for supply of pipes, flanges, fittings, nuts-bolts, gaskets, valves. However, it is not mentioned for supply of hydrant, water monitor stand.	TPI not envisaged for Hydrant and Water Monitor standpost assembly. These shall be BIS/FM/UL certified. Refer Corrigendum in this regard

				Please review and confirm the scope of TPI for supply, erection, etc.	
32	BOQ Tender_docs	NA	Item 92 Road crossing detail	Hume pipe for encasing steel pipe for road crossing is a good engineering practice. The same is also shown in typical road crossing detail. However, hume pipes are neither included in the underground item nor a separate item. Request to please review and revert.	Refer to below clause of IS 13039:2014 7.2 Underground mains shall be laid such that the top of the pipe is not less than 1 m below the ground level. 7.11 .semicircular RCC pipes are recommended for Cast Iron pipes. As hume pipe is mandatory only for cast iron pipes the same is not envisaged. An earth cushion of minimum 1.5 m shall be provided and ensured at road crossing. Refer corrigendum in this regard. Refer Corrigendum in this regard
33	NA	NA	NA	FACT will either provide attendance of contractor staff from their system monthly or allow contractor to install an attendance system to capture data at site/office.	No arrangements for attendance for contractors' labours will be provided.
34	NA	NA	NA	Request for office space (for project management staff) with furniture, electricity, light, ventilation will to be provided free of cost. Request for providing secured and covered space for shed (for storage of material, tools, tackles, labour for sitting, eating, etc.), fabrication, painting.	Open space shall be provided in the premises. However necessary arrangement shall be done by the contractor.
35	NA	NA	NA	Request to please provide access to the following on chargeable basis similar to emergency services. 1) Canteen - chargeable 2) Washroom - goodwill	Canteen facility shall not be provided. Portable toilet facility shall be arranged by contractor.
36	NA	NA	NA	Request to please allow permit and parking space for 1 personal and 1 rental vehicle	Contractor shall to obtain prior approval from FACT CD after the award of contract.
Bidder 2 :					
37	SOR	item No.2	Supply of water monitor stand post assembly	As per the data sheet Document No. 3901-32536-01-PS-003-DS02, the height of the stand post assembly is not shown along with flange details of stand post, is Gate valve is included in the assembly along with the gaskets and stud bolts also not mentioned in the data sheet. But in the drawing No. 32536-02-DG-10660, Typical detail of monitor underground is shown, and the stand post assembly is fitted with the WNRF flange and Gate valve of 100mm NB. So please clarify, the height of the stand post as well as the Flange, Gate valve, water monitor, Gaskets and fasteners are to be added in the same.	Installation Height shall be as per the drg. 32536-02-DG-10660. Separate gate valves are envisaged for water monitor only. Gaskets and fasteners are included in the scope of contractor.
38	SOR	item No. 8,9 and 10.	Supply of CS pipe, API 5L Gr.B PSL1, BE, ERW, ASME B 36.10, 80NB, Sch.40.	Normally, for fire water pipelines, pipes sizes below 200 mm NB is considered as IS 1239 Class C Heavy and above 200 mm NB is considered as IS 3589 Gr. 410. Thickness varies from 6 mm to 8 mm depends on the diameter of pipe. Please clarify whether this item is required CS seamless Pipe Sch 80 or ERW pipe as per IS 1239 Class C Heavy.	Tender conditions shall prevail.
39	SOR	item No. 11,12 and 13	NA	Please give the wall thickness of pipe in mm	Wall thickness of IS 3589 Gr.410, BE, ERW pipes are as follows 150 NB - 6.00 mm Thick 200 NB - 6.00 mm Thick 350 NB - 6.00 mm Thick 400 NB - 7.94 mm Thick Refer Corrigendum in this regard
40	SOR	item No. 58 to 62	Supply of gate valves	As per SOR the Trim 8, ie 13% CR / Hard Faced". As per the data sheet Document No. 3901-32536-03-PS-GAV 210 attached with the tender, indicates "Disc; Seat & Back Seat: A 182 Gr.6Fa". Which one to follow? Shall we follow Trim 8?	Please refer API 600 Table 8. For trim Number 8 nominal trim is F6 and hard faced, seat surface is 13% Cr and Co-Cr A. Forged seat surface material is mentioned as ASTM A182 (F6A). So please follow Trim 8 which is matching with valve data sheet.
			Painting	Also, data sheet mentioning the painting as Aluminium Paint. But as per the paint specification the colour should be fire red. Which one to follow? Shall we follow Fire Red?	Regarding painting, data sheet requirements shall be followed for procurement of valves. Final paint color at site after erection shall be fire red (shade No. 536 as per IS 5).
41	SOR	item No. 69 to 74.	Installation of Above ground pipe	The item does not mention any corrosion pad on pipes wherever pedestal is supported to the pipe. Please add a line item for the installation of corrosion pad. Also verify the quantity of pipes to be supplied is included this corrosion pad.	Corrosion pad is not envisaged for fire water piping.

42	SOR	Item No. 92 to 97	Installation of underground piping.	This item does not include the usage Hume pipes wherever road crossing required to route the line. Please add a line item for supply and installation of Hume pipes.	Refer to below clause of IS 13039:2014 7.2 Underground mains shall be laid such that the top of the pipe is not less than 1 m below the ground level. 7.11 , semicircular RCC pipes are recommended for Cast Iron pipes. As hume pipe is mandatory only for cast iron pipes the same is not envisaged. An earth cushion of minimum 1.5 m shall be provided and ensured at road crossing. Refer corrigendum in this regard.
43	SOR	Item No. 127	NA	As per the Drawing No. 32536-12-DG-00001 typ. details of foundation for FW pipelines at FACT CD, does not shown the moving rod on the top of the insert plate.	20 mm dia rod shall be included on the top of the insert plate. The quantity of same shall be taken from the structural quantity included in the Schedule of Work. Refer corrigendum in this regard.
44	Proforma Contract	Page No.17 of 36, Article 18.	Construction power and water.	Please specify the supply of power shall be provided at the entire field for laying and welding of pipeline	Tender conditional prevails.For field works DG power may be arranged by the contractor. Construction power shall be given only at a single point.
45	NA	NA	Period of Contract.	It is mentioned in the tender document, the period of contract is 4 Months. But the supply of Gate valves, most of the suppliers as per the vendor list, the supply shall be 14 to 16 weeks from the date of approval of drawings and QA policy. So the final order for the manufacturing of Gate valves only can be placed after the approval of the drawings and QAP. Being coming months are in monsoon period, the site execution is also very difficult to complete within this period. So, extend the period of completion to a minimum of SIX months.	Tender condition shall prevail
Bidder 3 :					
46	NA	NA	NA	The BIDDER/CONTRACTOR shall have successfully completed in last Seven (7) Years similar works of: I. One work of value INR 3.4 Crores OR II. Two works of value INR 2.2 Crores each OR III. Three works of value INR 1.7 Crores each Similar work means Piping work involving fabrication and erection of carbon steel pressure piping of minimum 200 NB size and of minimum sch 20 thickness rating in any chemical/petrochemical/fertiliser/LPG/refinery/ Boiler/power plants.As per the above criteria we should have done 200NB and above size piping for the worth of 3.4crores. Kindly note we have done fuel oil handling system for 2 x 660MW thermal power plant in which piping also there.We have done 200NB Sch-20 piping of 4400 mtrs and 300NB piping of 80mtrs in the same project. Total project value is 9.59crores. Completion certificate is also attached herewith for your ready reference. Fuel oil handling system consists of storage tanks, piping, pumps, valves, strainers etc., But we cannot prove the piping value worth is 3.4crores with the given certificate. Now you are requested to kindly consider the total value of the project against One work value mentioned in your technical qualification criteria.	The said work qualifies similar work criteria.

Name of Work : Fire hydrant line project work for FACT CD
E-Tender ID No : 2023_FACT_747859_1

Corrigendum-Technical

TPS 3901-32536-01-PS-003 R1

A. M&PCE

1. Document No. 3901-32536-01-PS-003-SPL of TPS 3901-32536-01-PS-003 R1, Special Requirements of Project

Additional Requirement:

“All hydrants and water monitors stand post assembly supplied shall be BIS/FM/UL certified.”

2. Document No. 32536-02-DG-10660 of TPS 3901-32536-01-PS-003 R1, Typ. Details of Hydrant and Water monitor, Typ. Road Crossing Detail

“1.5 M EARTH CUSHION FROM TOP OF HUME PIPE”

The above sentence is modified as

“1.5 M EARTH CUSHION FROM TOP OF PIPE”

B. PIPING

1. Document No. 32536-03-TS-003 SP of TPS 3901-32536-01-PS-003 R1, Special Requirement for the Project (Piping)

Additional Requirement:

“20 mm dia rod shall be provided on the top of the insert plate for sleepers.”

2. Document No. 32536-03-SW-003 of TPS 3901-32536-01-PS-003 R1, Schedule of items of work

Wall thickness of IS 3589 Gr.410, BE, ERW pipes shall be generally read as:

150 NB - 6.00 mm Thick
200 NB - 6.00 mm Thick
350 NB - 6.00 mm Thick
400 NB - 7.94 mm Thick

C. CIVIL

- 1.** Document No. 32536-12-DA-001 Ro of TPS 3901-32536-01-PS-003 R1, Specific Requirements of Work, Clause 3 Scope of Work

Additional Requirement:

“In case of Underground road crossing, the required portion of road shall be excavated to the specified depth and after laying of pipes shall be property backfilled, compacted and finished with a concrete pavement”