

Addendum-2 for Hajipur Sewerage Treatment Plant and Sewerage Network Project

NIT No:-BUIDCo/Yo-871/2017-40, Date-21.06.2018

Sl. No.	Section Reference	Condition as per Bid Document	To be Read As
1.	IFB Sr. N. 5 Technical Sr. No. 1	The Bidder shall provide evidence that it has Designed, developed, built, tested and commissioned at least 1 STP of 18MLD or 2 STP of 13MLD or 3 STP of 9 MLD during last 7 years preceding the month of publication of NIT.	The Bidder shall provide evidence that it has Designed, developed, built, tested and commissioned at least 1 STP of 18MLD or 2 STP of 13MLD or 3 STP of 9 MLD based on Activated Sludge Process / any other aerobic technology during last 7 years preceding the month of publication of NIT.
2.	Part-h 1.4 a Sr.N. 2	The Bidder shall provide evidence that it has Designed, developed, built, tested and commissioned at least 1 STP of 18MLD or 2 STP of 13MLD or 3 STP of 9 MLD during last 7 years preceding the month of publication of NIT.	The Bidder shall provide evidence that it has Designed, developed, built, tested and commissioned at least 1 STP of 18MLD or 2 STP of 13MLD or 3 STP of 9 MLD based on Activated Sludge Process / any other aerobic technology during last 7 years preceding the month of publication of NIT.
3.	IFB Sr. N. 5 Technical Sr. No. 2	The bidder or his nominated sub-contractor has successfully commissioned at least one Sewage Treatment Plant with the same technology as proposed for this contract for the lowest STP capacity mentioned in clause 1.4 (a) 1. above, operating successfully for a period of 1 year during the last 7 years preceding the month of publication of NIT. <i>In case of special treatments, tertiary treatment etc. The Qualification Criteria maybe suitably modified on case to case basis</i>	The bidder or his nominated sub-contractor has successfully commissioned at least one Sewage Treatment Plant based on Activated Sludge Process / any other aerobic technology for the lowest STP capacity mentioned in clause 1.4 (a) 1. above, operating successfully for a period of 1 year during the last 7 years preceding the month of publication of NIT.
4.	Part-h 1.4 a Sr.N. 2	The bidder or his nominated sub-contractor has successfully commissioned at least one Sewage Treatment Plant with the same technology as proposed for this contract for the lowest STP capacity mentioned in clause 1.4 (a) 1. above, operating successfully for a period of 1 year during the last 7 years preceding the month of publication of NIT.	The bidder or his nominated sub-contractor has successfully commissioned at least one Sewage Treatment Plant based on Activated Sludge Process / any other aerobic technology for the lowest STP capacity mentioned in clause 1.4 (a) 1. above, operating successfully for a period of 1 year during the last 7 years preceding the month of publication of NIT.
5.	Artical13 Design Services For STP 13.1. General 13.1.1 Design	The Operator shall execute the basic and detailed Design of STP and allied structures and its execution in compliance with the technical specifications and requirements contained in the contract, codes of practices	The Operator shall execute the basic and detailed Design of STP and allied structures based on Activated Sludge Process and its execution in compliance with the technical specifications and requirements contained in

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	&Engineering a)	as published by the Bureau of Indian Standard (BIS) or its equivalent standard as well as the latest version of “Manual on Sewerage and Sewage Treatment” as published by the Central PublicHealth Engineering Organization (CPHEEO) of the Ministry of Urban Development, Government of India. Wherever, the codes, standards and manual do not provide for the Design and execution of some component i.e. required to be Designed and executed, the operator shall follow the standard engineering practices as approved by Design-Build-Operations Engineer.	the contract, codes of practices as published by the Bureau of Indian Standard (BIS) or its equivalent standard as well as the latest version of “Manual on Sewerage and Sewage Treatment” as published by the Central PublicHealth Engineering Organization (CPHEEO) of the Ministry of Urban Development, Government of India. Wherever, the codes, standards and manual do not provide for the Design and execution of some component i.e. required to be Designed and executed, the operator shall follow the standard engineering practices as approved by Design-Build-Operations Engineer.
6.	Artical13 Design Services For STP 13.1. General 13.1.11 Design Responsibilities a) Sr.n 2	Selection, adoption and detailed engineering Designs for the most appropriate techno economically feasible cost effective treatment process technology for the treatment of the sewage ensuring that the treated sewage meets with the stringent of the disposal standards prescribed by the MOEF / CPCB and in the contract as may be applicable. These standards are prescribed below:	The already proposed ASP technology for the treatment of the sewage ensuring that the treated sewage meets with the stringent of the disposal standards prescribed by the MOEF / CPCB and in the contract as may be applicable. These standards are prescribed below:
7.	General Points	ASP	Activated Sludge Process
8.			Total 10.09 Acre land is available at STP. Successful bidder can set up the site such as establishments of plants, storage yard, offices, labs etc at STP.
9.		Soil investigation report	Soil investigation report is attached as an annexure-3.
10.			Annexure 2 is attached in which below mentioned requirement is available. 1. Site layout plan for STP/SPS. 2. Details of existing network laid by previous contractor with pipe diameter and depth. 3. Contour Plan of STP site. 4. Layout of proposed outfall channel.

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			5. HFL at STP site & effluent discharge point 6. Typical drawings of appurtenances such as Manholes, house service connection chamber etc.
11.		Drop Manholes In a manhole, wherever the difference between the invert level of downstream sewer and the invert level of the upstream sewer is greater than 60 cm, a drop manhole shall be provided at that position. The locations and construction of the drop manholes shall be provided as on drawings. HDPE Grade PE-100 pipes conforming to PN 6 as per IS:4984 with latest revisions and amendments suitably supported with MS fasteners at 300 mm c/c. for diameters pipe line as per Bill of Quantities, construction drawings and as directed by Engineer, specials conforming to IS: 1729 shall be used for providing the drop in the manhole & a suitable expander/reducer T-Joint at the top with incoming sewer and 45 degree bend at the bottom with HDPE specials to the direction of flow in the receiving sewer, encasing the pipe with cement concrete of 1:2:4 proportion including necessary centering and form work, vibrating, curing, including cost and conveyance of all materials, labour with all lead and lifts, etc., complete as per specification and as in construction drawing. The benching concrete in the manhole should surround the joint of the terminating bend and a neat channel shall be made in the benching concrete to direct the flow to the receiving sewer. A continuation of the incoming sewer should be built through the shaft wall to form a rodding and inspection eye, which should be provided with half blank flange as on drawing. The drop manhole arrangements shall be tested along with sewer lines.	New item (item no.19.b In table AB9) of drop connection is incorporated in revised financial bid.
12.		Vent shafts CI Vent shafts shall be erected at places as on construction drawings or as directed by Engineer and as per Bill of Quantities. The work includes providing and fixing 150mm	Deleted

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		diameter, Cast Iron pipe for ventilating shaft of 5 meters high with specials and cowl and with suitable grips in C.C. 1:2:4 pillar using 10mm to 20mm graded hard granite/trap/basalt or any other approved metal with 15 cms thick C.C. around up to 1.22 mtrs above the GL and with a foundation base of 90x90x90 cms plastered with 12 mm thick CM 1:3 to all exposed faces and linking the shaft to the manhole by means of 15 cm dia GSW pipes and specials, jointing with tar dipped hemp 1:1 1/2 CM caulking, curing with all lead and lifts etc., complete for all materials earth work excavation and refilling in all strata, and disposal of surplus earth as directed with all lead and lifts etc. complete.(Sulphate resistant cement shall be used).	
13.	Part-h 1.4 a Sr.N. 5 & IFB Sr. N. 5 Technical Sr. No. 5	It has designed, developed, built, tested and commissioned Sewerage Network of 111 KM length of the total scope of sewerage network collectively from maximum 3 projects during the last 7 years preceding the month of publication of NIT; of which 50 % should be above the pipe diameter (1000mm)	It has designed, developed, built, tested and commissioned Sewerage Network of 111 KM length of the total scope of sewerage network collectively from maximum 3 projects during the last 7 years preceding the month of publication of NIT; of which 600mtr should be above the pipe diameter (1000mm)
14.		Table AB9 (BOQ Item Sr. No. 19.a) Providing at the site lowering and laying in trenches aligning and joining of uPVC pipes of class III(4kg/cm ²) of dia 100mm and as per specification with rubber ring with socket and spigot joint (EPDM/SBR) fkor all depth including well graded granular bedding with offset 300 mm for pipe length as per drawing and specification including hydraulic field testing and commissioning etc. Complete as directed by Engineer.	Table AB9 (BOQ Item Sr. No. 19.a) Providing at the site lowering and laying in trenches aligning and joining of uPVC pipes of class III(6kg/cm ²) of dia 110mm and as per specification with rubber ring with socket and spigot joint (EPDM/SBR) fkor all depth including well graded granular bedding with offset 300 mm for pipe length as per drawing and specification including hydraulic field testing and commissioning etc. Complete as directed by Engineer.
15.		Basic Engineering Package	Attached as annexure 1
16.	Section 4 Clause No.	The epoxy coated reinforcement conforming	Bidder can use CRS Fe 500 grade

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	12.4	to IS 13620 or latest relevant Indian Standards shall be of tested quality	reinforcement.
17.		Soil Test Report	Attached as annexure 3
18.		Waste water characteristic	BOD-300, COD-400, TSS-300
19.		Financial Sheet Table AB9 Sr.N.11 Providing and constructing of brick masonry circular Nos. Manholes of “Type A” with internal dia 0.9m and having 230 mm thick brick masonry wall in cement sand mortar 1:4 including concreting PCC M-10 grade (1:4:8) for 225 mm thick foundation including curing compaction and form work etc. Complete, PCC M15 for benching and DáterD portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using Dáter aggregate 20 mm nominal size, 20 mm thick inside and outside plaster in CM 1:3, inside plaster finished with floating coat of neat cement, vata in CM 1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of CI foot steps of approved make at every 0.3 m height fixed in CM1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560 mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance and cost of wáter, and dewatering complete as directed by the Engineer , Excluding excavation, barricading, timbering, shoring- strutting dewatering etc which are to be paid separately Rate for depth up to 0.9 m	Financial Sheet Table AB9 Sr.N.11 Providing, transportation, lowering and fixing Precast RCC circular type manhole 0.91m internal dia at bottom and 0.56m dia at top made up of precast monolithic base, modular riser, and top cone in M-40 grade Cement Concrete placed, reinforcement as per drawing (minimum 100Kg/ Cum of Concrete) and aligned to provide vertical sides, with O ring rubber gasket at each joint, water tight and adjustment rings over top cone, complete with GRP/ FRP (Heavy Duty) type manhole cover, orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar conforming to IS : 1786 having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165mmwith minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to withstand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing as per drawing and all connections shall have a watertight seal between the pipe and the manhole complete as per standard design for depth of 0.91m including benching cement concrete of 1 : 2 : 4 (1 cement : 2 sand : 4 stone aggregate 20 mm nominal size) as per site requirements
20.		Financial Sheet Table AB9 Sr.N.12 Providing and constructing “Type-A” as above for depth beyond 0.90 m and upto 1.65 m with sewer brick masonry including 20mm plaster inside and outside as per drawing and direction of Engineer. Excluding excavation, barricading,	Financial Sheet Table AB9 Sr.N.12 Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91m but less than 1.67m for item above

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		timbering, shoring-strutting dewatering etc which are to be paid separately	
21.		Financial Sheet Table AB9 Sr.N.13 Providing and constructing of brick masonry circular Nos. Manholes of “Type B” with internal dia 1.2m having 230mm thick brick masonry wall upto 1.5m, 345mm thick from 1.5m to 2.5m in cement sand mortar 1:4 including concreting PCC M-10 grade(1:4:8) for 225 mm thick foundation including curing compaction and form work etc. Complete, PCC M15 for benching and DaterD portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using Dater aggregate 20 mm nominal size, 20 mm thick inside and outside plaster in CM 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of CI foot steps of approved make at every 0.3 m height fixed in CM1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance and cost of Water, and dewatering complete as directed by the Engineer. Excluding excavation, barricading, timbering, shoring-strutting dewatering etc which are to be paid separately Rate for depth up to 1.7 m	Financial Sheet Table AB9 Sr.N.13 Providing, transportation, lowering and fixing Precast RCC circular type manhole 1.22m internal dia at bottom and 0.56m dia at top made up of precast monolithic base, modular riser, and top cone in M-40 grade Cement Concrete placed, reinforcement as per drawing and aligned to provide vertical sides, with O ring rubber gasket at each joint, water tight and adjustment rings over top cone, complete with GRP/ FRP (Heavy Duty) type manhole cover, orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar (minimum 100Kg/ Cum of Concrete) conforming to IS : 1786 having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing as per drawing and all connections shall have a watertight seal between the pipe and the manhole complete as per standard design for depth of 1.68 m including benching cement concrete of 1 : 2 : 4 (1 cement : 2 sand : 4 stone aggregate 20 mm nominal size) as per site requirements.
22.		Financial Sheet Table AB9 Sr.N.14 Providing and constructing extra depth of manhole Mtr. “Type-B” with sewer brick masonry including 20mm plaster inside and outside as per drawing and direction of Engineer. Excluding excavation, barricading, timbering, shoring-strutting dewatering etc which are to be paid separately for depth beyond 1.70 m and upto 2.50 m	Financial Sheet Table AB9 Sr.N.14 Extra depth for circular type manhole 1.220m internal dia (at bottom) beyond 1.68M and upto 2.29m

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23.		Financial Sheet Table AB9 Sr.N.15 Providing and constructing of brick masonry circular Nos. Manholes of “Type C” with internal dia 1.5m and having 230mm thick brick masonry wall upto 1.5m, 345mm thick from 1.5m to 2.5m and 460 from 2.5m to 5m in cement sand mortar 1:4 including concreting PCC M-10 grade (1:4:8) for 225 mm thick foundation including curing compaction and form work etc. Complete, PCC M15 for benching and Dáterd portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using Dáter aggregate 20 mm nominal size, 20 mm thick inside and outside plaster in CM 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of CI foot steps of approved make at every 0.3 m height fixed in CM1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance and cost of Wáter, and dewatering complete as directed by the Engineer Excluding excavation, barricading, timbering, shoring- strutting dewatering etc which are to be paid separately Rate for depth 2.6 m	Financial Sheet Table AB9 Sr.N.15 Providing, transportation, lowering and fixing Precast RCC circular type manhole 1.52m internal dia at bottom and 0.56m dia at top made up of precast monolithic base, modular riser, and top cone in M-40 grade Cement Concrete placed, reinforcement as per drawing (minimum 100Kg/ Cum of Concrete) and aligned to provide vertical sides, with O ring rubber gasket at each joint, water tight and adjustment rings over top cone, complete with GRP/ FRP (Heavy Duty) type manhole cover, orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar conforming to IS : 1786 having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing as per drawing and all connections shall have a watertight seal between the pipe and the manhole complete as per standard design for depth of 2.30 m including benching cement concrete of 1 : 2 : 4 (1 cement : 2 sand : 4 stone aggregate 20 mm nominal size) as per site requirments.
24.		Financial Sheet Table AB9 Sr.N.16 Providing and constructing extra depth of manhole “Type-C” for depth beyond 2.60 m and upto 5.0 m with sewer brick masonry including 20mm plaster inside and outside as per drawing and direction of Engineer. Excluding excavation, barricading, timbering, shoring-strutting dewatering etc which are to be paid separately	Financial Sheet Table AB9 Sr.N.16 Extra depth for circular type manhole 1.52m internal dia (at bottom) beyond 2.30m for item

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25.		Financial Sheet Table AB9 Sr.N.17 Providing and constructing of brick masonry circular Nos. Manholes of “Type D” with internal dia 1.8m and having 230mm thick brick masonry wall upto 1.5m, 345mm thick from 1.5m to 2.5m, 460mm from 2.5m to 5m and 575mm from 5.0m to 9.0m in cement sand mortar 1:4 including concreting PCC M-10 grade (1:4:8) for 225 mm thick foundation including curing compaction and form work etc. Complete, PCC M15 for benching and DáterD portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using Dáter aggregate 20 mm nominal size, 20 mm thick inside and outside plaster in CM 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of CI foot steps of approved make at every 0.3 m height fixed in CM1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance and cost of Dáter, and dewatering complete as directed by the Engineer. Excluding excavation, barricading, timbering, shoring-strutting dewatering etc which are to be paid separately Rate for depth up to 5.1 m	Financial Sheet Table AB9 Sr.N.17 Providing, transportation, lowering and fixing Precast RCC circular type manhole 1.82m internal dia at bottom and 0.56m dia at top made up of precast monolithicbase, modular riser, and top cone in M-40 grade Cement Concrete placed, reinforcement as per drawing and aligned to provide vertical sides, with O ring rubber gasket at each joint, water tight and adjustment rings over top cone, complete with GRP/ FRP (Heavy Duty) type manhole cover, orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910 on 12mm dia steel bar (minimum 100Kg/ Cum of Concrete) conforming to IS : 1786 having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing as per drawing and all connections shall have a watertight seal between the pipe and the manhole complete as per standard design for depth of 2.30 m including benching cement concrete of 1 : 2 : 4 (1 cement : 2 sand : 4 stone aggregate 20 mm nominal size) as per site requirements.
26.		Financial Sheet Table AB9 Sr.N.18 Providing and constructing extra depth of manhole “Type-D” for depth beyond 5.10 m and upto 9.0 m with sewer brick masonry including 20 mm plaster inside and outside as per drawing and direction of Engineer. Excluding excavation, barricading, timbering, shoring-strutting dewatering etc which are to be paid separately	Financial Sheet Table AB9 Sr.N.18 Extra depth for circular type manhole 1.82m internal dia (at bottom) beyond 2.30m for item