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**KERALA WATER AUTHORITY  
OFFICE OF THE SUPERINTENDING ENGINEER  
P. H. CIRCLE, MUVATTUPUZHA**

No. SE/PHC/MVPA/D4/T-21/2022-23 (I)

Dated: 22.09.2022

From

Superintending Engineer

To

The Chief Engineer,  
Central Region,  
Kochi

Sir

Sub:- KIIFB-Project-TRAN 10:WRD 025-06-WSS to Ayyappankovil Panchayath- Part II Package I&II-Design and construction of electrical control rooms at raw water pump house and treatment plant compound, supply, erection and commissioning of transformers and allied works(1) 500 KVA at Thonithady raw water pump house,(2) 400 KVA at WTP compound(3) Supply erection and commissioning of motor pump sets at RWPH, treatment plant sump pumphouse,Kalthotty pump house and Nariyanpara intermediate pump house etc,(4) supplying,laying and commissioning 80 mm GI pumping main(5) improvement work of Kalthotty sump& pump house,(6) construction of pipe line bridge,(7) design and construction of 1.00 LL capacity sump& pump house at Nariyanpara,(8) providing washwater disposal pipe line at WTP Alady and interconnection works etc(9) Supply and laying 350 mm and 300 mm DI gravity main/pumping main pipe from Alady GLSR to Kalthotty sump(Re-arranging)(10) Supply and laying 300mm DI pumping main from Kalthotty sump to Nariyanpara(Re-arranging)(11)Supply and Laying 250 mm DI pumping main from Nariyanpara to Idukki Kavala(balance work re-arranging)-tender submitted for Sanction- reg:-

Ref:- 1)A.S.No. GO(Rt) No.34/2018/WRD dated 17.01.2018 from Water Resources Department.OrderNo.WRD 025-06-PA-01 dated 13.11.2018 of the Chef Executive Officer, KIIFB, Thiruvananthapuram  
2) a) T.S./2020-21/2018/13138 dated 08.12.2020 of Chief Engineer (CR) for an amount of Rs.578.80 Lakhs  
b) T.S/2020-21/2018/13980 dated 04.01.2021 of CE(CR) for an amount of Rs.1073 lakhs  
3) That office letter No.KWA/CE/CR/KTA/KIIFB/650/2019 dated 03.06.2020  
4) Package I- This office etender No.39/2020-21/SE/PHC/MVPA Due on 3.02.2021  
5) Re-E-tender No.50/2020-21/SE/PHC/MVPA due on 15.02.2021extended



upto 22.03.2021

- 6) Package II(A)- This office E-tender No.44/2020-21/SE/PHC/MVPA due on 09.02.2021 extended to
- 7) Re-E-tender No.52/2020-21/SE/PHC/MVPA due on 08.03.2021 extended to 22.03.2021,29.03.2021,15.04.2021
- 8) Package II(B)- This office E-tender No.45/2020-21/SE/PHC/MVPA due on 09.02.2021 extended to 15.02.2021
- 9) Re-E-tender No.53/2020-21/SE/PHC/MVPA due on 08.03.2021 extended to 22.03.2021,29.03.2021,15.04.2021
- 10). National level E-Tender No.02/2021-22/SE/PHC/MVPA due on 25.06.2021 extended to 12.07.2021, 28.07.2021
- 11) This office proceedings no: KWA/SE/PHC/MVPA/D1/T-02/2021 dated 28.07.2021
- 12) Re-E-Tender No.05/2021-22/SE/PHC/MVPA due on 21.09.2021 extended to 25.09.2021
- 13 ) Minutes No: KWA/CE/CR/KTA/KIIFB/650/2019 of the single tender committee chaired by CE/CR, held on 28.10.2021
- 14) This office proceedings No. KWA/SE/PHC/MVPA/D1/T-05/2021 dated 08.11.2021.
- 15) a) T.S./2021-22/2018/13138 (Reg.No.13524/2021-22) dated 20.11.2021 of Chief Engineer (CR) for an amount of Rs.611.50 Lakhs  
b) T.S./2021-22/2018/13980(Reg.No.13469/2021-22) dated20.11.2021 of Chief Engineer (CR) for an amount of Rs.1164L
- 16) E-Tender No.07/2021-22/SE/PHC/MVPA due on 14.12.2021
- 17) Tender committee Minutes No: KWA/CE/CR/KTA/KIIFB/650/2019 on 1.01.2022 chaired by CE/CR,
- 18) This office proceedings No. : KWA/SE/PHC/MVPA/D1/T-07/2021 dated 06.01.2022.
- 19) Re-E-Tender No.21/2021-22/SE/PHC/MVPA due on 05.02.2022 and extended to 11.02.2022
- 20) Minutes of special Technical Committee for price bid Evaluation of single Tender held on 09-03-2022 under the chairmanship of Chief Engineer (CR), KWA, Kochi-11.
- 21) This office proceedings No. : KWA/SE/PHC/MVPA/D1/T-07/2021 dated 6.03.2022.
- 22) a) T.S./2021-22/2018/13138 (Reg.No.8668/2025-23) dated 29.06.2022 of Chief Engineer (CR) for an amount of Rs.633.20L  
b) T.S./2021-22/2018/13980(Reg.No.8666/2022-23) dated29.06.2022 of Chief Engineer (CR) for an amount of Rs.1431 Lakhs
- 23) E-Tender No.13/2022-23/SE/PHC/MVPA due on 25.07.2022
- 24) This office proceedings No. : SE/PHC/MVPA/DB4/T-13/2022 dated 27.07.2022
- 25) Re-E-Tender No.21/2022-23/SE/PHC/MVPA due on 19.08.2022 .
- 26) This Office Letter No. even dated 25.08.2022
- 27) Minutes of Tender committee held on 01.09.2022 chaired by Chief



Engineer(CR) .KWA,Kochi-11.

28).This office proceedings even No. dated 03.09.2022.

29) This office proceedings even No. dated 17.09.2022.

30)Letter received from the contractor Electric Project Consultants, MP II/503,Makkaraparamba.Malappuram-676507.

31)This office letter of even dated 06.09.2022 addressed to CE.

32) This Office email dated 13.09.2022 to Electric power consultants

I am submitting herewith the tender documents received for the above work for favour of necessary action. In this regard, I may report as follows: Administrative sanction and Technical sanction was obtained for the above work as per reference 1<sup>st</sup> and 2<sup>nd</sup> cited. As per the 3<sup>rd</sup> cited above, it was directed from that office to arrange the Project in three packages.

Accordingly, estimates were prepared for the following 3 packages.

Package I)- Design and construction of electrical control rooms at raw water pump house and treatment plant compound,supply, erection and commissioning of transformers and allied works(1) 500 KVA at Thonithady raw water pump house (2) 400 KVA at WTP compound, supply, erection and commissioning of motor pumpsets at RWPH, treatment plant sump pump house, Kalthotty pump house and Nariyanpara intermediate Pump house etc.

1. Package II-Supplying and laying and commissioning 350 mm, 300mm &250 mm DI pumping/gravity main and 80 mm GI pumping main improvement work of Kalthotty sump and pump house, construction of pipeline bridge, design and construction of 1.00 LL capacity sump & pump house at Nariyanpara, providing wash water disposal pipeline at WTPAlady and inter connection works etc- Tender invited to two packages as package II (A), package II(B)
2. PackageIII- Design and construction of check dam across Periyar River at Thonithady- Agreement executed

Package I was tendered two times from this office vide tender ref (4&5) cited. Tender vide ref(4) was cancelled due to non participation and tender ref (5) was cancelled as per direction from that office (Letter No.KWA/CE/CR/KTA/KIIFB/650/2019 dated 15.04.2021) on 27.04.2021 due to high rate.

Package II(A) was tendered from this office vide ref (6) cited with due dated 09.02.2021.

wide publicity was given, and notice published in et ender websites and newspaper dailies. No body participated and the due date was extended to 15.02.2021. Nobody participated and was cancelled and then re-tendered vide ref (7) cited with due date 08.03.2021 and again extended to 22.03.2021 & 29.03.2021 &15.04.2021. No body quoted even after extending the due date up to 15.04.2021and was cancelled to rearrange the work in Global tender.

Package II(B)- This package is under the risk and cost of the Contractor Sri.S.Raju. This work was tendered from this office vide ref (8) cited with due date 09.02.2021 wide publicity was given, and notice published in e tender websites and newspaper dailies. No body participated and the due date was extended to 15.02.2021. No body participated and was cancelled and then re- tendered vide ref (9) cited with due date 08.03.2021 and again extended to 22.03.2021 & 29.03.2021 &15.04.2021. No body quoted even after extending the due date up to 15.04.2021 and was cancelled to rearrange the work in Global tender.

These three above mentioned packages {Package I & II(A)&(B)} were combined and Global tender invited vide ref (10) cited with due date 25.06.2021. No body participated and the due date was extended to twice up to 28.07.2021. But only single tender received and was cancelled vide ref



(11) cited. Re-tender was invited as vide ref (12) cited due on 21.09.2021. Only one bidder participated and was extended to 25.09.2021 & opening on 29.09.2021. As per minutes (ref.13),the committee decided to cancel the tender for retendering based on DSR 2018 after observing all procedural formalities. Accordingly this tender was cancelled vide proceedings dated 08.11.2021 (ref 14).

Vide reference 15<sup>th</sup> cited, the T.S was revised based on DSR 2018. Accordingly re e-tender was invited with revised PAC of 15,18,54,441/-as per DSR 2018 vide ref. (16) with due date on 14.12.2021 and opening date on 17.12.2021. Two bidders participated in this tender and only one bidder prequalified. This was the first tender call based on DSR 2018 and now the tender became single tender on dis qualification of one among the two bidders who participated in the tender. Hence the Special Technical Committee decided to cancel the tender and direct Superintending Engineer to retender as per rules. Accordingly, this tender was cancelled vide proceedings dated 06.01.2022. (ref 18).

Vide ref (19) re e-tender was invited fixing the due date on 11.02.2022 and opening on 16.02.2022.Only one bidder participated and the rate quoted by the firm was too high(53.25% above), Since quoted rate is very high, Committee ref (20) decided to cancel the tender and direct Superintending Engineer to verify and prepare realistic estimate based on site condition urgently.The tender was cancelled vide ref (21). Vide reference 22<sup>nd</sup> cited, the T.S was revised and e-tender was invited with revised PAC of 16,82,76,029/-. No body quoted and the tender was cancelled vide ref(24) for retendering. Accordingly re tender was invited vide ref (25) fixing the due date on 19.08.2022 and opening date on 22.08.2022.

In response to the tender call two bidders, Joseph John, Monipillil house Avoli P.O, Anicadu,Muvattupuzha,Ernakulam and Electric Project Consultants, MP II/503,Makkaraparamba.Malappuram-676507. JV with M.Ashraf,Moolamkuzhiyil House,Pazhamalloor P.O,Kottilangadi(Via) ,Malappuram participated in the tender and the technical bid of the tender was opened on 22.08.2022 at 4.00 PM and submitted to that office vide ref(26).As per minutes of tender committee vide ref(27),provisional pre qualification proceedings prequalifying only the bidder Sri.Joseph John was issued from this office on 03.09.2022 and emailed to both the bidders. The disqualified bidder M/s Electric Project Consultants,JV with M.Ashraf, objected to the disqualification,vide ref(30) above, which was reported to that office vide ref(31) and the reason for disqualification was also informed to the contractor by mail on 13.09.2022 and was directed to produce , within 3 days,any proof for reconsidering the disqualification, as per ref (32), but no reply was received. Hence, final prequalification proceedings issued from this office on 17.09.2022 fixing the opening of price bid on 19.09.2022. at 4.00 PM.

Sri. Joseph John quoted an amount of Rs.232227614.40 which is 38% above TPAC.LMR justification amount comes Rs.172640015/- . The firm period of the tender is up to 18.12.2022. In this regard, I may once again report that, even after incurring an amount of Rs.2529.59 Lakhs under ARP/NRDWP. the water supply scheme “CARWSS to Kattappana & Ayyappancovil Villages” could not be commissioned. Also **9357(Ayyappancovil Pt-1223(1st SLSSC) +2146(3rd SLSSC)=3369,Kanchiyar-3500(1st SLSSC)+2488(3rd SLSSC)=5988,(3369+5988=9357)).**FHTC’s sanctioned in JJM for Rs.5201.01Lakhs in Kanchiyar and Ayyappancovil Panchayaths targeted for completion in 2022-23, can be commissioned only after commissioning of this work. Tender Evaluation Statement, Status of Scheme, etc.also attached along with the tender documents.

I request that considering the urgent necessity of commissioning the scheme“CARWSS to Kattappana & Ayyappancovil Villages” the tender may be sanctioned at the earliest.



Yours faithfully,  
Pradeep V K  
Superintending Engineer

Copy To

The Executive Engineer, Project Division, Kattappana

Encl:

1. Performas
2. Supporting documents



Draft #12 of File SE/PHC/MVPA/D4/T-21/2022-23 Approved by Superintending Engineer on 22-Sep-2022 09:48 PM - Page 6

eTendering System Government of Kerala Created By: Liny Francis Created Date/Time: 19-Sep-2022 04:57 PM Tender Title: KIIFB Ayyappancovil Tender ID: 2022_KWA_501579_1						
Tender Inviting Authority: SUPERINTENDING ENGINEER,P.H.CIRCLE,MUVATTUPUZZHA						
Name of Work:KIIFB -Project: TRAN 10: WRD 025-06 - WSS to Ayyappankovil Panchayat - Part II						
Contract No: Re-21/2022-23/SE/PHC/MVPA						
SCHEDULE OF WORK / ITEM(S)						
Sl.No	Description of Work / Item(s)	No.of Qty	Units	Estimated Rate	JOSEPH JOHN(GSTN-32ACIPJ8820F1ZT)	
					Rate	Amount
1.00	Appendix –A  KIIFB Project: TRAN 10: WRD025-06 - WSS to Ayyappankovil Panchayat -					
1.01	Design and construction of electrical control rooms at raw water pump house and treatment plant compound, supply, erection and commissioning of transformers and allied works (1) 500KVA at Thonithady raw water pump house,(2)400 KVA at WTP compound, supply erection and commissioning of motor pump sets at RWPH, treatment plant pump house, Kalthatty	1.00	LS	100.00	94043725.00	94043725.00
2.00	APPENDIX -B KIIFB PROJECT: TRAN 10: WRD025-06- WSS TO AYYAPPANKOVIL PANCHAYAT IN IDUKKI DISTRICT- PART II, PACKAGE II:- APPENDIX B(1)-Supply and laying 350mm and 300mm DI gravity main/ pumping main pipe from Alady GLSR to Kalthatty pump house (As per design) etc per					
2.01	Procuring and supplying at site the required 350 mm DI K9 pipes bearing ISI mark as per IS 8329/2000	5248.00	m	100.00	6579.00	34526592.00
2.02	Do- -do- 300 mm DI K9 pipes with required specials -do- -do-	1833.00	m	100.00	5354.00	9813882.00
2.03	Procuring and supplying at site the required specials (suitable to site conditions) of same class including rubber gaskets bearing ISI mark as per	59.98	Quintal	10.00	30000.00	1799460.00
2.04	Procuring and supplying at site the required 350 mm CI Double Flanged Sluice Valve with Cap PN 1.6	2.00	Nos.	10.00	65000.00	130000.00
2.05	Do- -do- 300 mm CI PN 1.6 Sluice valves -do- -do-	1.00	Nos.	10.00	55000.00	55000.00
2.06	Do- -do- 200 mm CI PN 1.6 Sluice valves -do- -do-	5.00	Nos.	10.00	25000.00	125000.00
2.07	Do- -do-100 mm Kinetic Air valve -do- -do-	6.00	Nos.	10.00	7000.00	42000.00
2.08	Do- -do-80 mm Kinetic Air valve -do- -do-	4.00	Nos.	10.00	5000.00	20000.00
2.09	Working Charges Laying of 350 mm DI K9 pipes, valves & specials including all associated works, testing, commissioning and maintaining the pipeline including necessary anchor blocks, stream/bridge/culvert crossing arrangements, construction of valve chambers, surface box and P Tubes etc. as per the approved design and	5248.00	m	10.00	2500.00	13120000.00

L1 Amount	L1 Vendor
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94043725.00	JOSEPH JOHN
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34526592.00	JOSEPH JOHN
9813882.00	JOSEPH JOHN
1799460.00	JOSEPH JOHN
130000.00	JOSEPH JOHN
55000.00	JOSEPH JOHN
125000.00	JOSEPH JOHN
42000.00	JOSEPH JOHN
20000.00	JOSEPH JOHN
13120000.00	JOSEPH JOHN



2.10	Do- -do- 300 mm DI K9 pipes, valves & specials -do- -do-	1833.00	m	10.00	2000.00	3666000.00
2.11	Supply of Spare pipes and specials/valves for maintenance after guarantee period Supplying of 350mm DI K9 pipes bearing ISI mark as per IS 8329/2000	105.00	m	10.00	6579.00	690795.00
2.12	Do- -do- 300mm DI K9 pipes -do- -do-	37.00	m	10.00	5354.00	198098.00
3.00	APPENDIX B(2)-Supply and laying 300 mm DI pumping main from Kalthotty sump to Nariyanpara (Re-arranging) as					
3.01	Procuring and supplying at site the required 300 mm DI K9 pipes bearing ISI mark as per IS 8329/2000 specifications. (cost shall include cost	4830.00	m	10.00	5354.00	25859820.00
3.02	Procuring and supplying at site the required specials (suitable to site conditions) of same class including rubber gaskets bearing ISI mark as per	26.76	Quin tal	10.00	30000.00	802830.00
3.03	Procuring and supplying at site the required 300 mm CI Double Flanged Sluice Valve with Cap PN 1.6	2.00	Nos	10.00	55000.00	110000.00
3.04	Do- -do- 200 mm CI PN 1.6 Sluice valves -do- -do-	4.00	Nos.	10.00	25000.00	100000.00
3.05	Do- do-50 mm CI Single orifice Air valve (Large orifice) -do-do-	5.00	Nos.	10.00	1500.00	7500.00
3.06	Do- do-25 mm Single orifice Air valve(small orifice) do-do-	3.00	Nos.	10.00	1000.00	3000.00
3.07	Working Charges Laying of 300 mm DI K9 pipes, valves & specials including all associated works including necessary fencing, testing, commissioning and maintaining the pipeline including necessary anchor blocks, stream/bridge/culvert crossing arrangements, construction of valve chambers, surface box and P Tubes etc, as per the approved design and specifications where ever necessary	4830.00	m	10.00	2000.00	9660000.00
3.08	Supply of Spare pipes and specials/valves for maintenance after guarantee period Supplying of 300mm DI K9 pipes	97.00	m	10.00	5354.00	519338.00
4.00	APPENDIX B(3)-Supply and Laying 250mm DI pumping main from Nariyanpara to Idukki kavala (balance					
4.01	Procuring and supplying at site the required 250 mm DI K9 pipes bearing ISI mark as per IS 8329/2000 specifications. (cost shall include cost	1165.00	m	10.00	4216.00	4911640.00
4.02	Procuring and supplying at site the required specials (suitable to site conditions) of same class including rubber gaskets bearing ISI mark as per	7.45	Quin tal	10.00	30000.00	223500.00
4.03	Procuring and supplying at site the required 250 mm CI Double Flanged Sluice Valve with Cap PN 1.6	3.00	Nos	10.00	30000.00	90000.00
4.04	Procuring and supplying at site the required 200 mm CI Double Flanged Sluice Valve with Cap PN 1.6	1.00	Nos	10.00	25000.00	25000.00
4.05	Do- do-25 mm Single orifice Air valve(small orifice) do-do-	3.00	Nos.	10.00	1000.00	3000.00

3666000.00	JOSEPH
690795.00	JOSEPH JOHN
198098.00	JOSEPH

25859820.00	JOSEPH JOHN
802830.00	JOSEPH JOHN
110000.00	JOSEPH JOHN
100000.00	JOSEPH
7500.00	JOSEPH
3000.00	JOSEPH
9660000.00	JOSEPH JOHN
519338.00	JOSEPH JOHN

4911640.00	JOSEPH JOHN
223500.00	JOSEPH JOHN
90000.00	JOSEPH JOHN
25000.00	JOSEPH JOHN
3000.00	JOSEPH



4.06	Laying of 250 mm DI K9 pipes, valves & specials including all associated works, testing, commissioning and maintaining the pipeline including necessary anchor blocks, stream/bridge/culvert crossing arrangements, construction of valve chambers, surface box and P Tubes etc. as per the approved design and	1165.00	Nos	10.00	1750.00	2038750.00
4.07	Supply of Spare pipes and specials/valves for maintenance after guarantee period Supplying of 250mm DI K9 pipes bearing ISI mark	23.00	m	10.00	4216.00	96968.00
5.00	APPENDIX -C KIIFB PROJECT: TRAN 10: WRD025-06- WSS TO AYYAPPANKOVIL PANCHAYAT IN IDUKKI DISTRICT-					
5.01	(1)Supplying, laying and commissioning 80mm GI pumping main, (2)improvement work of Kalthotty sump& pump house, (3)construction of pipe line bridge,(4) design and construction of 1.00LL capacity sump& pump house at Nariyanpara, (5)providing wash water disposal pipe line at WTP Alady and interconnection works(6) Line stabilization and interconnection works. Supply and fixing	1.00	LS	100.00	21644109.00	21644109.00

2038750.00	JOSEPH JOHN
96968.00	JOSEPH JOHN

21644109.00	JOSEPH JOHN
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Total in Figures

224326007.00

Lowest Amount Quoted BY: JOSEPH JOHN(224326007.00)





eTendering System Government of Kerala  
 Created By: Liny Francis  
 Created Date/Time: 19-Sep-2022 04:57 PM  
 Tender Title: KIIFB Ayyappancovil  
 Tender ID: 2022\_KWA\_501579\_1

Tender Inviting Authority: SUPERINTENDING ENGINEER,P.H.CIRCLE,MUVATTUPUZHA

Name of Work:KIIFB -Project: TRAN 10: WRD 025-06 - WSS to Ayyappankovil Panchayat - Part II ,Package I&II -Design and construction of electrical control rooms at raw water pump house

Contract No: Re-21/2022-23/SE/PHC/MVPA

SCHEDULE OF WORK / ITEM(S)

Sl.No	Bidder Name	Estimated Rate	Quoted Percentage	Quoted Rate in Figures and Words	
				Rate	Amount
1.00	JOSEPH JOHN(GSTN-32ACIPJ8820F1ZT)	6584672.80	20.00	7901607.36	Seventy Nine Lakh One Thousand Six Hundred and Seven

Lowest Amount Quoted BY: JOSEPH JOHN(7901607.36)



**BOQ Summary Details**  
Tender Title: KIIFB Ayyappancovil  
Tender ID: 2022\_KWA\_501579\_1

Sheet Name	Sl.No	Bidder Name	Amount	Bid Rank
BoQ1	1	JOSEPH JOHN	224326007.00	L1
BoQ2	1	JOSEPH JOHN	7901607.36	L1



Validate

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Help

**Item Rate BoQ****Tender Inviting Authority: SUPERINTENDING ENGINEER,P.H.CIRCLE,MUVATTUPUZHA**

**Name of Work:KIIFB -Project: TRAN 10: WRD 025-06 - WSS to Ayyappankovil Panchayat - Part II ,Package I&II -Design and construction of electrical control rooms at raw water pump house and treatment plant compound, supply, erection and commissioning of transformers and allied works (1) 500KVA at Thonithady raw water pump house,(2)400 KVA at WTP compound,(3) supply erection and commissioning of motor pump sets at RWPH, treatment plant sump pump house, Kalthotty pump house and Nariyanpara intermediate P H etc, (4)Supplying, laying and commissioning 80mm GI pumping main, (5)improvement workof Kalthotty sump& pump house, (6)construction of pipe line bridge,(7) design andconstruction of 1.00LL capacity sump& pump house at Nariyanpara, (8)providing washwater disposal pipe line at WTP Alady and interconnection works etc (9) Supply and laying 350mm and 300mm DI gravity main/ pumping main pipe from Alady GLSR to Kalthotty sump (Re-arranging), (10) Supply and laying 300 mm DI pumping main from Kalthotty sump to Nariyanpara (Re-arranging) (11) Supply and Laying 250mm DI pumping main from Nariyanpara to Idukki kavala (balance work re-arranging)**

**Contract No: Re-21/2022-23/SE/PHC/MVPA**

<b>Name of the Bidder/ Bidding Firm /</b>	<b>JOSEPH JOHN</b>					
<b><u>PRICE SCHEDULE</u></b>						
<b>(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )</b>						
<b>NUMBER #</b>	<b>TEXT #</b>	<b>NUMBER</b>	<b>TEXT #</b>	<b>NUMBER #</b>	<b>NUMBER #</b>	<b>TEXT #</b>
<b>Sl. No.</b>	<b>Item Description</b>	<b>Quantity</b>	<b>Units</b>	<b>BASIC RATE In Figures To be entered by the Bidder in Rs. P</b>	<b>TOTAL AMOUNT With all Taxes but excluding GST in Rs. P</b>	<b>TOTAL AMOUNT In Words</b>
<b>1</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>13</b>	<b>53</b>	<b>55</b>



1	<b>Appendix –A</b>  <b>KIIFB Project: TRAN 10: WRD025-06 - WSS to Ayyappankovil Panchayat - Part II ,Package I</b>					
1.01	Design and construction of electrical control rooms at raw water pump house and treatment plant compound, supply, erection and commissioning of transformers and allied works (1) 500KVA at Thonithady raw water pump house,(2)400 KVA at WTP compound, supply erection and commissioning of motor pump sets at RWPH, treatment plant sump pump house, Kalthotty pump house and Nariyanpara intermediate P H etc.as per scope of work and NIT	1	LS	94043725.00	94043725.00	INR Nine Crore Forty Lakh Forty Three Thousand Seven Hundred & Twenty Five Only
2	<b>APPENDIX -B</b> <b>KIIFB PROJECT: TRAN 10: WRD025-06- WSS TO AYYAPPANKOVIL PANCHAYAT IN IDUKKI DISTRICT- PART II, PACKAGE II:-</b> <b>APPENDIX B(1)-Supply and laying 350mm and 300mm DI gravity main/ pumping main pipe from Alady GLSR to Kalthotty sump (Re-arranging) as per scope of work and NIT</b>					
2.01	Procuring and supplying at site the required <b>350 mm DI K9</b> pipes bearing ISI mark as per IS 8329/2000 specifications.	5248	m	6579.00	34526592.00	INR Three Crore Forty Five Lakh Twenty Six Thousand Five Hundred



2.02	Do- -do- <b>300 mm DI K9</b> pipes with required specials -do- -do-	1833	m	<b>5354.00</b>	<b>9813882.00</b>	INR Ninety Eight Lakh Thirteen Thousand
2.03	Procuring and supplying at site the required specials (suitable to site conditions) of same class including rubber gaskets bearing ISI mark as per IS 8329/2000 specifications.	59.982	Quintal	<b>30000.00</b>	<b>1799460.00</b>	INR Seventeen Lakh Ninety Nine Thousand Four Hundred & Sixty Only
2.04	Procuring and supplying at site the required <b>350 mm CI Double Flanged Sluice Valve with Cap PN 1.6 Conforming to IS 14846 - 2000, specifications.</b>	2	Nos.	<b>65000.00</b>	<b>130000.00</b>	INR One Lakh Thirty Thousand Only
2.05	Do- -do- <b>300 mm CI PN 1.6 Sluice valves - do- -do-</b>	1	Nos.	<b>55000.00</b>	<b>55000.00</b>	INR Fifty Five Thousand Only
2.06	Do- -do- <b>200 mm CI PN 1.6 Sluice valves - do- -do-</b>	5	Nos.	<b>25000.00</b>	<b>125000.00</b>	INR One Lakh Twenty Five Thousand Only
2.07	Do- -do- <b>100 mm Kinetic Air valve -do- -do-</b>	6	Nos.	<b>7000.00</b>	<b>42000.00</b>	INR Forty Two Thousand Only
2.08	Do- -do- <b>80 mm Kinetic Air valve -do- -do-</b>	4	Nos.	<b>5000.00</b>	<b>20000.00</b>	INR Twenty Thousand Only



2.09	<b><u>Working Charges</u></b> Laying of <b>350 mm DI K9</b> pipes, valves & specials including all associated works, testing, commissioning and maintaining the pipeline including necessary anchor blocks, stream/bridge/culvert crossing arrangements, construction of valve chambers, surface box and P Tubes etc, as per the approved design and specifications where ever necessary etc., complete including cost of cement and steel.	5248.000	m	<b>2500.00</b>	<b>13120000.00</b>	INR One Crore Thirty One Lakh Twenty Thousand Only
2.1	Do- -do- <b>300 mm DI K9</b> pipes, valves & specials -do- -do-	1833.000	m	<b>2000.00</b>	<b>3666000.00</b>	INR Thirty Six Lakh Sixty Six Thousand Only
2.11	<b><u>Supply of Spare pipes and specials/valves for maintenance after guarantee period</u></b> Supplying of <b>350mm DI K9 pipes</b> bearing ISI mark as per IS 8329/2000 specifications. (cost shall include cost of specials as per NIT vol II)	105	m	<b>6579.00</b>	<b>690795.00</b>	INR Six Lakh Ninety Thousand Seven Hundred & Ninety Five Only
2.12	Do- -do- <b>300mm DI K9 pipes</b> -do- -do-	37	m	<b>5354.00</b>	<b>198098.00</b>	INR One Lakh Ninety Eight Thousand & Ninety Eight Only
3	<b>APPENDIX B(2)-Supply and laying 300 mm DI pumping main from Kalthotty sump to Nariyanpara (Re-arranging) as per scope of work and NIT</b>					



3.01	Procuring and supplying at site the required <b>300 mm DI K9</b> pipes bearing ISI mark as per IS 8329/2000 specifications. (cost shall include cost of specials as per NIT vol II)	4830.000	m	<b>5354.00</b>	<b>25859820.00</b>	INR Two Crore Fifty Eight Lakh Fifty Nine Thousand Eight Hundred & Twenty Only
3.02	Procuring and supplying at site the required specials (suitable to site conditions) of same class including rubber gaskets bearing ISI mark as per IS 8329/2000 specifications.	26.761	Quintal	<b>30000.00</b>	<b>802830.00</b>	INR Eight Lakh Two Thousand Eight Hundred & Thirty Only
3.03	Procuring and supplying at site the required 300 mm CI Double Flanged Sluice Valve with Cap PN 1.6 Conforming to IS 14846 - 2000, specifications.	2.000	Nos	<b>55000.00</b>	<b>110000.00</b>	INR One Lakh Ten Thousand Only
3.04	Do- -do- <b>200 mm CI PN 1.6 Sluice valves - do- -do-</b>	4	Nos.	<b>25000.00</b>	<b>100000.00</b>	INR One Lakh Only
3.05	Do- do- <b>50 mm CI Single orifice Air valve (Large orifice) -do-do-</b>	5	Nos.	<b>1500.00</b>	<b>7500.00</b>	INR Seven Thousand Five Hundred Only
3.06	Do- do- <b>25 mm Single orifice Air valve (small orifice) do-do-</b>	3	Nos.	<b>1000.00</b>	<b>3000.00</b>	INR Three Thousand Only



3.07	<u>Working Charges</u> Laying of <b>300 mm DI K9</b> pipes, valves & specials including all associated works including necessary fencing, testing, commissioning and maintaining the pipeline including necessary anchor blocks, stream/bridge/culvert crossing arrangements, construction of valve chambers, surface box and P Tubes etc, as per the approved design and specifications where ever necessary etc., complete including cost of cement and steel.	4830.000	m	<b>2000.00</b>	<b>9660000.00</b>	INR Ninety Six Lakh Sixty Thousand Only
3.08	<u>Supply of Spare pipes and specials/valves for maintenance after guarantee period</u> Supplying of <b>300mm DI K9 pipes</b> bearing ISI mark as per IS 8329/2000 specifications.	97.000	m	<b>5354.00</b>	<b>519338.00</b>	INR Five Lakh Nineteen Thousand Three Hundred & Thirty Eight Only
4	<b>APPENDIX B(3)-Supply and Laying 250mm DI pumping main from Nariyanpara to Idukki kavala (balance work re-arranging) as per scope of work and NIT</b>					
4.01	Procuring and supplying at site the required <b>250 mm DI K9</b> pipes bearing ISI mark as per IS 8329/2000 specifications. (cost shall include cost of specials as per NIT vol II)	1165.000	m	<b>4216.00</b>	<b>4911640.00</b>	INR Forty Nine Lakh Eleven Thousand Six Hundred & Forty Only





4.02	Procuring and supplying at site the required specials (suitable to site conditions) of same class including rubber gaskets bearing ISI mark as per IS 8329/2000 specifications.	7.450	Quintal	<b>30000.00</b>	<b>223500.00</b>	INR Two Lakh Twenty Three Thousand Five Hundred Only
4.03	Procuring and supplying at site the required <b>250 mm</b> CI Double Flanged Sluice Valve with Cap PN 1.6 Conforming to IS 14846 - 2000, specifications.	3.000	Nos	<b>30000.00</b>	<b>90000.00</b>	INR Ninety Thousand Only
4.04	Procuring and supplying at site the required <b>200 mm</b> CI Double Flanged Sluice Valve with Cap PN 1.6 Conforming to IS 14846 - 2000, specifications.	1.000	Nos	<b>25000.00</b>	<b>25000.00</b>	INR Twenty Five Thousand Only
4.05	Do- do-25 mm Single orifice Air valve(small orifice) do-do-	3	Nos.	<b>1000.00</b>	<b>3000.00</b>	INR Three Thousand Only
4.06	Laying of <b>250 mm DI K9</b> pipes, valves & specials including all associated works, testing, commissioning and maintaining the pipeline including necessary anchor blocks, stream/bridge/culvert crossing arrangements, construction of valve chambers, surface box and P Tubes etc, as per the approved design and specifications where ever necessary etc., complete including cost of cement and steel.	1165.000	Nos	<b>1750.00</b>	<b>2038750.00</b>	INR Twenty Lakh Thirty Eight Thousand Seven Hundred & Fifty Only



4.07	<b><u>Supply of Spare pipes and specials/valves for maintenance after guarantee period</u></b> Supplying of <b>250mm DI K9 pipes</b> bearing ISI mark as per IS 8329/2000 specifications.	23.000	m	<b>4216.00</b>	<b>96968.00</b>	INR Ninety Six Thousand Nine Hundred & Sixty Eight Only
5	<b>APPENDIX -C KIIFB PROJECT: TRAN 10: WRD025-06- WSS TO AYYAPPANKOVIL PANCHAYAT IN IDUKKI DISTRICT- PART II, PACKAGE II:-</b>					
5.01	(1)Supplying, laying and commissioning 80mm GI pumping main, (2)improvement work of Kalthotty sump& pump house, (3)construction of pipe line bridge,(4) design and construction of 1.00LL capacity sump& pump house at Nariyanpara, (5)providing wash water disposal pipe line at WTP Alady and interconnection works(6) Line stabilization and Interconnection works,Supply and fixing Electromagnetic flow meter etc. (as per scope of work and NIT	1	LS	<b>21644109.00</b>	<b>21644109.00</b>	INR Two Crore Sixteen Lakh Forty Four Thousand One Hundred & Nine Only
<b>Total in Figures</b>					<b>224326007.00</b>	INR Twenty Two Crore Forty Three Lakh Twenty Six Thousand &Seven Only



**Quoted Rate in Words**

**INR Twenty Two Crore Forty Three Lakh Twenty Six Thousand & Seven Only**



Validate

Print

Help

**Percentage BoQ**

Tender Inviting Authority: SUPERINTENDING ENGINEER,P.H.CIRCLE,MUVATTUPUZHA

Name of Work:KIIFB -Project: TRAN 10: WRD 025-06 - WSS to Ayyappankovil Panchayat - Part II ,Package I&II -Design and construction of electrical control rooms at raw water pump house and treatment plant compound, supply, erection and commissioning of transformers and allied works (1) 500KVA at Thonithady raw water pump house,(2)400 KVA at WTP compound,(3) supply erection and commissioning of motor pump sets at RWPH, treatment plant sump pump house, Kalthotty pump house and Nariyanpara intermediate P H etc, (4)Supplying, laying and commissioning 80mm GI pumping main, (5)improvement workof Kalthotty sump& pump house, (6)construction of pipe line bridge,(7) design andconstruction of 1.00LL capacity sump& pump house at Nariyanpara, (8)providing washwater disposal pipe line at WTP Alady and interconnection works etc (9) Supply and laying 350mm and 300mm DI gravity main/ pumping main pipe from Alady GLSR to Kalthotty sump (Re-arranging), (10) Supply and laying 300 mm DI pumping main from Kalthotty sump to Nariyanpara (Re-arranging) (11) Supply and Laying 250mm DI pumping main from Nariyanpara to Idukki kavala (balance work re-arranging)

Contract No: Re-21/2022-23/SE/PHC/MVPA

Name of the Bidder/ Bidding Firm / Company :	JOSEPH JOHN					
<b><u>PRICE SCHEDULE</u></b>						
<b>(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )</b>						
<b>NUMBER #</b>	<b>TEXT #</b>	<b>NUMBER</b>	<b>TEXT</b>	<b>NUMBER</b>	<b>NUMBER #</b>	<b>TEXT #</b>
Sl. No.	Item Description	Quantity	Units	Estimated Rate in Rs. P	<b>TOTAL AMOUNT With all Taxes But excluding GST in Rs. P</b>	<b>TOTAL AMOUNT In Words</b>
1	2	4	5	6	53	55



6	<b>Appendix B- (9) - Road restoration works-(a) PWD road</b>					
6.01	Removal of unserviceable soil including excavation, loading and disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid separately (PWD sanctioned price rate-specification code- 3.11)	1246.875	cum	47.61	<b>59363.72</b>	INR Fifty Nine Thousand Three Hundred & Sixty Three and Paise Seventy Two Only
6.02	Maintenance of Earthen Shoulder (filling with fresh soil) Making up loss of material/ irregularities on shoulder to the design level by adding fresh approved soil and compacting it with appropriate equipment.(PWD sanctioned rate-specification code- 10.2)	4987.500	sqm	41.25	<b>205734.38</b>	INR Two Lakh Five Thousand Seven Hundred & Thirty Four and Paise Thirty Eight Only
6.03	Construction of granular sub-base by providing graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401. Grading-IV - For lower sub base - Mix in Place Method (PWD sanctioned rate-specification code-4.2.A2)	225.000	cum	3178.82	<b>715234.50</b>	INR Seven Lakh Fifteen Thousand Two Hundred & Thirty Four and Paise Fifty Only
6.04	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.(PWD sanctioned rate-specification code-4.12)	150.000	cum	3344.36	<b>501654.00</b>	INR Five Lakh One Thousand Six Hundred & Fifty Four Only



6.05	Prime Coat- Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.7kg/sqm using mechanical means.(PWD sanctioned rate-specification code-5.1)	1500.000	sqm	54.39	<b>81585.00</b>	INR Eighty One Thousand Five Hundred & Eighty Five Only
6.06	Supplying and stacking 12mm hard blue granite broken stone in standard heaps for measurement(IRC 3.2.1.a)- PWD sanctioned rate-specification code- 55.2	40.500	cum	2631.07	<b>106558.34</b>	INR One Lakh Six Thousand Five Hundred & Fifty Eight and Paise Thirty Four Only
6.07	Supplying and stacking 6mm hard blue granite broken stone in standard heaps for measurement(IRC 3.2.1.a)- PWD sanctioned rate-specification code- 55.3	13.500	cum	2631.07	<b>35519.45</b>	INR Thirty Five Thousand Five Hundred & Nineteen and Paise Forty Five Only
6.08	Supplying and stacking 36mm size hard broken stone in standard heaps for measurement.(PWD sanctioned rate- specification code- 55.4)	150.000	cum	2537.36	<b>380604.00</b>	INR Three Lakh Eighty Thousand Six Hundred & Four Only
6.09	Providing, laying and rolling of open graded premix carpet of 20 mm thickness with 0.27 cum of 12 mm departmental aggregates premixed with 12.96 kg of bitumen per 10 sqm using penetration grade bitumen to required line, grade and level on a previously prepared base, after priming the existing surface with 5 kg of bitumen (VG 30) 10 sqm including mixing in a suitable plant, laying and rolling with a three wheel static roller of 80-100 KN capacity, finished to required level and grades, followed by a seal coat of 0.09 cum of 6 mm departmental aggregates premixed with 8.64 kg of bitumen per 10 sqm.By Manual Means-PWD sanctioned rate-specification code-55.1.a	1500.000	sqm	192.02	<b>288030.00</b>	INR Two Lakh Eighty Eight Thousand & Thirty Only



6.1	Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregate 40 mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days.( PWD sanctioned rate-specification code- 12.4)	196.875	cum	7032.06	<b>1384436.81</b>	INR Thirteen Lakh Eighty Four Thousand Four Hundred & Thirty Six and Paise Eighty One Only
6.11	CPlain/Reinforced Cement Concrete in Open Foundation complete as per Drawing and Technical Specifications PCC Grade M20 (Without formwork) -PWD sanctioned rate-specification code-12.8.b	98.438	cum	8523.47	<b>839033.34</b>	INR Eight Lakh Thirty Nine Thousand &Thirty Three and Paise Thirty Four Only
7	<b>Appendix B - (9) - Road restoration works- (b) Village/ Panchayat/ PMGSY roads</b>					
7.01	Construction of granular sub-base by providing graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401. Grading-IV - For lower sub base - Mix in Place Method (PWD sanctioned rate-specification code-4.2.A2)	154.688	cum	3178.82	<b>491725.31</b>	INR Four Lakh Ninety One Thousand Seven Hundred & Twenty Five and Paise Thirty One Only
7.02	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.(PWD sanctioned rate-specification code-4.12)	103.125	cum	3344.36	<b>344887.13</b>	INR Three Lakh Forty Four Thousand Eight Hundred & Eighty Seven and Paise Thirteen Only



7.03	Prime Coat- Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.7kg/sqm using mechanical means.(PWD sanctioned rate-specification code-5.1)	1031.250	sqm	54.39	<b>56089.69</b>	INR Fifty Six Thousand & Eighty Nine and Paise Sixty Nine Only
7.04	Supplying and stacking 12mm hard blue granite broken stone in standard heaps for measurement(IRC 3.2.1.a)- PWD sanctioned rate-specification code- 55.2	27.845	cum	2631.07	<b>73262.14</b>	INR Seventy Three Thousand Two Hundred & Sixty Two and Paise Fourteen Only
7.05	Supplying and stacking 6mm hard blue granite broken stone in standard heaps for measurement(IRC 3.2.1.a)- PWD sanctioned rate-specification code- 55.3	9.282	cum	2631.07	<b>24421.59</b>	INR Twenty Four Thousand Four Hundred & Twenty One and Paise Fifty Nine Only
7.06	Supplying and stacking 36mm size hard broken stone in standard heaps for measurement.(PWD sanctioned rate- specification code- 55.4)	92.813	cum	2537.36	<b>235499.99</b>	INR Two Lakh Thirty Five Thousand Four Hundred & Ninety Nine and Paise Ninety Nine Only
7.07	Providing, laying and rolling of open graded premix carpet of 20 mm thickness with 0.27 cum of 12 mm departmental aggregates premixed with 12.96 kg of bitumen per 10 sqm using penetration grade bitumen to required line, grade and level on a previously prepared base, after priming the existing surface with 5 kg of bitumen (VG 30) 10 sqm including mixing in a suitable plant, laying and rolling with a three wheel static roller of 80-100 KN capacity, finished to required level and grades, followed by a seal coat of 0.09 cum of 6 mm departmental aggregates premixed with 8.64 kg of bitumen per 10 sqm. By Manual Means- PWD sanctioned rate-specification code-55.1.a	1031.250	sqm	192.02	<b>198020.63</b>	INR One Lakh Ninety Eight Thousand & Twenty and Paise Sixty Three Only





7.08	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	67.500	cum	8340.93	<b>563012.78</b>	INR Five Lakh Sixty Three Thousand & Twelve and Paise Seventy Eight Only
<b>Total in Figures</b>					<b>6584672.80</b>	INR Sixty Five Lakh Eighty Four Thousand Six Hundred & Seventy Two and Paise Eighty Only
<b>Quoted Rate in Figures</b>			<b>Exce ss (+)</b>	<b>20.00%</b>	<b>7901607.36</b>	INR Seventy Nine Lakh One Thousand Six Hundred &
<b>Quoted Rate in Words</b>		<b>INR Seventy Nine Lakh One Thousand Six Hundred &amp; Seven Only</b>				



## COMMERCIAL DETAILS OF THE TENDER

To be accompanied with Tender

### 1. General details

Tender No.	Re-E-Tender No.21/2022-23/SE/PHC/MVPA due on 19.08.2022 .
Name of Scheme	KIIFB-Project-TRAN 10:WRD 025-06-WSS to Ayyappankovil Panchayath-Part II Package I&II-
Category of Scheme	KIIFB
Name of Work	Design and construction of electrical control rooms at raw water pump house and treatment plant compound, supply, erection and commissioning of transformers and allied works(1) 500 KVA at Thonithady raw water pump house,(2) 400 KVA at WTP compound(3) Supply erection and commissioning of motor pump sets at RWPH, treatment plant sump pumphouse,Kalthotty pump house and Nariyanpara intermediate pump house etc,(4) supplying,laying and commissioning 80 mm GI pumping main(5) improvement work of Kalthotty sump& pump house,(6) construction of pipe line bridge,(7) design and construction of 1.00 LL capacity sump& pump house at Nariyanpara,(8) providing washwater disposal pipe line at WTP Alady and interconnection works etc(9) Supply and laying 350 mm and 300 mm DI gravity main/pumping main pipe from Alady GLSR to Kalthotty sump(Re-arranging)(10) Supply and laying 300mm DI pumping main from Kalthotty sump to Nariyanpara(Re-arranging)(11)Supply and Laying 250 mm DI pumping main from Nariyanpara to Idukki Kavala(balance work re-arranging)-

### 2. Administrative Sanction details

Sl. No.	Administrative Sanction No.	dated	Amount
1	AS No GO(Rt) No.34/2018/ WRD dated 17.01.2018.from water resources department.Order No.WRD025-06-PA-01 dated 13.11.2018 of the Chief Engineer,KIIFB,Thiruvananthapuram	17.01.2018.	Rs. 46.424 Crores
Administrative Sanction - Total Amount			Rs. 46.424 Crores
Cumulative Expenditure of the Scheme in lakhs	0		Nil

### 3. Technical Sanction details

Technical Sanction No. - Latest	T.S./2021-22/2018/13138 (Reg.No.8668/2025-23) dated 29.06.2022 of Chief Engineer (CR) for an amount of Rs.633.20 Lakhs& T.S./2021-22/2018/13980(Reg.No.8666/2022-23) dated29.06.2022 of Chief Engineer (CR) for an amount of Rs.1431 Lakhs
TS Sanction issued by	The Chief Engineer (CR), Kochi - 11.



TS Amount	Rs.633.20 Lakhs &Rs.1431 Lakhs	
Population benefited		
Details of Source Adequacy Certified by CE	NA	NA

#### 4. Tender Dates and Amount

Sl. No.	Particulars	Remarks
1	Estimate Amount	2064.20 Lakhs
2	SOR adopted	DSR2018
3	Tendered PAC	16,82,76,029
4	Tender Date	29.07.2022
5	Due Date	19.8.2022
6	Expiry date of firm period	18.12.2022
7	Type of Tender ( LS / Schedule )	L S including schedule
8	Nature of Tendering (e-tender/others)	e-tender
9	No. of Prequalified Tenderers	1 No
10	No. of Tender Form purchased	2 No
11	No. of Tender Received	2 No
12	Completion Period of this Work	12 months
13	Proposed Completion date of Scheme	31.12.23
14	Name of Division	Project Division, Kattappana
15	Name of Circle	P.H. Circle, Muvattupuzha
16	Tender invited by	Superintending Engineer, P.H. Circle, Muvattupuzha
17	Name of Tendering Officer	Sri. Muhammed Rafi.A

#### 5. Scope of Work

Design and construction of electrical control rooms at raw water pump house and treatment plant compound, supply, erection and commissioning of transformers and allied works(1) 500 KVA at Thonithady raw water pump house,(2) 400 KVA at WTP compound(3) Supply erection and commissioning of motor pump sets at RWPH, treatment plant sump pumphouse,Kalthotty pump house and Nariyanpara intermediate pump house etc,(4) supplying,laying and commissioning 80 mm GI pumping main(5) improvement work of Kalthotty sump& pump house,(6) construction of pipe line bridge,(7) design and construction of 1.00 LL capacity sump& pump house at Nariyanpara,(8) providing washwater disposal pipe line at WTP Alady and interconnection works etc(9) Supply and laying 350 mm and 300 mm DI gravity main/pumping main pipe from Alady GLSR to Kalthotty sump(Re-arranging)(10) Supply and laying 300mm DI pumping main from Kalthotty sump to Nariyanpara(Re-arranging)(11)Supply and Laying 250 mm DI pumping main from Nariyanpara to Idukki Kavala(balance work re-arranging)-

Sequence of tender and re-tender	PAC	Due date	Reason for Cancellation



Re-tender No.39/2020-21//SE/PHC/MVPA due dt.03/02/2021	Rs.48329630	03.02.2021	Non participation of bidders
21//SE/PHC/MVPA due dt.15/02/2021 extended to 22/03/2021	Rs.48329630	22.03.2021	Cancelled due to high rate
21//SE/PHC/MVPA due dt.09/02/2021 extended to 15/02/2021	Rs.22111504	15.02.2021	Non participation of bidders
21//SE/PHC/MVPA due dt.09/02/2021 extended to 15/02/2021	Rs.67082180	15.02.2021	Non participation of bidders. Hence cancelled to re arrange the work in global tender.
21//SE/PHC/MVPA due dt.15/02/2021 extended to 22/03/2021	Rs.22111504	15.04.2021	Non participation of bidders
Re-tender No.53/2020-21/SE/PHC/MVPA due date on 08/03/2021 extended to 22/03/2021,29/03/2021, 15/04/2021	Rs.67082180	15.04.2021	Non participation of bidders. Hence cancelled to re arrange the work in global tender.
Re-tender No.02/2020-21/SE/PHC/MVPA due date on 25/06/2021 extended to 12/07/2021 & 28/07/2021	Rs.140845248	28.07.2021	Only one bidder participated. Cancelled vide proceedings No. KWA/SE/PHC/MVPA/DI/T-02/2021 dtd. 28/07/2021
Re-tender No.05/2020-21/SE/PHC/MVPA due date on 21/09/2021 extended to 25/09/2021	Rs.140845248	25.09.2021	Single bid. Cancelled tender & directed to revised the estimate as per DSR 2018 and to retender
Tender No.07/2021-22/SE/PHC/MVPA due date on 14/12/2021	Rs. 151854441	14.12.2021.	1st tender call in DSR 2018 2 offers received. Tender cancelled as one bidder not pre qualify andhence became single tender



Tender No.21/2021-22/SE/PHC/MVPA due date on 05/02/2022 extended to 11/02/2022	Rs.151854441	17.12.21	Only one bidder participated and rate quoted too high (53.25%). Since quoted rate is very high committee decided to cancel the tender and direct SE to verify and prepare realistic estimate based on site condition.
Tender No.13/2022-23/SE/PHC/MVPA due date on 25/07/2022	Rs.168276029	27-07-2022	No bidders participated. Hence tender cancelled by SE vide order No. SE/PHC/MVPA/DB4/T-13/2022 Dtd. 27/07/2022
Tender No.21/2022-23/SE/PHC/MVPA due date on 19/08/2022 (current tender)	Rs.168276029	19.08.2022 .	This Tender

### **6. Re-Tender Details**

Tender No.21/2022-23/SE/PHC/MVPA due date on 19/08/2022 (current tender)	Rs.168276029	19.08.2022 .	This Tender
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Second re-tender	--	--	N A
Third re-tender	--	--	--
Fourth re-tender	--	--	--

### **7. Publicity Details**

Sl. No.	Name of Daily	Language	Appeared on date
1	etenders.gov.in	English	30.07.2022
2	Kerala Kaumuthi (All Kerala Edition)	Malayalam	On or before 30/07/2022
3	Mathrubhumi (All Kerala Edition)	Malayalam	



4	Business Standard (All India Edition)	English
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### 8. List of Tenderers with Quoted Amount

Sl. No.	Name of Tenderers	Tendered PAC	Quoted Amount in Rs.	% Excess / Below
		Rs.	Rs	
1	Sri.Joseph John, ,	168276029	232227614.36	<b>38 % above</b>

### 9. Details of Lowest Tender Compared with PAC

Sl. No.	Items	Tendered PAC Rs.	Quoted Amount Rs	Comparison in %	Remarks
1	Lowest	168276029.00	232227614.36	<b>38 % above</b>	

### 10. Rate Analysis of pipes with Lowest Tender

Sl. No.	Type of Pipe	Unit	Quantity in M	Rate as per DSR 2014/m	Quoted Rate/m	Comparison in %
1	NA	NA	NA	NA	NA	NA
Negotiated by			Negotiated amount			

### 12. Recommendation

Recommendation of SE	Recommendation of CE
Single offer received may be approved	
<b>Superintending Engineer</b>	<b>Chief Engineer</b>





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2064.2





16-12-2017 10:00



1.529277727      0.529277727



224326007.00

7901607.36

232227614.36

1.380039782





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## TECHNICAL STATUS OF THE SCHEME

To be accompanied with tender document

<b>Tender Number</b>		<b>Re-E-Tender No.21/2022-23/SE/PHC/MVPA due on 19.08.2022</b>										
<b>Name of Scheme</b>		<b>KIIFB-Project-TRAN 10:WRD 025-06-WSS to Ayyappankovil Panchayath-Part II Package I&amp;II-</b>										
<b>Name of Work</b>		<b>Design and construction of electrical control rooms at raw water pump house and treatment plant compound, supply, erection and commissioning of transformers and allied works(1) 500 KVA at Thonithady raw water pump house,(2) 400 KVA at WTP compound(3) Supply erection and commissioning of motor pump sets at RWPH, treatment plant sump pumphouse,Kalthotty pump house and Nariyanpara intermediate pump house etc,(4) supplying,laying and commissioning 80 mm GI pumping main(5) improvement work of Kalthotty sump&amp; pump house,(6) construction of pipe line bridge,(7) design and construction of 1.00 LL capacity sump&amp; pump house at Nariyanpara,(8) providing washwater disposal pipe line at WTP Alady and interconnection works etc(9) Supply and laying 350 mm and 300 mm DI gravity main/pumping main pipe from Alady GLSR to Kalthotty sump(Re-arranging)(10) Supply and laying 300mm DI pumping main from Kalthotty sump to Nariyanpara(Re-arranging)(11)Supply and Laying 250 mm DI pumping main from Nariyanpara to Idukki Kavala(balance work re-arranging)-</b>										
Sl. No.	Components	Whether this component is included in the scheme. Yes/ No	Total Quantity included as per TS	Completed		Progress		Present Tender		To be Arranged		Remarks
				Quantity	%	Quantity	%	Quantity	%	Quantity	%	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Check dams / Bunds	Yes	Package-III									Selection Notice Issued
2	Raw water Intake	Yes										Existing
3	Well Cum Pump house	Yes										Existing
4	Raw Water Pump house/pumping main	Yes										Included in this Tender
5	Raw Water Pump Sets	Yes										
6	Transformer	Yes	Package-I									



7	Raw Water Pipe/Pumping main	do	Package-II									completed except the reaches arranged in Package-II
8	Water Treatment Plant	Yes										Existing
9	Clear Water Sump	do										Existing
10	Clear Water Pump House	Yes										
11	Clear Water Pump Sets	Yes	Package-II									Included in this Tender
12	Substation at CWPH	No										
13	Clear Water Pumping Main	No										completed except the reaches arranged in Package-II
14	Elevated Service Reservoir	No										
15	CW Transmission Main	Yes										completed
16	Booster / Lifting Station	No	Intermediate sump at Nariampara									Included in this Tender
17	Booster / Lifting Pump set	No										
18	Ground Level Tanks											Completed
19	Over Head Tanks	No										NIL
20	Distribution MS Pipe	Yes										
21	Distribution CI Pipe											



22	Distribution DI Pipes	Yes											Completed
23	Distribution GI Pipes	Yes											
24	Distribution PVC Pipes	Yes											
25	Distribution others	Yes											
26	Distribution TOTAL	Yes											
	<b>Any Other Components</b>	Nil											

**Superintending Engineer**

**Chief Engineer**



**KERALA WATER AUTHORITY**  
**Details to be submitted to the Tender Committee for evaluating the Tenders**

Name of Circle: P.H. Circle, Muvattupuzha

Name of Work : KIIFB-Project-TRAN 10:WRD 025-06-WSS to Ayyappankovil Panchayath-Part II Package I&II-

Re- E-Tender No.21/2022-23/SE/PHC/MVPA due on 19.08.2022

Name of Scheme under which the work is to be awarded : Design and construction of electrical control rooms at raw water pump house and treatment plant compound, supply, erection and commissioning of transformers and allied works(1) 500 KVA at Thonithady raw water pump house,(2) 400 KVA at WTP compound(3) Supply erection and commissioning of motor pump sets at RWP, treatment plant sump pumphouse,Kalthotty pump house and Nariyanpara intermediate pump house etc,(4) supplying,laying and commissioning 80 mm GI pumping main(5) improvement work of Kalthotty sump& pump house,(6) construction of pipe line bridge,(7) design and construction of 1.00 LL capacity sump& pump house at Nariyanpara,(8) providing washwater disposal pipe line at WTP Alady and interconnection works etc(9) Supply and laying 350 mm and 300 mm DI gravity main/pumping main pipe from Alady GLSR to Kalthotty sump(Re-arranging)(10) Supply and laying 300mm DI pumping main from Kalthotty sump to Nariyanpara(Re-arranging)(11)Supply and Laying 250 mm DI pumping main from Nariyanpara to Idukki Kavala(balance work re-arranging)-

							Funds required for completing the work				
Details for	Original Estimate Amount	Revised Estimate Amount	A.S. & T.S. No. and Date	Expenditure till Prev. fin. Year (including Materials)	Expenditure during this year (including Materials)	Total expenditure till date (including materials)	For supply works	For future expenditure	Budget provision for the year	Anticipated date of completion	Remarks if any
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.		
1. The present work	2064.20 Lakhs	Nil.	AS No GO(Rt) No.34/2018/ WRD dated 17.01.2018.from water resources department.Order No.WRD025-06-PA-01 dated 13.11.2018 of the Chief Engineer,KIIFB,Thiruvananthapuram T.S./2021-22/2018/13138 (Reg.No.8668/2025-23) dated 29.06.2022 of Chief Engineer (CR) for an amount of Rs.633.20 Lakhs& T.S./2021-22/2018/13980(Reg.No.8666/2022-23) dated29.06.2022 of Chief Engineer (CR) for an amount of Rs.1431 Lakhs	Nil	Nil	0.52				31.12..2023	
2. The entire Scheme	Rs.46.424 Cr										
Details of Tenders:											
Date of Publication of Tender Notice	No. of Tender documents sold	No. of tender documents Received	Name of Tenderer Recommended	Estimated PAC	Quoted PAC	% of excess	Whether current Sch. Of rates followed?	If not Why?	Firm period tender/ quotation		
Kerala Kaumuthi (All Kerala Edition),Mathrubhumi (All Kerala Edition),Business Standard (All India Edition)On or before 30/07/2022	2	2	Sri.Joseph John	168276029	23222614.36	38 % above	DSR 2018		18.12.2022		

- a) What are the efforts taken to get the rates reduced and the result?: : As the quoted rate is 38 % above the tendered PAC, tender may be sanctioned at suitable rate.
- b) Justification for large variation (if any, between the estimated and quoted PAC) : NA
- c) Whether re-tender is advisable, and if not, why? : No, This work is tendered several times, But no reasonable rate received,
- Any other remarks
- Reason for delay if any submitting the tender to H.O. No delay
- Recommendations of the Superintending Engineer Recommend for sanction
- Recommendations of the Chief Engineer
- Forwarded to H.O. on .....

**Superintending Engineer**





**KERALA WATER AUTHORITY,  
P.H.CIRCLE, MUVATTUPUZHA**

**CHECK LIST**

**KIIFB-Project-TRAN 10:WRD 025-06-WSS to Ayyappankovil Panchayath-Part II Package I&II-**

**Name of Work:- KIIFB-Project-TRAN 10:WRD 025-06-WSS to Ayyappankovil Panchayath-Part II Package I&II-Design and construction of electrical control rooms at raw water pump house and treatment plant compound, supply, erection and commissioning of transformers and allied works(1) 500 KVA at Thonithady raw water pump house,(2) 400 KVA at WTP compound(3) Supply erection and commissioning of motor pump sets at RWPH, treatment plant sump pumphouse,Kalthotty pump house and Nariyanpara intermediate pump house etc,(4) supplying,laying and commissioning 80 mm GI pumping main(5) improvement work of Kalthotty sump& pump house,(6) construction of pipe line bridge,(7) design and construction of 1.00 LL capacity sump& pump house at Nariyanpara,(8) providing washwater disposal pipe line at WTP Alady and interconnection works etc(9) Supply and laying 350 mm and 300 mm DI gravity main/pumping main pipe from Alady GLSR to Kalthotty sump(Re-arranging)(10) Supply and laying 300mm DI pumping main from Kalthotty sump to Nariyanpara(Re-arranging)(11)Supply and Laying 250 mm DI pumping main from Nariyanpara to Idukki Kavala(balance work re-arranging)-**

		Yes	No.
1	Whether the timeframe stipulated vide circular dated 29/07/2013 is complied	Yes	
2	Copy of Administrative Sanction(AS)/Revised AS	Yes	
3	Copy of Technical Sanction(TS)/Revised TS	Yes	
4	Whether duly filled up proforma submitted with specific recommendation of SE/CE	Yes	
5	Whether Tendered PAC is excluding Excise Duty (Details to be submitted separately)	NA	
6	Whether Copy of Sanctioned Estimate furnished	Yes	
7	Whether Publicity Details submitted (Details to be furnished separately)	Yes	
8	Whether details/documents substantiating financial standing of the tendered submitted	Yes	



9	Whether experience certificates submitted to Head Office contain the following as per NIT a) Date of award of work for which experience - certificate is issued- b)Date of Agreement- c)Period of completion as per Agreement- d)Actual date of completion:	Yes	
10	Whether justification/Specific recommendation/urgency in case of high quoted rate furnished as per order/circular	Yes	
11	Whether Rate Comparison with DSR/LMR excluding Excise Duty submitted with Abstract of DSR /LMR	Yes	
12	Whether required land for all components of the scheme is under KWA possession.(Details to be furnished separately)	Yes	
13	Whether specific Remarks/Recommendations of CE/SE/tendering Authority given in the proforma	Yes	
14	Whether any changes/deviation made against the original provision If yes, sanction details to be submitted separately		No.
15	Whether pie policy followed, if not , furnish the details	Yes	
16	Whether break up of cost of materials and working charges given in the Tender Notice. If not, specify the reasons separately.		No.
17	Whether technical status showing the status of all the components of the scheme furnished.	Yes	
18	Copy of schematic diagram.	No.	

**SUPERINTENDING ENGINEER**





Yes



<b>TPAC CALCULATION</b>		
	Design and construction of electrical control rooms at raw water pump house and treatment plant compound, supply, erection and commissioning of transformers and allied works (1) 500KVA at Thonithady raw water pump house,(2)400 KVA at WTP compound,(3) supply erection and commissioning of motor pump sets at RWPH, treatment plant sump pump house, Kalthotty pump house and Nariyanpara intermediate P H etc, (4)Supplying, laying and commissioning 80mm GI pumping main, (5)improvement workofKalthotty sump& pump house, (6)construction of pipe line bridge,(7) design andconstruction of 1.00LL capacity sump& pump house at Nariyanpara, (8)providing washwater disposal pipe line at WTP Alady and interconnection works etc (9) Supply and laying 350mm and 300mm DI gravity main/ pumping main pipe from Alady GLSR to Kalthotty sump (Re-arranging), (10) Supply and laying 300 mm DI pumping main from Kalthotty sump to Nariyanpara (Re-arranging) (11) Supply and Laying 250mm DI pumping main from Nariyanpara to Idukki kavala (balance work re-arranging)	
	<b>Package I</b>	
1	Civil Works.(a) Design and Construction of Electrical Control room, RCC Columns with foot bridge to Thonithady Raw water pumping station(1) Control room and foot bridge.	8103196.33
2	Civil Works.(a) Construction of Electrical Control room, RCC Columnswith foot bridge to Thonithady Raw water pumping station-(3)Construction of waste water drain.	404105.7
3	Civil works-(b)Construction of Electrical Control room at water treatment plant site Alady and approach road work..(1)Construction of control room	1983656
4	Civil work (b)Construction of Electrical Control room at water treatmentplant site Alady and approach road work.(2).Construction of concrete road and retaining wall.	7211119.01
5	2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound- (1)- 11 KV substation and HT equipments	970302.82
6	2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound-(2)- LT / MVPANELS & ACCESSORIES	498880
7	2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound- (3)- DISTRIBUTION BOARDS, SWITCHGEAR & ACCESSORIES	25342



8	2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound- (4)- CABLES , WIRES & ACCESSORIES	988208
9	2(a)- Supply, erection, testing and commissioning of 400 KVATransformer and allied works at Alady plant compound- (5)- EARTHING & ACCESSORIES	1081588
10	2(a)- Supply, erection, testing and commissioning of 400 KVATransformer and allied works at Alady plant compound-(6) SUBSTATIONEQUIPMENTS & MISC	52084
11	2(b)- Supply, erection, testing and commissioning of 500 KVATransformer and allied works at Thonithady raw water pump housecompound- (1)- 11 KV substation and HT equipments	1765939
12	2(b)- Supply, erection, testing and commissioning of 500 KVATransformer and allied works at Thonithady raw water pump housecompound-(2)- LT / MV PANELS & ACCESSORIES	1806133
13	2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump housecompound- (3)- DISTRIBUTION BOARDS, SWITCHGEAR & ACCESSORIES	25342
14	2(b)- Supply, erection, testing and commissioning of 500 KVATransformer and allied works at Thonithady raw water pump housecompound- (4)- CABLES , WIRES & ACCESSORIES	845912
15	2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady plant compound- (5)- EARTHING & ACCESSORIES	1109488
16	2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump housecompound-(6) SUBSTATION EQUIPMENTS & MISC	17084
	2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump housecompound-(7) - SCHEME APPROVAL & POWER ALLOCATION	35000
17	4) Supply, Erection, Testing and Commissioning of 2 Nos new VerticalTurbine motor Pumpset (working voltage 3300V) having discharge of 80lps against a total head of 180 M. suction head 20.30m at Thonithady rawwater pump house	9018615.72
18	9(a) Supply, Erection, Testing and Commissioning of 2 Nos motor pumpsets at Nariyanpara pump house for pumoing to Nariampara top to GL tank	530859.84



19	9(b) Supply, Erection, Testing and Commissioning of 2 Nos motor pumpsets at Nariyanpara pump house for pumping to Mulakamedu/Kochuthovala GL tank	1520946.32
20	9(c) Supply, Erection, Testing and Commissioning of 2 Nos motor pumpsets at Kalthotty pump house pumping to Labbakada GL tank	237261.02
21	9(d) Supply, Erection, Testing and Commissioning of 2 Nos motor pumpsets at Kalthotty pump house pumping to Meppara GL tank	1334094.19
23	Supply, Erection, Testing and Commissioning of 2 Nos Centrifugal MotorPumpset having discharge of 5 lps against a total head of 81 M. suctionhead 5m at WTP sump for pumping to Alady Kurisumala GLSR.	520437.74
24	(2) - Supply, Erection, Testing and Commissioning of 2 Nos new Centrifugal motor Pumpset having discharge of 65 lps against a totalhead of 125 M. suction head 5m speed 1450 rpm at WTP sump for pumping to Kalthotty / Nariyampara sumps	6972415.86
	<b>Total</b>	<b>47058010.55</b>
	<b>Package II</b>	
	Package II excluding GST-	<b>121218018.9</b>
	Total Package I & II	<b>168276029</b>
<b>LMR CALCULATION</b>		
	<b>Package I</b>	
	LMR Estimate PAC	55989263
	Deduct	
1	Power allocation charges (OYEC & CD) Extension of three phase line to Kalthotti and Nariyanpara pumping station	
2	Power allocation and energization of clear water pump house at Kalthotty ( Including application fee, power allocation fee , Estimate cost for service connection, Cash deposit)	1965000
3	Any additional cost for actual execution of work - Power allocation and energization of clear water pump house at Kalthotty 100 KVA ( Approval from KSEB	200000



4	Power allocation and energization of clear water pump house at Nariyampara ( Including application fee, power allocation fee , Estimate cost for service connection, Cash deposit) - As per intimation notice DB-2018-19/ESKNCHR/326 dated 22.03.2019 from KSEB)	920000
5	Any additional cost for actual execution of work - Power allocation and energization of clear water pump house at Nariyampara 160 KVA ( Approval from KSEB)	200000
	Total deduction	3285000
	NET LMR Package-I	<b>52704263</b>
	Package II excluding GST-	<b>119935752</b>
	Total Package I&Package II	<b>172640015</b>

**SUPERINTENDING ENGINEER**





35000





LMR Estimate PAC





-1.06

**KIIFB Project: TRAN 10: WRD025-06 - WSS to Ayyappankovil Panchayat - Part II**  
**,Package I - Design and construction of electrical control rooms at raw water pump**  
**house and treatment plant compound, supply, erection and commissioning of**  
**transformers and allied works (1) 500KVA at Thonithady raw water pump**  
**house,(2)400 KVA at WTP compound, supply erection and commissioning of motor**  
**pump sets at RWPH, treatment plant sump pump house, Kalthotty pump house and**  
**Nariyanpara intermediate P H etc.**

LMR Abstract with DAR 21-IDK(Idukki & Udumbanchola & Peerumedu) 01/07/2022 - 30/09/2022

Sl No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
11		Civil Works.(a) Design and Construction of Electrical Control room, RCC Columns with foot bridge to Thonithady Raw water pumping station(1) Control room and foot bridge.						
1	2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared	900.000	sqm	15.43	13887.00	15.60	14040.00
2	15.7.4	Demolishing brick work manually / by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-Charge.In cement mortar	1.201	cum	1805.99	2168.99	1829.35	2197.05
3	2.8.1	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil	513.822	cum	309.95	159259.13	319.55	164191.82
4	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:Cement mortar 1:6 (1 cement : 6 coarse sand)	6.968	cum	7520.41	52402.22	8030.80	55958.61
5	4.1.5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	9.861	cum	7690.32	75834.25	9884.65	97472.53
6	50.6.1.3	Solid block masonry using pre cast solid blocks (Factory made) of size 40x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 for super structure above floor two level up to floor V level thickness 20cm and above in: CM 1:6 ( 1 cement :6 coarse sand) etc complete						



		25.157	cum	7784.73	195840.45	8495.10	213711.23
7	10.6.1 Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.80x1.25 mm M.S. laths with 1.25 mm thick top cover						
		17.700	sqm	3617.29	64026.03	4136.05	73208.09
8	10.5.1 Providing and fixing 1 mm thick M.S. sheet door with frame of 40x40x6 mm angle iron and 3 mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.Using M.S. angels 40x40x6 mm for diagonal braces						
		1.800	sqm	5440.63	9793.13	6399.50	11519.10
9	50.9.1.3 Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length ( hold fast lugs or dash fastener shall be paid for separately). using good quality Vengai wood						
		0.256	cum	80265.15	20547.88	118215.00	30263.04
10	50.9.2.3 Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows, 35 mm thick shutters including ISI marked M.S pressed butt hinges bright finished of required size with necessary screws, excluding paneling which will be paid for separately, all complete as per direction of Engineer in - charge.using Vengai wood						
		7.821	sqm	2666.62	20855.64	3555.55	27807.96
11	5.33.1 Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.All work upto plinth level						
		79.842	cum	9825.93	784521.90	12022.00	959860.52



12	5.33.2 Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.All work above plinth level upto floor V level	127.677	cum	11550.4	1474720.42	13768.90	1757971.85
13	5.34.1 Extra for providing richer mixes at all floor levels. Note:- Excess/less cement over the specified cement content used is payable/ recoverable separately.Providing M-30 grade concrete instead of M-25 grade BMC/RMC. (Note:- Cement content considered in M-30 is @ 340 kg/cum).	207.519	cum	85.7	17784.38	101.65	21094.31
14	5.2.2 Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up tot floor five level excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3( 1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	11.135	cum	11433.93	127316.81	13791.85	153572.25
15	5.22.6 Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more	24051.941	kilogram	102.61	2467969.67	120.80	2905474.47
16	5.9.1 Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	197.600	sqm	350.0	69160.00	347.55	68675.88
17	5.9.3 Centering and shuttering including strutting, etc. and removal of form for:Suspended floors, roofs, landings, balconies and access platform	348.889	sqm	851.52	297085.96	907.25	316529.55
18	5.9.5 Centering and shuttering including strutting, etc. and removal of form for:Lintels, beams, plinth beams, girders bressumers and cantilevers	668.774	sqm	678.28	453616.03	731.35	489107.86



19	5.9.6 Centering and shuttering including strutting, etc. and removal of form for:Columns, Pillars, Piers, Abutments, Posts and Struts	430.401	sqm	901.48	387997.89	910.10	391707.95
20	13.7.1 12 mm cement plaster finished with a floating coat of neat cement of mix:1:3 ( 1 cement : 3 fine sand)	1503.77 1	sqm	418.79	629764.26	486.80	732035.72
21	13.8.2 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix:1: 4 ( 1 cement : 4 fine sand)	337.251	sqm	453.75	153027.64	530.10	178776.76
22	13.44.1 Finishing walls with water proofing cement paint of required shade:New work (Two or more coats applied @ 3.84 kg/10 sqm)	1629.55 1	sqm	112.09	182656.37	121.20	197501.58
23	13.60.1 Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade:Two or more coats on new work	323.138	sqm	158.02	51062.27	160.55	51879.81
24	13.37.1 White washing with lime to give an even shade:New work (three or more coats)	151.229	sqm	35.1	5308.14	34.10	5156.91
25	13.50.3 Applying priming coat:With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron /steel works	46.200	sqm	62.27	2876.87	61.40	2836.68
26	13.48.3 Finishing with Deluxe Multi surface paint system for interiors and exteriors using primer as per manufacturers specifications:Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/10 sqm of approved brand and manufacture	55.276	sqm	154.62	8546.78	157.30	8694.91
27	13.71 Lettering with black Japan pint of approved brand and manufacture	2500.00 0	Letterxc m ht	5.8	14500.00	5.85	14625.00





28	11.21.1.1 Providing and fixing 10 mm thick acid and /or alkali resistant tiles of approved make and colour using acid and / or alkali resisting mortar bedding, and joints filled with acid and /or alkali resisting cement as per IS : 4457, complete as per the direction of Engineer-in-Charge.In flooring on a bed of 10 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)Acid and alkali resistant tile	3.312	sqm	1836.85	6083.65	2098.50	6950.23
29	11.21.2.1 Providing and fixing 10 mm thick acid and /or alkali resistant tiles of approved make and colour using acid and / or alkali resisting mortar bedding, and joints filled with acid and /or alkali resisting cement as per IS : 4457, complete as per the direction of Engineer-in-Charge.In dado/ skirting on 12 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)Acid and alkali resistant tile	12.960	sqm	1975.33	25600.28	2235.80	28975.97
30	11.37 Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer), of 1st quality conforming to IS : 15622, of approved make, in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), including pointing the joints with white cement and matching pigment etc., complete.	3.151	sqm	1138.82	3588.42	1317.40	4151.13
31	11.22.1.1 Tile work in skirting, risers of steps and dado upto 2 m height, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry @ 3.3 kg/sqm, including pointing in white cement mixed with pigment of matching shade complete.Marble tiles ( polished ) Raj Nagar8 mm thick	15.121	sqm	1523.0	23029.28	1532.50	23172.93
32	od2083/2019_2020 Providing sanitary facilities and electrical works including water closet ,flushing cistern ,wash basin, steel taps, 250ltr capacity PVC water tank and other required sanitary and electrical fittings as per the direction of departmental officers in charge.	1.000	No	42488.69	42488.69	46280.10	46280.10
33	od148982/2018_2019 Providing gantry girder arrangements to existing pump house with allied works etc.complete.	1.000	No	80000.0	80000.00	80000.00	80000.00
34	od173455/2020_2021 Providing and fixing MS hook of 22mm dia, bend to shape in RCC slab (ceiling of control room) or beam as per standards including painting the exposed portion	12.000	No	301.61	3619.32	377.95	4535.40



SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
35	10.16.2	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.Hot finished seamless type tubes	911.028	kg	193.47	176256.59	209.55	190905.92
13 Civil Works.(a) Construction of Electrical Control room, RCC Columns with foot bridge to Thonithady Raw water pumping station-(3)Construction of waste water drain.								
1	2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared	100.000	sqm	15.43	1543.00	15.60	1560.00
2	2.8.1	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil	38.250	cum	309.95	11855.59	319.55	12222.79
3	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:Cement mortar 1:6 (1 cement : 6 coarse sand)	19.125	cum	7520.41	143827.84	8030.80	153589.05
4	5.1.3	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	11.701	cum	8964.72	104896.19	11245.05	131578.33
5	5.9.2	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	99.002	sqm	748.62	74114.88	766.40	75875.13
6	5.22.6	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more	7.021	kilogram	102.61	720.42	120.80	848.14
7	13.7.2	12 mm cement plaster finished with a floating coat of neat cement of mix:1:4 ( 1 cement : 4 fine sand)						



SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
14 Civil works-(b)Construction of Electrical Control room at water treatment plant site Alady and approach road work..(1)Construction of control room .			166.500	sqm	403.29	67147.79	468.30	77971.95
1	2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared	150.000	sqm	15.43	2314.50	15.60	2340.00
2	2.8.1	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil	200.965	cum	309.95	62289.10	319.55	64218.37
3	2.7.2	Earth work in excavation by mechanical means (Hydraulic excavator )/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed.Hard rock (requiring blasting)	5.400	cum	749.05	4044.87	1047.20	5654.88
4	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:Cement mortar 1:6 (1 cement : 6 coarse sand)	18.407	cum	7520.41	138428.19	8030.80	147822.94
5	4.1.5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	14.724	cum	7690.32	113232.27	9884.65	145541.59
6	50.6.1.3	Solid block masonry using pre cast solid blocks (Factory made) of size 40x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 for super structure above floor two level up to floor V level thickness 20cm and above in: CM 1:6 ( 1 cement :6 coarse sand) etc complete	21.383	cum	7784.73	166460.88	8495.10	181650.72



7	10.6.1 Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.80x1.25 mm M.S. laths with 1.25 mm thick top cover	9.000	sqm	3617.29	32555.61	4136.05	37224.45
8	21.1.1.1 Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS : 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing /paneling, C.P. brass/ stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge.(Glazing, paneling and dash fasteners to be paid for separately):For fixed portionAnodised aluminium (anodised transparent or dyed to required shade according to IS : 1868, Minimum anodic coating of grade AC 15)	13.389	kg	520.9	6974.33	588.35	7877.42
9	21.3.1 Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer - in - Charge. ( Cost of aluminium snap beading shall be paid in basic item):With float glass panes of 4.0 mm thickness	7.500	sqm	1228.2	9211.50	1585.20	11889.00
10	5.1.2 Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size)	10.836	cum	9483.15	102759.41	11828.25	128170.92
11	5.2.2 Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3( 1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	26.087	cum	11433.93	298276.93	13791.85	359787.99
12	5.22A.6 Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete above plinth level.Thermo - Mechanically Treated bars of grade Fe-500D or more						



		4061.53 0	kg	102.61	416753.59	120.80	490632.82
13	5.9.1 Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete						
		36.000	sqm	350.0	12600.00	347.55	12511.80
14	5.9.3 Centering and shuttering including strutting, etc. and removal of form for:Suspended floors, roofs, landings, balconies and access platform						
		98.987	sqm	851.52	84289.41	907.25	89805.96
15	5.9.5 Centering and shuttering including strutting, etc. and removal of form for:Lintels, beams, plinth beams, girders bressumers and cantilevers						
		73.182	sqm	678.28	49637.89	731.35	53521.66
16	5.9.6 Centering and shuttering including strutting, etc. and removal of form for:Columns, Pillars, Piers, Abutments, Posts and Struts						
		59.040	sqm	901.48	53223.38	910.10	53732.30
17	13.7.1 12 mm cement plaster finished with a floating coat of neat cement of mix:1:3 ( 1 cement : 3 fine sand)						
		207.662	sqm	418.79	86966.77	486.80	101089.86
18	13.8.2 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix:1: 4 ( 1 cement : 4 fine sand)						
		319.321	sqm	453.75	144891.90	530.10	169272.06
19	13.37.1 White washing with lime to give an even shade:New work (three or more coats)						
		81.120	sqm	35.1	2847.31	34.10	2766.19
20	13.44.1 Finishing walls with water proofing cement paint of required shade:New work (Two or more coats applied @ 3.84 kg/10 sqm)						
		430.863	sqm	112.09	48295.43	121.20	52220.60
21	13.50.3 Applying priming coat:With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron /steel works						
		18.000	sqm	62.27	1120.86	61.40	1105.20



22	13.48.3	Finishing with Deluxe Multi surface paint system for interiors and exteriors using primer as per manufacturers specifications:Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/10 sqm of approved brand and manufacture						
		18.000	sqm	154.62	2783.16	157.30	2831.40	
23	13.71	Lettering with black Japan pint of approved brand and manufacture						
		1500.00 0	Letterxc m ht	5.8	8700.00	5.85	8775.00	
24	11.21.1.1	Providing and fixing 10 mm thick acid and /or alkali resistant tiles of approved make and colour using acid and / or alkali resisting mortar bedding, and joints filled with acid and /or alkali resisting cement as per IS : 4457, complete as per the direction of Engineer-in-Charge.In flooring on a bed of 10 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)Acid and alkali resistant tile						
		54.000	sqm	1836.85	99189.90	2098.50	113319.00	
25	11.22.1.1	Tile work in skirting, risers of steps and dado upto 2 m height, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry @ 3.3 kg/sqm, including pointing in white cement mixed with pigment of matching shade complete.Marble tiles ( polished ) Raj Nagar8 mm thick						
		5.480	sqm	1523.0	8346.04	1532.50	8398.10	
26	od173455/2020_2021	Providing and fixing MS hook of 22mm dia, bend to shape in RCC slab (ceiling of control room) or beam as per standards including painting the exposed portion						
		12.000	No	301.61	3619.32	377.95	4535.40	
27	10.16.2	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.Hot finished seamless type tubes						
		123.241	kg	193.47	23843.44	209.55	25825.15	
Sl No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
15		Civil work (b)Construction of Electrical Control room at water treatment plant site Alady and approach road work.(2).Construction of concrete road and retaining wall.						
1	2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared						
		30.000	sqm	15.43	462.90	15.60	468.00	



2	2.8.1 Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil	36.000	cum	309.95	11158.20	319.55	11503.80
3	4.1.5 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	4.801	cum	7690.32	36921.23	9884.65	47456.20
4	7.1.1 Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:Cement mortar 1:6 (1 cement : 6 coarse sand)	36.800	cum	7520.41	276751.09	8030.80	295533.44
5	5.2.2 Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up tot floor five level excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3( 1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	4.201	cum	11433.93	48033.94	13791.85	57939.56
6	2.2.1 Earth work in rough excavation, banking excavated earth in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with 1/2 tonne roller or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up in embankments for roads, flood banks, marginal banks and guide banks or filling up ground depressions, lead up to 50 m and lift up to 1.5 m:All kinds of soil	500.000	cum	917.54	458770.00	928.20	464100.00
7	od165801/2020_2021 Dry rubble masonry with hard stone in foundation and plinth including leveling up with cement concrete 1:6:12 ( 1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:	500.000	cum	4957.19	2478595.00	4681.30	2340650.00
8	5.1.3 Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	250.000	cum	8964.72	2241180.00	11245.05	2811262.50



9	5.9.1	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete						
		220.001	sqm	350.0	77000.35	347.55	76461.35	
10	5.22.6	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more						
		15420.001	kilogram	102.61	1582246.30	120.80	1862736.12	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
<b>19 2- Electromechanical works</b>								
No Specifications added under this Estimate								
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
21	2(a)-	Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound- (1)- 11 KV substation and HT equipments						
1	od194695/2018_2019	Erection of RCC/ PCC pole of following length in brick ballast and ramming the foundation, finishing with 150 mm thick cement concrete (1:3:6) layer on top with including excavation and refilling etc. as required.						
		2.000	Nos	4957.0	9914.00	4957.00	9914.00	
2	od194696/2018_2019	Supplying and erection of a set of cross bracing frame work for 11 KV over head line double pole structure having four members fabricated out of 50 mm X 50 mm X 6 mm angle iron to form a rectangle of minimum size 1400 mm width X 2500 mm height, complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. (as per drawing) and painting with primer and finish paint as required.						
		1.000	set	6552.0	6552.00	6552.00	6552.00	
3	od194697/2018_2019	Erection of double pole 3 wire cross arm for 11 KV/22 KV/33 KV over head lines as required.						
		3.000	Nos	967.0	2901.00	967.00	2901.00	
4	od194698/2018_2019	Supplying and erection of 11 kV pin insulator complete with large steel head G.I. pin, nuts, washers etc. as required.						
		1.000	set	349.0	349.00	349.00	349.00	





5	od194699/2018_2019 Supplying and erection of three piece nonlinear resistor type lightning arrestor suitable for 3 wire, 11 kV overhead lines with rated voltage 9 kV (rms) with a nominal discharge current rating of 5 kA and complete with galvanised clamping arrangement, G.I. bolts, nuts, washers etc. as required.	1.000	set	3601.0	3601.00	3601.00	3601.00
6	od194700/2018_2019 OUTDOOR HT BREAKER PANEL (LBS) Supply, Installation, Testing & Commissioning of 11kV Outdoor HT Breaker Panel with the following components. 11kV Load Break Swich 11kV, 350 MVA, 630A, LBS unit - 1 set Voltmeter ( 0 - 11kV) - 3 Nos LED Pilot Indication - LBS ON / OFF - 1 Set Trip Push buttons - 1 set 2NO+2NC Aux contacts - 1 Set 230V AC Shunt Trip Coil - 1 No Aluminium Busbar - 1 Set Seal off Bushings - 3 Nos Space Heater Element with Thermostat & wiring - 1 Nos Inspection Lamp LED with switch & wiring - 1 set Metering Chamber PT - 100 VA, 11kV/110V, CL 0.2S - 1 No CT - */5A, 15VA, CL 0.2S - 3 Nos Provisions for mounting 3 phase, 4wire, HT CT/PT operated, bi- directional TOD meter with accuracy class 0.2S including wiring and test terminal block, site glass etc. - 1 set Voltage Circuit: The active & apparent power consumption of voltage circuit including power supply of meter at reference voltage, reference temperature & frequency shall not exceed 1.0 Watt & 4.0 VA per phase Current Circuit: The apparent power taken by current circuit at basic current, reference frequency & reference temperature shall not exceed 1.0 VA/phase.( The Quoted rate shall be inclusive of necessary control wiring,components working on LT supply should be prewired completely with necessary controls as specified till the connection point for feeding LT Supply from outside, Cable end box for receiving incoming and outgoing cables and suitable civil foundation etc as required.) Supply & Labour	1.000	set	215359.0	215359.00	215359.00	215359.00
7	od194701/2018_2019 HT Bidirectional TOD Meter Supply & Providing 3 phase, 4wire, HT CT/PT operated, bi-directional with accuracy class 0.2S for both Active and Reactive energy, -/5A, HT static tri vector meter with TOD register, DLMS compliant & AMR compatible with optical port and RS232 port having ISI Marking, suitable for measurement of active kWh, reactive energy kVARh and apparent energy kVAh and kVA MD, kW MD at nominal frequency in the range of 47.5 Hz to 52.5 Hz in balanced as well as unbalanced load conditions in the existing outdoor Meter cubicle including testing & commissioning etc. complete.	1.000	set	43954.0	43954.00	43954.00	43954.00
8	od194702/2018_2019 HT Equipment Pinth, Substation Yard Fencing & Levelling- Providing, fabricating and fixing 2m high chainlink fencing over 4mm thick barbed wire with a framework of 50x50x6mm MS angle between vertical posts of ISMC 75 at 2400mm interval, Earthing as per KSEI/KSEB standards shall be done around the periphery of the fencing. The MS framework for chainlink fencing shall be Hot Dip Galvanised. The rate shall be inclusive of all materials, labour, lead, lift etc including escalation works and fabrication and assembly works including all nuts, bolts and other miscallaneous items etc complete as per drawing and as directed by the Engineer in Charge.	1.000	set	43954.0	43954.00	43954.00	43954.00



			20.000	metre	1298.0	25960.00	1298.00	25960.00
9	od194703/2018_2019	Supplying and filling the substation yard with 40mm size blue jelly of 150mm thick including cost and conveyance of all materials, labour charges etc complete						
			5.000	cum	3017.0	15085.00	3017.00	15085.00
10	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:Cement mortar 1:6 (1 cement : 6 coarse sand)						
			2.000	cum	7520.41	15040.82	8030.80	16061.60
11	od194705/2018_2019	400 KVA Transformer- Supply, installation, testing and commissioning of one number 400 kVA, DYn11, 3Ph, 50Hz, 11/0.433 kV,ONAN cooled, copper wound outdoor distribution transformer with tappings from +5% to -10% in steps of 2.5% with OFTC. The HT side & LT side shall have cable end box for XLPE cable. The transformer shall have suitable enclosure for The HT side & LT side. The transformer shall be complete with all standard accessories and fittings & conform to IS:2026. The rate shall be inclusive of all materials, lead,lift, first fill of oil, necessary civil works for mounting to the existing transformer foundation complete as per single line schematic diagram & particular specifications.						
			1.000	set	631587.0	631587.00	631587.00	631587.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
22	2(a)-	Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound-(2)- LT / MV PANELS & ACCESSORIES						



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1	<p>od201682/2018_2019</p> <p>PCC PANEL - Supply, fabrication, erection, testing and commissioning of cubicle type fully compartmentalised, dust tight, vermin proof, water proof 800A LT- Main MV Panel falling to IP54 category fabricated out of 16 SWG CRCA Sheet Steel painted as per standards with Alumimium Busbars of suitable size, earth bus of adequate capacity, double earth connection to all switches, internal rigid connection etc. including suitable chambers, front open, top cable entry with water proof shrouding, free standing panel consisting of the following as per standards ( All switches shall confirm to conforming to IEC 60947-2 standards). Incommer 800A FP Microprocessor based MDO ACB (35kA) - 1 Nos. Restricted Earth Fault Relay - 1 Set 800A TPN best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set RYB indicators ( LED Pilot type ) with 2A Control MCB and toggle switches - 4 Set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set 800/5A CL 1.0, 15VA Metering CTs - 1 Set Outgoings: 630A, 35kA 4P MCCB - 2 Nos. 200A FP SDFU (100kA) - 2 Nos. 63A FP SDFU (100kA) - 1 Nos. Surge Protection Pluggable type surge arrester with potential free contact, thermal disconnecter &amp; provision for inbuilt common remote indication for defective arresters to connect between Line and Neutral and one number Spark Gap type arrester to connect between Neutral and Earth of following ratings including base element &amp; pluggable arresters. Nominal voltage 230V, 50Hz, Nominal Discharge current 30 kA (8/20 sec) for Line to Neutral &amp; 50 kA (8/20 sec) for Neutral to Earth, Maximum Discharge Current I<sub>max</sub> 50 kA (8/20 sec) -1Set Supports The panel shall be supported to ground using framework fabricated out of MS Flats / Angles etc. painted with two coats of Zinc Chromate primer and two coats of enamel paint. The framework shall be firmly supported to ground using suitable cement concrete plinth. The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable, fuse sizes, etc., in white enamel paint. The board shall be fabricated in such a way that future extension be possible. Supply &amp; Labour</p>					
		1.000	set	294498.0	294498.00	294498.00
2	<p>od194956/2018_2019</p> <p>WTP - MCC PANEL- Supply, fabrication, erection, testing and commissioning of cubicle type fully compartmentalised, dust tight, vermin proof, water proof 200A MV Panel falling to IP54 category fabricated out of 16 SWG CRCA Sheet Steel painted as per standards with Alumimium Busbars of suitable size, earth bus of adequate capacity, double earth connection to all switches, internal rigid connection etc. including suitable chambers, front open, top cable entry with water proof shrouding, free standing panel consisting of the following as per standards ( All switches shall confirm to conforming to IEC 60947-2 standards). Incoming : 200A TPN Isolator - 1 No. 200A TPN best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set RYB indicators ( LED Pilot type ) with 2A Control MCB and toggle switches - 1 Set 200/5A CL 1.0, 15VA Metering CTs - 1 Set Outgoings: 100A TPN SDFU (100kA) - 3 Nos. 32A TP D curve MCB (10kA) - 6 Nos. 25A TP D curve MCB (10kA) - 3 Nos. 10A TP D curve MCB (10kA) - 4 Nos. Supports The panel shall be supported to ground using framework fabricated out of MS Flats / Angles etc. painted with two coats of Zinc Chromate primer and two coats of enamel paint. The framework shall be firmly supported to ground using suitable cement concrete plinth. The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable, fuse sizes, etc., in white enamel paint. The board shall be fabricated in such a way that future extension be possible. Supply &amp; Labour</p>					

Kerala Water Authority  
**PRICE**



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			1.000	set	84484.0	84484.00	84484.00	84484.00
3	od194957/2018_2019	<p>APFC PANEL -Automatic Power Factor Correction Panel of total 40 KVAR capacity with Auto / Mannual mode operation to be fabricated out of 14 guage CRCA sheet steel Powder coated with provision for capacitor mounted inside the panel with adequate number of louvers and powder coated with approved shade and having following specific components(refer particular specification) with Alumimium Busbars of suitable size, earth bus of adequate capacity, double earth connection to all switches, internal rigid connection etc. including suitable chambers, front open, top cable entry , free standing panel consisting of the following as per standards. Incomer 100A TPN Isolator - 1 No. 100 A TPN best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set RYB indicators ( LED Pilot type ) with 2A Control MCB and toggle switches- 1 Set 100/5A 15VA CL 1.0 Metering CTs - 3 Sets Microprocessor based intelligent, 8 step IPFC relay with PF display - 1 No. Out goings 40A, 10kA C Curve TP MCB - 1 Nos 20A, 10kA C Curve TP MCB - 1 Nos 16A, 10kA C Curve TP MCB - 2 Nos 10A, 10kA C Curve TP MCB - 1 Nos 6A, 10kA C Curve TP MCB - 3 Nos Capacitor duty contactors working on 3 Phase 415V AC supply of the following ratings wired with Pilot LED indication for ON &amp; OFF, Push Buttons for Manual ON &amp; OFF operation using suitable NO / NC contacts for all the stages 15 kVAR - 1 Nos 10 kVAR- 3 Nos 7.5 kVAR- 4 Nos 480 V,50 Hz Double di-electric polypropylene ( MPP heavy duty ) Capacitors of the following ratings including fixed compensation for low load losses. 15 kVAR - 1 Nos 10 kVAR- 1 Nos 5 kVAR- 2 Nos 2 kVAR - 2 Nos 1 kVAR - 1 Nos The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable, fuse sizes, etc., in white enamel paint. Supply &amp; Labour Supports The panel shall be supported to ground using framework fabricated out of MS Flats / Angles etc. painted with two coats of Zinc Chromate primer and two coats of enamel paint. The framework shall be firmly supported to ground using suitable cement concrete plinth. The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable, fuse sizes, etc., in white enamel paint. Supply &amp; Labour</p>						
			1.000	set	119898.0	119898.00	119898.00	119898.00
Sl No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
23	2(a)-	Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound- (3)- DISTRIBUTION BOARDS, SWITCHGEAR & ACCESSORIES						
1	od194998/2018_2019	<p>Supply, installation, testing &amp; commissioning of best quality sheet steel, phosphatised and painted, dust and vermin proof enclosure (IP43) Vertical TPN Double door DB including copper bus bar, neutral link, earth bus and DIN rail suitable for fixing RCCB + Isolator (8 module )as incommer and SP/TP MCB as outgoings etc. on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall , making good the damages, colour washing, dressing the DB including termination etc. as required. ( Including closing vaccant slots using Dummy ) - 12 Way</p>						
			1.000	No	11136.0	11136.00	11136.00	11136.00



2	od194999/2018_2019 Supply and providing the following MCCB/ RCCB / MCB / MCB Isolators/COS etc. to the existing DBs / MCS / Junction Boxes etc. including giving proper termination using suitable Bananna copper lugs, sleeves, insulation etc. complete. 63A, 100mA 3Ph RCCB			1.000	No	6640.0	6640.00	6640.00	6640.00
3	od195000/2018_2019 Supply and providing the following MCCB/ RCCB / MCB / MCB Isolators/COS etc. to the existing DBs / MCS / Junction Boxes etc. including giving proper termination using suitable Bananna copper lugs, sleeves, insulation etc. complete. 63A, 4P MCB Isolator			1.000	No	1050.0	1050.00	1050.00	1050.00
4	od195001/2018_2019 Supply and providing the following MCCB/ RCCB / MCB / MCB Isolators/COS etc. to the existing DBs / MCS / Junction Boxes etc. including giving proper termination using suitable Bananna copper lugs, sleeves, insulation etc. complete. 6A to 32A , 10kA SP MCB			36.000	No	181.0	6516.00	181.00	6516.00
Sl No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount	
24	2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound- (4)- CABLES , WIRES & ACCESSORIES								
1	od195885/2018_2019 HT Power Cables - Supply & laying 11KV stranded compact circular aluminium conductor, conductors screened with extruded semi conducting compound XLPE insulated, insulation screened with extruded semi conducting compound in combination with copper tape (0.3 kA for 1 sec.), cores laid up, inner sheath of PVC tape, galvanized steel flat strip armoured, and overall PVC sheathed cable of the following sizes in the existing cable trench conforming to IS: 7098 part II 1985 with latest amendments. 3C x 300 Sqm			25.000	metre	2281.0	57025.00	2281.00	57025.00
2	od195886/2018_2019 HT Power Cables - Supply & laying 11KV stranded compact circular aluminium conductor, conductors screened with extruded semi conducting compound XLPE insulated, insulation screened with extruded semi conducting compound in combination with copper tape (0.3 kA for 1 sec.), cores laid up, inner sheath of PVC tape, galvanized steel flat strip armoured, and overall PVC sheathed cable of the following sizes in the existing cable trench conforming to IS: 7098 part II 1985 with latest amendments. 3C x 150 Sqm			25.000	metre	2318.0	57950.00	2318.00	57950.00



3	od195980/2018_2019 HT Cable Terminations Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 150 Sqmm	1.000	set	7664.0	7664.00	7664.00	7664.00
4	od195981/2018_2019 HT Cable Terminations Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 300 Sqmm	1.000	set	10002.0	10002.00	10002.00	10002.00
5	od195993/2018_2019 HT Cable Termination- Supplying and making Outdoor cable end jointing with heat shrinkable jointing kit, including lugs and other jointing materials, for for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 150 Sqmm	1.000	set	12802.0	12802.00	12802.00	12802.00
6	od196006/2018_2019 HT Cable Terminations - Supplying and making Outdoor cable end jointing with heat shrinkable jointing kit, including lugs and other jointing materials, for for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 300 Sqmm	1.000	set	14660.0	14660.00	14660.00	14660.00
7	od195889/2018_2019 LT Power Cables - Supply & laying UG AYFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3.5C x 185 Sqmm	120.000	metre	1752.0	210240.00	1752.00	210240.00
8	od195890/2018_2019 LT Power Cables Supply & laying UG AYFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3.5C x 150 Sqmm	60.000	metre	1241.0	74460.00	1241.00	74460.00
9	od195891/2018_2019 LT Power Cables Supply & laying UG AYFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3.5C x 50 Sqmm	30.000	metre	539.0	16170.00	539.00	16170.00



10	od195892/2018_2019 LT Power Cables Supply & laying UG AYFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling. 3.5C x 35 Sqmm	30.000	metre	421.0	12630.00	421.00	12630.00
11	od195893/2018_2019 LT Power Cables - Supply & laying UG AYFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling- 3.5C x 25 Sqmm	30.000	metre	350.0	10500.00	350.00	10500.00
12	od195894/2018_2019 LT Power Cables - Supply & laying UG AYFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling - 4C x 6 Sqmm	75.000	metre	216.0	16200.00	216.00	16200.00
13	od195895/2018_2019 LT Power Cables - Supply & laying UG AYFY,PVC insulated and PVC sheathed Aluminium conductor armoured power cable of 1.1 KV grade of following sizes through trench/wall/ ceiling- 4C x 4 Sqmm	105.000	metre	179.0	18795.00	179.00	18795.00
14	od195896/2018_2019 LT Power Cables - Supply & laying UG 2XFY,PVC insulated and PVC sheathed Copper conductor armoured Power / Control cable of 1.1 KV grade of the following sizes through trench/wall/ ceiling - 4C x 2.5 Sqmm	50.000	metre	305.0	15250.00	305.00	15250.00
15	od195897/2018_2019 LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 185 Sqmm (57mm)	6.000	No	1245.0	7470.00	1245.00	7470.00
16	od195898/2018_2019 LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 150 Sqmm (50mm)	8.000	No	917.0	7336.00	917.00	7336.00
17	od195899/2018_2019 LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 50 Sqmm (35mm)	4.000	No	548.0	2192.00	548.00	2192.00



18	od195900/2018_2019 LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 35 Sqmm (32mm)	4.000	No	437.0	1748.00	437.00	1748.00
19	od195901/2018_2019 LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete- 3.5C x 25 Sqmm (28mm)	4.000	No	398.0	1592.00	398.00	1592.00
20	od195902/2018_2019 LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete - 4C x 6 sqmm (22mm)	10.000	No	266.0	2660.00	266.00	2660.00
21	od195903/2018_2019 LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete - 4C x 4 sqmm (22mm)	14.000	No	225.0	3150.00	225.00	3150.00
22	od195904/2018_2019 LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete - 4C x 2.5 Sqmm	2.000	No	211.0	422.00	211.00	422.00
23	od195905/2018_2019 LT Power Cables - Supply & drawing the following size of FR Multi-core PVC Insulated and PVC sheathed Copper conductor round flexible wire manufactured with bright annealed bare copper conductor as per IS 8130/1984 Insulated and sheathed with electrical grade PVC compound as per IS 5831/1984 generally conforming to IS 694/1990 for working voltage up to and including 1100 V through existing PVC conduit / casing capping wall. 3C x 0.5 Sqmm	25.000	metre	47.0	1175.00	47.00	1175.00
24	od195906/2018_2019 LT Power Cables - Supply & drawing the following size of FR Multi-core PVC Insulated and PVC sheathed Copper conductor round flexible wire manufactured with bright annealed bare copper conductor as per IS 8130/1984 Insulated and sheathed with electrical grade PVC compound as per IS 5831/1984 generally conforming to IS 694/1990 for working voltage up to and including 1100 V through existing PVC conduit / casing capping wall. 3C x 1.5 Sqmm	25.000	metre	88.0	2200.00	88.00	2200.00





25	od195907/2018_2019 PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete.20mm dia, 1.5mm thick	350.000	metre	88.0	30800.00	88.00	30800.00
26	od195908/2018_2019 PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface concealed position making good the damages made etc.complete.25mm dia, 1.5mm thick	250.000	metre	107.0	26750.00	107.00	26750.00
27	od195909/2018_2019 PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface concealed position making good the damages made etc.complete. 32mm dia 1.5mm thick	100.000	metre	138.0	13800.00	138.00	13800.00
28	od195910/2018_2019 PVC Conduits- Supply & providing Capping / Casing of good quality of the following sizes. 20 mm	100.000	metre	43.0	4300.00	43.00	4300.00
29	od195911/2018_2019 PVC Conduits- Supply & providing Capping / Casing of good quality of the following sizes. 25 mm	100.000	metre	49.0	4900.00	49.00	4900.00
30	od195912/2018_2019 UG Cable Tamper Protection- Supply & laying the following size of B class GI Pipe for UG Cable tamper protection in the existing trench in position etc. complete.50 mm	10.000	metre	379.0	3790.00	379.00	3790.00
31	od195913/2018_2019 UG Cable Tamper Protection- Supply & laying the following size of B class GI Pipe for UG Cable tamper protection in the existing trench in position etc. complete. 75 mm	10.000	metre	485.0	4850.00	485.00	4850.00
32	od195914/2018_2019 Circuit Mains- Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 4.0 Sqmm - SPN + E - rate as per vetted estimate						



		100.000	metre	199.0	19900.00	199.00	19900.00
33	od195915/2018_2019 Circuit Mains- Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 2.5 Sqmm - SPN + E - rate as per vetted estimate.						
		200.000	metre	154.0	30800.00	154.00	30800.00
34	od195916/2018_2019 Circuit Mains- Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 1.5 sqmm - SPN + E						
		350.000	metre	118.0	41300.00	118.00	41300.00
35	od195917/2018_2019 Cable Supports & Trenching- Supply and erection of Cable trays and cable supports fabricated out of MS angles 25x25x6mm (ISA) and 25x6mmMS flats with and 20cm spacing between successive cross members and supported using 25cm long 32x6mm MS flat at every 1m spacing. The cable trays and supports shall be painted with two coats of Zinc Chromate primer and two coats of enamel paint.						
		500.000	kg	142.0	71000.00	142.00	71000.00
36	od195918/2018_2019 Cable Supports & Trenching- Supply and providing 6mm MS chequered plate of suitable thickness including cutting, welding, painting etc. as required for the cable trench covering.						
		100.000	kg	121.0	12100.00	121.00	12100.00
37	od195919/2018_2019 Cable Supports & Trenching - Charges for making cable trenches in all type of soil including providing country burnt bricks breadth wise above the cable, providing sand cushioning of 150mm refilling & restoring normal surface etc.complete as per standards of the following size. 35 cm Wide x 100 cm Deep ( HT Cables )						
		100.000	metre	640.0	64000.00	640.00	64000.00
38	od195920/2018_2019 Cable Supports & Trenching - Charges for making cable trenches in all type of soil including providing country burnt bricks breadth wise above the cable, providing sand cushioning of 150mm refilling & restoring normal surface etc.complete as per standards of the following size. 35 cm Wide x 75 cm Deep ( LT Cables )						
		100.000	metre	594.0	59400.00	594.00	59400.00



39	od195921/2018_2019 Cable Supports & Trenching - Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.							
	50.000	No	516.0	25800.00	516.00	25800.00		
40	od195922/2018_2019 Cable Supports & Trenching - Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.							
	25.000	No	417.0	10425.00	417.00	10425.00		
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
25	2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound- (5)- EARTHING & ACCESSORIES							
1	od196108/2018_2019 Supply and providing plate earthing as per IS 3043 with 1200x1200x12 mm GI/CI earth plate, 50 mm GI watering pipe fixed to the earth plate with 25 x 3mm GI clamps, GI funnel with weld mesh, filling required quantity of charcoal including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 450 x 450 x 450 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.							
	8.000	set	11091.0	88728.00	11091.00	88728.00		
2	od196109/2018_2019 Supply and providing pipe earthing as per IS 3043 with 2.5 m long 40 mm dia B class GI pipe, GI funnel with weld mesh, filling required quantity of charcoal & salt including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 300 x 300 x 300 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.							
	5.000	set	2952.0	14760.00	2952.00	14760.00		
3	od196110/2018_2019 Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continous earthing along with cables tinned at terminals etc. complete. 25 x 6 mm Copper Strip							
	300.000	metre	1507.0	452100.00	1507.00	452100.00		
4	od196111/2018_2019 Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continous earthing along with cables tinned at terminals etc. complete. 25 x 3 mm Copper strip							
	500.000	metre	797.0	398500.00	797.00	398500.00		



5	od196112/2018_2019 Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving earth connection as required. No. 16 SWG Copper Conductor							
	300.000	metre	199.0	59700.00	199.00	59700.00		
6	od196113/2018_2019 Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving earth connection as required. No. 10 SWG Copper Conductor							
	600.000	metre	113.0	67800.00	113.00	67800.00		
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
26	2(a)- Supply, erection, testing and commissioning of 400 KVA Transformer and allied works at Alady plant compound-(6) SUBSTATION EQUIPMENTS & MISC							
1	od196123/2018_2019 Supply and providing 6 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 3.3 KV dielectric strength conforming to IS 5429/ 1969.							
	5.000	sqm	773.0	3865.00	773.00	3865.00		
2	od196124/2018_2019 Supply and providing 12 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 15 KV dielectric strength conforming to IS 5429/ 1969 in front of the HT Breaker Panel.							
	2.000	sqm	1379.0	2758.00	1379.00	2758.00		
3	od196125/2018_2019 Supply and providing 5 Kg. Dry Chemical Powder type Fire Extinguisher with hose and clamps including fixing it to wall as required.							
	2.000	set	2383.0	4766.00	2383.00	4766.00		
4	od196126/2018_2019 Supply and providing 9 Litre capacity GI Fire Bucket painted in post office red with primer coat of red oxide and written with white paint 'FIRE' mounted on MS angle frame work/ wall bracket filled with fine sand, painting the bracket/ floor stand including making good the damages, colour washing etc. as required.							
	4.000	set	638.0	2552.00	638.00	2552.00		
5	od196127/2018_2019 Supply and providing First Aid Chart duly framed and placed in a conspicuous location for clear vision.							
	1.000	set	247.0	247.00	247.00	247.00		



6	od196128/2018_2019 Supply and providing Laminated Electrical Schematic diagram framed and placed in a conspicuous location for clear vision.	1.000	set	226.0	226.00	226.00	226.00	
7	od196129/2018_2019 Supply & providing Aluminium anodised Danger Notice Board of size 200 x 150 mm. with inscriptions ( both in English and Malayalam) and conventional Skull and Bone in Red colour at locations as directed by the Engineer in Charge	10.000	Nos	267.0	2670.00	267.00	2670.00	
8	od202018/2018_2019 SCHEME APPROVAL & POWER ALLOCATION - Preparation and submission of latest scheme drawings, Voltage drop calculations, Earthing design & fault level calculations to the Electrical Inspectorate including all MV additions recently made and obtaining approval, arranging inspection for entire installation, obtaining sanction orders for the electrical installation, complete (Including all incidental and statutory expenses ).	1.000	L.S	20000.0	20000.00	20000.00	20000.00	
9	od202020/2018_2019 SCHEME APPROVAL & POWER ALLOCATION - Preparation and submission of latest scheme drawings to KSEB for obtaining sanction for power allocation (Including all incidental and statutory expenses) .Preparation, submission and execution of HT agreement(6 sets) as per the renewed Contract demand according to the latest additions.	1.000	L.S	15000.0	15000.00	15000.00	15000.00	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
27	2(b)-	Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump house compound- (1)- 11 KV substation and HT equipments						
1	od194695/2018_2019 Erection of RCC/ PCC pole of following length in brick ballast and ramming the foundation, finishing with 150 mm thick cement concrete (1:3:6) layer on top with including excavation and refilling etc. as required.	2.000	Nos	4957.0	9914.00	4957.00	9914.00	
2	od194696/2018_2019 Supplying and erection of a set of cross bracing frame work for 11 KV over head line double pole structure having four members fabricated out of 50 mm X 50 mm X 6 mm angle iron to form a rectangle of minimum size 1400 mm width X 2500 mm height, complete with 50 mm X 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. (as per drawing) and painting with primer and finish paint as required.	1.000	set	6552.0	6552.00	6552.00	6552.00	



3	od194697/2018_2019 Erection of double pole 3 wire cross arm for 11 KV/22 KV/33 KV over head lines as required.	3.000	Nos	967.0	2901.00	967.00	2901.00
4	od194698/2018_2019 Supplying and erection of 11 kV pin insulator complete with large steel head G.I. pin, nuts, washers etc. as required.	1.000	set	349.0	349.00	349.00	349.00
5	od194699/2018_2019 Supplying and erection of three piece nonlinear resistor type lightning arrester suitable for 3 wire, 11 kV overhead lines with rated voltage 9 kV (rms) with a nominal discharge current rating of 5 kA and complete with galvanised clamping arrangement, G.I. bolts, nuts, washers etc. as required.	1.000	set	3601.0	3601.00	3601.00	3601.00
6	od201137/2018_2019 OUTDOOR HT BREAKER PANEL (LBS) - Supply, Installation, Testing & Commissioning of 11kV Outdoor HT Breaker Panel with the following components. 11kV Load Break Swich 11kV, 350 MVA, 630A, LBS unit - 1 set Voltmeter ( 0 - 11kV) - 3 Nos LED Pilot Indication - LBS ON / OFF - 1 Set Trip Push buttons - 1 set 2NO+2NC Aux contacts - 1 Set 230V AC Shunt Trip Coil - 1 No Aluminium Busbar - 1 Set Seal off Bushings - 3 Nos Space Heater Element with Thermostat & wiring - 1 Nos Inspection Lamp LED with switch & wiring - 1 set Metering Chamber PT - 100 VA, 11kV/110V, CL 0.2S - 1 No CT - */5A, 15VA, CL 0.2S - 3 Nos Provisions for mounting 3 phase, 4wire, HT CT/PT operated, bi-directional TOD meter with accuracy class 0.2S including wiring and test terminal block, site glass etc. - 1 set Voltage Circuit: The active & apparent power consumption of voltage circuit including power supply of meter at reference voltage, reference temperature & frequency shall not exceed 1.0 Watt & 4.0 VA per phase Current Circuit: The apparent power taken by current circuit at basic current, reference frequency & reference temperature shall not exceed 1.0 VA/phase. ( The Quoted rate shall be inclusive of necessary control wiring, components working on LT supply should be prewired completely with necessary controls as specified till the connection point for feeding LT Supply from outside, Cable end box for receiving incoming and outgoing cables and suitable civil foundation etc as required.) - Supply & Labour	1.000	set	215359.0	215359.00	215359.00	215359.00
7	od201138/2018_2019 HT Bidirectional TOD Meter - Supply & Providing 3 phase, 4wire, HT CT/PT operated, bi-directional with accuracy class 0.2S for both Active and Reactive energy, -/5A, HT static tri vector meter with TOD register, DLMS compliant & AMR compatible with optical port and RS232 port having ISI Marking, suitable for measurement of active kWh, reactive energy kVARh and apparent energy kVAh and kVA MD, kW MD at nominal frequency in the range of 47.5 Hz to 52.5 Hz in balanced as well as unbalanced load conditions in the existing outdoor Meter cubicle including testing & commissioning etc. complete.						



		1.000	set	43954.0	43954.00	43954.00	43954.00
8	od201139/2018_2019 HT Equipment Pinth, Substation Yard Fencing & Levelling - Providing, fabricating and fixing 2m high chainlink fencing over 4mm thick barbed wire with a framework of 50x50x6mm MS angle between vertical posts of ISMC 75 at 2400mm interval, Earthing as per KSEI/KSEB standards shall be done around the periphery of the fencing. The MS framework for chainlink fencing shall be Hot Dip Galvanised. The rate shall be inclusive of all materials, labour, lead, lift etc including escalation works and fabrication and assembly works including all nuts, bolts and other miscellaneous items etc complete as per drawing and as directed by the Engineer in Charge.						
		20.000	metre	1298.0	25960.00	1298.00	25960.00
9	od201140/2018_2019 HT Equipment Pinth, Substation Yard Fencing & Levelling - Supplying and filling the substation yard with 40mm size blue jelly of 150mm thick including cost and conveyance of all materials, labour charges etc complete						
		5.000	cum	3017.0	15085.00	3017.00	15085.00
10	od201141/2018_2019 HT Equipment Pinth, Substation Yard Fencing & Levelling - Supply & erection of Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with : Cement mortar 1:6 (1 cement : 6 coarse sand).						
		2.000	cum	6143.0	12286.00	6143.00	12286.00
11	od201142/2018_2019 500 KVA Transformer - Supply, installation, testing and commissioning of one number 500 kVA, DYn11, 3Ph, 50Hz, 11/3.3 kV, ONAN cooled, copper wound outdoor distribution transformer with tappings from +5% to -10% in steps of 2.5% with OFTC. The HT side & LT side shall have cable end box for XLPE cable. The transformer shall have suitable enclosure for The HT side & LT side. The transformer shall be complete with all standard accessories and fittings & conform to IS:2026. The rate shall be inclusive of all materials, lead, lift, first fill of oil, necessary civil works for mounting to the existing transformer foundation complete as per single line schematic diagram & particular specifications.						
		1.000	set	918604.0	918604.00	918604.00	918604.00

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12	od210621/2020_2021 Supply/erection/testing commissioning of one number50/ 63 KVA( or suitable near size) 3.3KV/433V ,distribution transformer Indoor (or out door),with HT/LT cable entry ,with suitable HT and LT cables from 3.3 KV pannel to transformer and LT cable to LT panel,cable termination,foundation/structure/enclosure for transformer including ,erection ,testing and commissioning of LT pannel with 100A incomer MCCB, 3 NOS 63 A outgoing MCCB with isolation,erathing , with meters and indicating lamps etc complete including approval from Inspectrate.-complete-as per CEA and Inspectrate statutes		1.000	No	350000.0	350000.00	350000.00	350000.00
13	od201143/2018_2019 Neutral Grounding Resistor - Supply & Providing 50A,3.3kV 40ohm 30sec NGR - Supply		1.000	No	155766.0	155766.00	155766.00	155766.00
14	od201144/2018_2019 Neutral Grounding Resistor - Supply & Providing 50A,3.3kV 40ohm 30sec NGR - Labour		1.000	No	656.0	656.00	656.00	656.00
15	od201145/2018_2019 NEUTRAL CT - Supply & Providing 5P10 Protection Class 20/5A, 15VA Neutral CT in a suitable enclosure including giving connections to Transformer Neutral etc.complete - Supply		1.000	No	4327.0	4327.00	4327.00	4327.00
16	od201146/2018_2019 NEUTRAL CT - Supply & Providing 5P10 Protection Class 20/5A, 15VA Neutral CT in a suitable enclosure including giving connections to Transformer Neutral etc.complete - Labour		1.000	No	625.0	625.00	625.00	625.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
28	2(b)-	Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump house compound-(2)- LT / MV PANELS & ACCESSORIES						





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1	od201161/2018_2019 PCC PANEL -Design ,approval, Supply, fabrication, erection, testing and commissioning of 3.3kv cubicle type fully compartmentalized, dust tight, vermin proof, water proof 3.3 kv , VCB panel set 200Amp or suitable rating - Main 3.3.KV Panel falling to IP54 category fabricated out of 16 SWG CRCA Sheet Steel painted as per standards with Alumimium Busbars of suitable size, earth bus of adequate capacity, double earth connection to all switches, internal rigid connection etc. including suitable chambers, front open, top cable entry with water proof shrouding, free standing panel consisting of the following as per standards ( All switches shall confirm to conforming to IEC 60947-2 standards). Incommer - 200A FP Microprocessor based VCB - suitable MVA based on fault level-- 1 Nos. Restricted Earth Fault Relay - best conductivity Aluminium busbar with SMC supports, heat shrinkable sleeves etc. as per ISS - 1set RYB indicators ( LED Pilot type ) with 2A Control MCB and toggle switches - 4 Set Multifunction Digital Panel meter to read V, A, F, PF, kW, kVA, kVAR, kWh, kVAh, kVARh Class 1.0 - 1 Set 200/5A CL 1.0, 15VA Metering CTs -one VCB incomer 200 A or suitable size- 3 Sets Outgoings: 200A, VCB - 1 Nos. 100/50A VCB out going- .with isolation facility - Surge Protection Pluggable type surge arrester with potential free contact, thermal disconnecter & provision for inbuilt common remote indication for defective arresters to connect between Line and Neutral and one number Spark Gap type arrester to connect between Neutral and Earth of following ratings including base element & pluggable arresters. Nominal voltage 3.3KV, 50Hz, Nominal Discharge current 30 kA (8/20 sec) for Line to Neutral & 50 kA (8/20 sec) for Neutral to Earth, Maximum Discharge Current I <sub>max</sub> 50 kA (8/20 sec) -1Set Supports The panel shall be supported to ground using framework fabricated out of MS Flats / Angles etc. painted with two coats of Zinc Chromate primer and two coats of enamel paint. The framework shall be firmly supported to ground using suitable cement concrete plinth. The Panel Board shall be provided with 25 x 3mm copper earth bus for the full length. Painting letters / identifications for the incoming and outgoing switches, cable, fuse sizes, etc., in white enamel paint. The board shall be fabricated in such a way that future extension be possible. Supply & Labour ,suitable battery and charger for the pannel,-complete as per CEA and kerala State Electrical Inspectrate relevant statutes,approval from inspectrate ,2.5 sq mm copper cable shall be used for all control circuits-							
			1.000	set	1806133.0	1806133.00	1806133.00	1806133.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
29	2(b)-	Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump house compound- (3)- DISTRIBUTION BOARDS, SWITCHGEAR & ACCESSORIES						
1	od194998/2018_2019 Supply, installation, testing & commissioning of best quality sheet steel, phosphatised and painted, dust and vermin proof enclosure (IP43) Vertical TPN Double door DB including copper bus bar, neutral link, earth bus and DIN rail suitable for fixing RCCB + Isolator (8 module )as incommer and SP/TP MCB as outgoings etc. on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall , making good the damages, colour washing, dressing the DB including termination etc. as required. ( Including closing vaccant slots using Dummy ) - 12 Way							
			1.000	No	11136.0	11136.00	11136.00	11136.00

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2	od201177/2018_2019 Supply and providing the following MCCB/ RCCB / MCB / MCB Isolators/COS etc. to the existing DBs / MCS / Junction Boxes etc. including giving proper termination using suitable Bananna copper lugs, sleeves, insulation etc. complete - 63A, 100mA 3Ph RCCB		1.000	No	6640.0	6640.00	6640.00	6640.00
3	od195000/2018_2019 Supply and providing the following MCCB/ RCCB / MCB / MCB Isolators/COS etc. to the existing DBs / MCS / Junction Boxes etc. including giving proper termination using suitable Bananna copper lugs, sleeves, insulation etc. complete. 63A, 4P MCB Isolator		1.000	No	1050.0	1050.00	1050.00	1050.00
4	od201178/2018_2019 Supply and providing the following MCCB/ RCCB / MCB / MCB Isolators/COS etc. to the existing DBs / MCS / Junction Boxes etc. including giving proper termination using suitable Bananna copper lugs, sleeves, insulation etc. complete - 6A to 32A , 10kA SP MCB		36.000	No	181.0	6516.00	181.00	6516.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
30	2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump house compound- (4)- CABLES , WIRES & ACCESSORIES							
1	od201350/2018_2019 HT Power Cables - Supply & laying 11KV stranded compact circular aluminium conductor, conductors screened with extruded semi conducting compound XLPE insulated, insulation screened with extruded semi conducting compound in combination with copper tape (0.3 kA for 1 sec.), cores laid up, inner sheath of PVC tape, galvanized steel flat strip armoured, and overall PVC sheathed cable of the following sizes in the existing cable trench conforming to IS: 7098 part II 1985 with latest amendments. 3C x 150 Sqm		60.000	metre	2318.0	139080.00	2318.00	139080.00
2	od201351/2018_2019 HT Power Cables - Supply & laying 11KV stranded compact circular aluminium conductor, conductors screened with extruded semi conducting compound XLPE insulated, insulation screened with extruded semi conducting compound in combination with copper tape (0.3 kA for 1 sec.), cores laid up, inner sheath of PVC tape, galvanized steel flat strip armoured, and overall PVC sheathed cable of the following sizes in the existing cable trench conforming to IS: 7098 part II 1985 with latest amendments. 3C x 50 Sqm		65.000	metre	1072.0	69680.00	1072.00	69680.00



3	od201352/2018_2019 HT Power Cables - Supply & laying 11KV stranded compact circular aluminium conductor, conductors screened with extruded semi conducting compound XLPE insulated, insulation screened with extruded semi conducting compound in combination with copper tape (0.3 kA for 1 sec.), cores laid up, inner sheath of PVC tape, galvanized steel flat strip armoured, and overall PVC sheathed cable of the following sizes in the existing cable trench conforming to IS: 7098 part II 1985 with latest amendments. 1C x 50 Sqmm	20.000	metre	628.0	12560.00	628.00	12560.00
4	od201353/2018_2019 HT Cable Terminations - Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 150 Sqmm	4.000	set	10002.0	40008.00	10002.00	40008.00
5	od201354/2018_2019 HT Cable Terminations - Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 50 Sqmm	8.000	set	7664.0	61312.00	7664.00	61312.00
6	od201355/2018_2019 HT Cable Terminations - Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 1C x 50 Sqmm	1.000	set	7664.0	7664.00	7664.00	7664.00
7	od201356/2018_2019 HT Cable Terminations - Supplying and making Outdoor cable end jointing with heat shrinkable jointing kit, including lugs and other jointing materials, for for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 150 Sqmm	2.000	set	12367.0	24734.00	12367.00	24734.00
8	od201357/2018_2019 HT Cable Terminations - Supplying and making Outdoor cable end jointing with heat shrinkable jointing kit, including lugs and other jointing materials, for for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 1C x 50 Sqmm	1.000	set	14660.0	14660.00	14660.00	14660.00



9	od201358/2018_2019 LT Power Cables - Supply & laying UG 2XFY,PVC insulated and PVC sheathed Copper conductor armoured Power / Control cable of 1.1 KV grade of the following sizes through trench/wall/ ceiling - 4C x 2.5 Sqmm	50.000	metre	308.0	15400.00	308.00	15400.00
10	od201359/2018_2019 LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete. 3.5C x 400 Sqmm (82mm)	6.000	No	2152.0	12912.00	2152.00	12912.00
11	od201360/2018_2019 LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete. 3.5C x 300 Sqmm (70mm)	8.000	No	1713.0	13704.00	1713.00	13704.00
12	od201361/2018_2019 LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete. 3.5C x 35 Sqmm (32mm)	2.000	No	437.0	874.00	437.00	874.00
13	od201362/2018_2019 LT Power Cables - Providing cable glanding, gland earthing & end termination of UG cables of the following sizes using Siemens type Brass compression gland & Copper lugs etc. complete. 4C x 2.5 Sqmm	2.000	No	217.0	434.00	217.00	434.00
14	od201363/2018_2019 LT Power Cables - Supply & drawing the following size of FR Multi-core PVC Insulated and PVC sheathed Copper conductor round flexible wire manufactured with bright annealed bare copper conductor as per IS 8130/1984 Insulated and sheathed with electrical grade PVC compound as per IS 5831/1984 generally conforming to IS 694/1990 for working voltage up to and including 1100 V through existing PVC conduit / casing capping wall. 3C x 0.5 Sqmm	25.000	metre	47.0	1175.00	47.00	1175.00
15	od201364/2018_2019 LT Power Cables - Supply & drawing the following size of FR Multi-core PVC Insulated and PVC sheathed Copper conductor round flexible wire manufactured with bright annealed bare copper conductor as per IS 8130/1984 Insulated and sheathed with electrical grade PVC compound as per IS 5831/1984 generally conforming to IS 694/1990 for working voltage up to and including 1100 V through existing PVC conduit / casing capping wall. 3C x 1.5 Sqmm	25.000	metre	88.0	2200.00	88.00	2200.00



16	od201365/2018_2019 PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete. 20mm dia 1.5mm thick	350.000	metre	88.0	30800.00	88.00	30800.00
17	od201366/2018_2019 PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete. 25mm dia 1.5mm thick	250.000	metre	107.0	26750.00	107.00	26750.00
18	od201367/2018_2019 PVC Conduits - Supply and providing the following size of ISI Marked rigid PVC conduits with specials confirming to IS 9537/1983 on surface / concealed position making good the damages made etc.complete. 32mm dia 1.5mm thick	100.000	metre	138.0	13800.00	138.00	13800.00
19	od201368/2018_2019 PVC Conduits - Supply & providing Capping / Casing of good quality of the following sizes. 20 mm	100.000	metre	43.0	4300.00	43.00	4300.00
20	od201369/2018_2019 PVC Conduits - Supply & providing Capping / Casing of good quality of the following sizes. 25 mm	100.000	metre	49.0	4900.00	49.00	4900.00
21	od201370/2018_2019 UG Cable Tamper Protection - Supply & laying the following size of B class GI Pipe for UG Cable tamper protection in the existing trench in position etc. complete. 50 mm	10.000	metre	379.0	3790.00	379.00	3790.00
22	od201371/2018_2019 UG Cable Tamper Protection - Supply & laying the following size of B class GI Pipe for UG Cable tamper protection in the existing trench in position etc. complete. 75 mm	10.000	metre	485.0	4850.00	485.00	4850.00



23	od201372/2018_2019 Circuit Mains - Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 4.0 Sqmm - SPN + E	100.000	metre	199.0	19900.00	199.00	19900.00
24	od201373/2018_2019 Circuit Mains - Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 2.5 Sqmm - SPN + E	200.000	metre	154.0	30800.00	154.00	30800.00
25	od201374/2018_2019 Circuit Mains- Supply and wiring the following size of PVC insulated copper wire manufactured with bright annealed bunched electrolytic copper conductor as per IS 8130/1984 insulated with di-electrical grade PVC compound per as IS 5831/1984 Generally Conforming to IS 694/1990 for working voltage up to and including 1100 V.through the existing PVC conduits / capping casing. 3 run x 1.5 sqmm - SPN + E	350.000	metre	118.0	41300.00	118.00	41300.00
26	od201375/2018_2019 Cable Supports & Trenching- Supply and erection of Cable trays and cable supports fabricated out of MS angles 25x25x6mm (ISA) and 25x6mmMS flats with and 20cm spacing between successive cross members and supported using 25cm long 32x6mm MS flat at every 1m spacing. The cable trays and supports shall be painted with two coats of Zinc Chromate primer and two coats of enamel paint.	500.000	kg	149.0	74500.00	149.00	74500.00
27	od201376/2018_2019 Cable Supports & Trenching- Supply and providing 6mm MS chequered plate of suitable thickness including cutting, welding, painting etc. as required for the cable trench covering.	100.000	kg	121.0	12100.00	121.00	12100.00
28	od201377/2018_2019 Charges for making cable trenches in all type of soil including providing country burnt bricks breadth wise above the cable, providing sand cushioning of 150mm refilling & restoring normal surface etc.complete as per standards of the following size. 35 cm Wide x 100 cm Deep ( HT Cables )	100.000	metre	651.0	65100.00	651.00	65100.00



29	od201378/2018_2019 Charges for making cable trenches in all type of soil including providing country burnt bricks breadth wise above the cable, providing sand cushioning of 150mm refilling & restoring normal surface etc.complete as per standards of the following size. 35 cm Wide x 75 cm Deep ( LT Cables )							
	100.000	metre	604.0	60400.00	604.00	60400.00		
30	od195921/2018_2019 Cable Supports & Trenching - Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.							
	50.000	No	516.0	25800.00	516.00	25800.00		
31	od195922/2018_2019 Cable Supports & Trenching - Supply route marker with 10cmx10cm GI plate 5mm thick with inscriptions there on bolted / welded to 35x35x6mm angle iron 60cm long and fixing the same in ground as required.							
	25.000	No	417.0	10425.00	417.00	10425.00		
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
31	2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady plant compound- (5)- EARTHING & ACCESSORIES							
1	od201561/2018_2019 Supply and providing plate earthing as per IS 3043 with 1200x1200x12 mm GI/CI earth plate, 50 mm GI watering pipe fixed to the earth plate with 25 x 3mm GI clamps, GI funnel with weld mesh, filling required quantity of charcoal including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 450 x 450 x 450 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.							
	8.000	set	11091.0	88728.00	11091.00	88728.00		
2	od201562/2018_2019 Supply and providing pipe earthing as per IS 3043 with 2.5 m long 40 mm dia B class GI pipe, GI funnel with weld mesh, filling required quantity of charcoal & salt including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 300 x 300 x 300 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.							
	5.000	set	2952.0	14760.00	2952.00	14760.00		
3	od201563/2018_2019 Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continous earthing along with cables tinned at terminals etc. complete. 25 x 6 mm Copper Strip							



			300.000	metre	1600.0	480000.00	1600.00	480000.00
4	od201564/2018_2019	Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continuous earthing along with cables tinned at terminals etc. complete. 25 x 3 mm Copper strip						
			500.000	metre	797.0	398500.00	797.00	398500.00
5	od201565/2018_2019	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving earth connection as required. No.16 SWG Copper Conductor						
			300.000	metre	199.0	59700.00	199.00	59700.00
6	od201566/2018_2019	Supply and drawing bare earthing conductors of the following sizes along with wiring/ cables and giving earth connection as required. No.10 SWG Copper Conductor						
			600.000	metre	113.0	67800.00	113.00	67800.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
32	2(b)-	Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump house compound-(6) SUBSTATION EQUIPMENTS & MISC						
1	od201637/2018_2019	Supply and providing 6 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 3.3 KV dielectric strength conforming to IS 5429/ 1969.						
			5.000	sqm	773.0	3865.00	773.00	3865.00
2	od201638/2018_2019	Supply and providing 12 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 15 KV dielectric strength conforming to IS 5429/ 1969 in front of the HT Breaker Panel.						
			2.000	sqm	1379.0	2758.00	1379.00	2758.00
3	od201639/2018_2019	Supply and providing 5 Kg. Dry Chemical Powder type Fire Extinguisher with hose and clamps including fixing it to wall as required.						
			2.000	set	2383.0	4766.00	2383.00	4766.00
4	od201640/2018_2019	Supply and providing 9 Litre capacity GI Fire Bucket painted in post office red with primer coat of red oxide and written with white paint 'FIRE' mounted on MS angle frame work/ wall bracket filled with fine sand, painting the bracket/ floor stand including making good the damages, colour washing etc. as required.						
			4.000	set	638.0	2552.00	638.00	2552.00





5	od201641/2018_2019 Supply and providing First Aid Chart duly framed and placed in a conspicuous location for clear vision.							
	1.000	set	247.0	247.00	247.00	247.00		
6	od201642/2018_2019 Supply and providing Laminated Electrical Schematic diagram framed and placed in a conspicuous location for clear vision.							
	1.000	set	226.0	226.00	226.00	226.00		
7	od201643/2018_2019 Supply & providing Aluminium anodised Danger Notice Board of size 200 x 150 mm. with inscriptions ( both in English and Malayalam) and conventional Skull and Bone in Red colour at locations as directed by the Engineer in Charge							
	10.000	No	267.0	2670.00	267.00	2670.00		
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
33	2(b)- Supply, erection, testing and commissioning of 500 KVA Transformer and allied works at Thonithady raw water pump house compound-(7) - SCHEME APPROVAL & POWER ALLOCATION							
1	od202018/2018_2019 SCHEME APPROVAL & POWER ALLOCATION - Preparation and submission of latest scheme drawings, Voltage drop calculations, Earthing design & fault level calculations to the Electrical Inspectorate including all MV additions recently made and obtaining approval, arranging inspection for entire installation, obtaining sanction orders for the electrical installation, complete (Including all incidental and statutory expenses ).							
	1.000	L.S	20000.0	20000.00	20000.00	20000.00		
2	od202020/2018_2019 SCHEME APPROVAL & POWER ALLOCATION - Preparation and submission of latest scheme drawings to KSEB for obtaining sanction for power allocation (Including all incidental and statutory expenses) .Preparation, submission and execution of HT agreement(6 sets) as per the renewed Contract demand according to the latest additions.							
	1.000	L.S	15000.0	15000.00	15000.00	15000.00		
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
34	Supply, erection, testing and commissioning of motor pump set							
No Specifications added under this Estimate								
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
38	(4) Supply, Erection, Testing and Commissioning of 2 Nos new Vertical Turbine motor Pumpset (working voltage 3300V) having discharge of 80 lps against a total head of 180 M. suction head 20.30m at Thonithady raw water pump house							



1	od197162/2018_2019 Supply, Erection, Testing and Commissioning of 2 Nos new Vertical Turbine motor Pumpset (working voltage 3300V) having discharge of 80 lps against a total head of 180 M. suction head 20.30 m at WTP sump.( From raw water pumping station to Alady plant) including cost of soft starter	2.000	No	3888802.96	7777605.92	3888802.95	7777605.90
2	od197164/2018_2019 Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor	25.000	metre	1518.0	37950.00	1518.00	37950.00
3	od197165/2018_2019 Supply of suitable size PVC insulated, sheathed, armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to panel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.	20.000	metre	1518.0	30360.00	1518.00	30360.00
4	2.8.1 Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil	15.000	cum	309.95	4649.25	319.55	4793.25
5	od197167/2018_2019 Providing 350mm surge arrestor- Providing 350mm surge arrestor having test pressure 45Kg/cm2 to the clear water pumping main including cost of specials such as 2 Nos. Tail piece, 2 Nos. Mechanical joints, cutting the existing DI pipe, inserting surge arrestor, jointing with flanged joints etc. including cost of surge arrestor.(Rate as per DSR Observed data)	1.000	No	600000.0	600000.00	600000.00	600000.00
6	od197168/2018_2019 Providing 350mm surge arrestor- Cement concrete 1:2:4 using 20mm nominay size metal for anchore block including charges of form work and labour charges etc. complete.(Rate as per DSR Observed data)	5.000	cum	8941.83	44709.15	8941.85	44709.25



7	od197169/2018_2019 Providing 350mm surge arrestor- Providing air cushion valve of diameter - 200mm & test pressure 45 Kg/cm <sup>2</sup> with flanged ends including all cost of materials such as 200mm air cushion valve - 1 No., 200mm D/F CI sluice valve - 1 No. etc and all labour charges for fitting the same in position as directed by the departmental officers.(Rate as per DSR Observed data)							
	1.000	No	409500.0	409500.00	409500.00	409500.00		
8	od197170/2018_2019 Providing 350mm surge arrestor- Constructing RCC valve chamber of size 2.50m x 1.20m x 1.20m for providing the zero velocity valve including all cost of materials, labour charge, form work etc complete as directed by the departmental officers. (Rate as per DSR Observed data)							
	1.000	No	63841.4	63841.40	63841.40	63841.40		
9	od197171/2018_2019 STATUTORY APPROVAL FROM KSEB							
	1.000	No	50000.0	50000.00	50000.00	50000.00		
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
39 (3) Power Allocation and CD, OYEC charges etc.								
1	od494/2019_2020 Providing 11 KV line extension, CD and OYEC charges for the power connection of Alady water treatment plant - 400 KVA ( Approval from KSEB)							
	1.000	No	2439594.0	2439594.00	2439594.00	2439594.00		
2	od495/2019_2020 Providing 11 KV line extension, CD and OYEC charges for the power connection of Thonithady raw water pumping station - 500 KVA ( Approval from KSEB)							
	1.000	No	872306.0	872306.00	872306.00	872306.00		
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
40	9(a) Supply, Erection, Testing and Commissioning of 2 Nos motor pump sets at Nariyanpara pump house for pumping to Nariyanpara top GL tank							
No Specifications added under this Estimate								
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
41	9(a.) Supply, Erection, Testing and Commissioning of 2 Nos motor pump sets at Nariyanpara pump house for pumping to Nariyanpara top GL tank							



1	od54105/2020_2021 Supply, Erection, Testing and Commissioning of 2 Nos new Horizontal / Vertical type multi stage Centrifugal motor Pumpset having discharge of 3.50 lps against a total head of 173 M. suction head 5m, speed 1450 rpm at Nariampara pumping station.(Intermediate sump to Narianpara Top GLSR)		2.000	No	247846.9 2	495693.84	247846.9 0	495693.80
2	od54106/2020_2021 Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor		25.000	metre	193.2	4830.00	193.20	4830.00
3	od54107/2020_2021 Supply of suitable size PVC insulated, sheathed, armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.		20.000	metre	266.8	5336.00	266.80	5336.00
4	od54108/2020_2021 STATUTORY APPROVAL FROM KSEB		1.000	No	25000.0	25000.00	25000.00	25000.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
42	9(b) Supply, Erection, Testing and Commissioning of 2 Nos motor pump sets at Nariyanpara pump house for pumping to Mulakaramedu/ Kochuthovala GL tank							
1	od54144/2020_2021 Supply, Erection, Testing and Commissioning of 2 Nos new Horizontal / Vertical type multi stage Centrifugal motor Pumpset having discharge of 22 lps against a total head of 113 M. suction head 5m, speed 1450 rpm at Nariampara pumping station.(Intermediate sump to Mulakaramedu and Kochuthovala GLSR)		2.000	No	734489.4 1	1468978.82	734489.4 0	1468978.80
2	od54145/2020_2021 Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor		25.000	metre	425.5	10637.50	425.50	10637.50



3	od54146/2020_2021 Supply of suitable size PVC insulated, sheathed,armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.			20.000	metre	816.5	16330.00	816.50	16330.00
4	od54147/2020_2021 STATUTORY APPROVAL FROM KSEB			1.000	No	25000.0	25000.00	25000.00	25000.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount	
43	9(c) Supply, Erection, Testing and Commissioning of 2 Nos motor pump sets at Kalthotty pump house pumping to Labbakada GL tank								
1	od54190/2020_2021 Supply, Erection, Testing and Commissioning of 2 Nos new Horizontal / Vertical type multi stage Centrifugal motor Pumpset having discharge of 11 Ips against a total head of 19 M. suction head 5m, speed 1450 rpm at Kalthotty pumping station.(To Labbakada GLSR)			2.000	No	116130.5 1	232261.02	116130.5 0	232261.00
2	od54191/2020_2021 STATUTORY APPROVAL FROM KSEB			1.000	No	5000.0	5000.00	5000.00	5000.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount	
44	9(d) Supply, Erection, Testing and Commissioning of 2 Nos motor pump sets at Kalthotty pump house pumping to Meppara GL tank								
1	od54202/2020_2021 Supply, Erection, Testing and Commissioning of 2 Nos new Horizontal / Vertical type multi stage Centrifugal motor Pumpset having discharge of 11 Ips against a total head of 184 M. suction head 5m, speed 1450 rpm at Kalthotty pumping station.(Kalthotty to Mepar GLSR)			2.000	No	646338.9 7	1292677.94	646338.9 5	1292677.90
2	od54203/2020_2021 Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor			25.000	metre	339.25	8481.25	339.25	8481.25



3	od54204/2020_2021 Supply of suitable size PVC insulated, sheathed,armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.			20.000	metre	396.75	7935.00	396.75	7935.00
4	od54205/2020_2021 STATUTORY APPROVAL FROM KSEB			1.000	No	25000.0	25000.00	25000.00	25000.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount	
45	9(e) Power allocation charges (OYEC & CD) Extension of three phase line to Kalthotti and Nariyanpara pumping station								
1	od54540/2020_2021 Power allocation and energization of clear water pump house at Kalthotty ( Including application fee, power allocation fee , Estimate cost for service connection, Cash deposit) - As per intimation notice DB-2018-19/ESKNCHR/326 dated 22.03.2019 from KSEB)			1.000	No	1965000.0	1965000.00	1965000.00	1965000.00
2	od54541/2020_2021 Any additional cost for actual execution of work - Power allocation and energization of clear water pump house at Kalthotty 100 KVA ( Approval from KSEB)			1.000	L.S	200000.0	200000.00	200000.00	200000.00
3	od54542/2020_2021 Power allocation and energization of clear water pump house at Nariyampara ( Including application fee, power allocation fee , Estimate cost for service connection, Cash deposit) - As per intimation notice DB-2018-19/ESKNCHR/326 dated 22.03.2019 from KSEB)			1.000	No	920000.0	920000.00	920000.00	920000.00
4	od54543/2020_2021 Any additional cost for actual execution of work - Power allocation and energization of clear water pump house at Nariyampara 160 KVA ( Approval from KSEB)			1.000	L.S	200000.0	200000.00	200000.00	200000.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount	



46 13 - Supply, erection, testing and commissioning of motor pumpsets at Alady pump house								
No Specifications added under this Estimate								
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
47		Supply, Erection, Testing and Commissioning of 2 Nos Centrifugal Motor Pumpset having discharge of 5 lps against a total head of 81 M. suction head 5m at WTP sump for pumping to Alady Kurisumala GLSR.						
1	od54791/2020_2021	Supply, Erection, Testing and Commissioning of 2 Nos new Horizontal / Vertical type multi stage Centrifugal motor Pumpset having discharge of 5 lps against a total head of 81 M. suction head 5m, speed 1450 rpm at Alady water treatment plant to Alady GLSR.						
			2.000	No	238352.1 2	476704.24	238352.1 0	476704.20
2	od54792/2020_2021	Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor						
			25.000	metre	416.3	10407.50	416.30	10407.50
3	od54793/2020_2021	Supply of suitable size PVC insulated, sheathed,armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to pannel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.						
			20.000	metre	416.3	8326.00	416.30	8326.00
4	od54794/2020_2021	STATUTORY APPROVAL FROM KSEB						
			1.000	No	25000.0	25000.00	25000.00	25000.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
48	(2) -	Supply, Erection, Testing and Commissioning of 2 Nos new Centrifugal motor Pumpset having discharge of 65 lps against a total head of 125 M. suction head 5m speed 1450 rpm at WTP sump for pumping to Kalthotty / Nariyampara sumps						
1	od55073/2020_2021	Supply, Erection, Testing and Commissioning of 2 Nos new Horizontal / Vertical type multi stage Centrifugal motor Pumpset having discharge of 65 lps against a total head of 125 M. suction head 5m, speed 1450 rpm at WTP Alady. ( From sump to Nariyanpara/ kalthotty intermediate pumping station) including soft starter						
			2.000	No	2884326. 68	5768653.36	2884326. 70	5768653.40



2	od55074/2020_2021 Supply of additional cable beyond the initial supply of 10Mtr. Additional requirement from panel board to starter and from starter to motor	25.000	metre	1104.0	27600.00	1104.00	27600.00
3	od55075/2020_2021 Supply of suitable size PVC insulated, sheathed, armoured copper conductor cable conforming to relevant IS code, for giving power connections to main switchboard to panel board etc. complete as per standards including end termination materials as per IE rules. The supply shall be limited to the actual requirement.	20.000	metre	1104.0	22080.00	1104.00	22080.00
4	od55076/2020_2021 Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All classes of soil (Rate as per DSR Observed data)	15.000	cum	425.54	6383.10	425.55	6383.25
5	2.8.1 Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil	15.000	cum	309.95	4649.25	319.55	4793.25
6	od55077/2020_2021 Providing 350mm surge arrestor having test pressure 45Kg/cm2 to the clear water pumping main including cost of specials such as 2 Nos. Tail piece, 2 Nos. Mechanical joints, cutting the existing DI pipe, inserting surge arrestor, jointing with flanged joints etc. including cost of surge arrestor.(Rate as per DSR Observed data)	1.000	No	600000.0	600000.00	600000.00	600000.00
7	od55078/2020_2021 Cement concrete 1:2:4 using 20mm nominay size metal for anchore block including charges of form work and labour charges etc. complete ( Rate as per DSR observed data)	5.000	cum	8941.83	44709.15	8941.85	44709.25





8	od55079/2020_2021 Providing air cushion valve of diameter - 200mm & test pressure 45 Kg/cm2 with flanged ends including all cost of materials such as 200mm air cushion valve - 1 No., 200mm D/F CI sluice valve - 1 No. etc and all labour charges for fitting the same in position as directed by the departmental officers.(Rate as per DSR Observed data)	1.000	No	409500.0	409500.00	409500.00	409500.00
9	od55080/2020_2021 Constructing RCC valve chamber of size 2.50m x 1.20m x 1.20m for providing the zero velocity valve including all cost of materials, labour charge, form work etc complete as directed by the departmental officers. (Rate as per DSR Observed data)	1.000	No	63841.0	63841.00	63841.00	63841.00
10	od55081/2020_2021 STATUTORY APPROVAL FROM KSEB	1.000	No	25000.0	25000.00	25000.00	25000.00
<b>Estimate PAC</b>							<b>53654910.55</b>
<b>LMR Estimate PAC</b>							<b>55989263.00</b>
<b>Percentage Excess</b>							<b>4.35</b>
Rupees Five Crore Fifty Nine Lakh Eighty Nine Thousand Two Hundred and Sixty Three Only							

Kerala Water Authority  
**PRICE**



**KIIFB Project:TRAN10: WRD025- 06 -WSS to Ayyappankovil Panchayat in Idukki District-Part II-Package-II- Supplying, laying and commissioning 350mm, 300mm& 250mm DI pumping/ gravity main and 80mm GI pumping main, improvement work of Kalthotty sump& pump house, construction of pipe line bridge, design and construction of 1.00LL capacity sump& pump house at Nariyanpara, providing wash water disposal pipe line at WTP Alady and interconnection works etc**

LMR Abstract with DAR 21-IDK(Idukki & Udumbanchola & Peerumedu) 01/07/2022 - 30/09/2022

Sl No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
5	Appendix A- (1) - Supply and laying 350mm and 300mm DI gravity main/ pumping main pipe from Alady GLSR to Kalthotty sump (Re-arranging)- (a) Cost of materials							
1	100.98.119	Supply of DI K9 Pipe Conforming to IS 8329/2000, 300mm Dia.	1870.00	metre	4520.63	8453578.10	4274.30	7992941.00
			0					
2	100.98.120	Supply of DI K9 Pipe Conforming to IS 8329/2000, 350mm Dia.	5353.00	metre	5506.95	29478703.35	5238.35	28040887.55
			0					
3	100.98.461	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 200mm.	5.000	No	23723.65	118618.25	11794.00	58970.00
4	100.98.463	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 300mm.	1.000	No	43312.35	43312.35	21653.95	21653.95
5	100.98.464	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 350mm.	2.000	No	77806.55	155613.10	31667.35	63334.70
6	od41949/2020_2021	Supply DI specials, Tees, Bends, Collars, Tapers etc.	59.982	quintal	20384.0	1222673.09	19397.05	1163473.85
7	100.98.436	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Kinetic Air Valve Type DK, Size 80mm.						



SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount	
			4.000	No	11748.55	46994.20	5691.80	22767.20	
8	100.98.437	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Kinetic Air Valve Type DK, Size 100mm.							
			6.000	No	17963.75	107782.50	7621.70	45730.20	
6	Appendix A - (1) - Supply and laying 350mm and 300mm DI gravity main/ pumping main pipe from Alady GLSR to Kalthotty sump (Re-arranging)-(b) Working charges								
1	100.1.1	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : All kinds of soil (Ref. Item No. 2.10.1 of DSR)	7346.91 9	cum	579.85	4260110.98	592.25	4351212.78	
2	100.1.5	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :" Ordinary Rock. (Ref. Item No. 2.13.1 of DSR)	1763.26 1	cum	842.1	1484842.09	1033.20	1821801.27	
3	100.2.2	Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 m <sup>2</sup> on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m. Medium Rock (blasting prohibited) New Data derived from Item No.2.9.3	293.878	cum	1106.34	325128.99	1547.00	454629.27	
4	2.7.3	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed. Hard rock (blasting prohibited)	195.918	cum	1248.58	244619.30	1781.60	349047.51	



5	100.4.1 Excavating in hard rock for trenches by blasting for laying pipes and stacking useful materials for measurements and disposing unserviceable materials within the initial lead of 50m and lift upto 1.50m (initial depth 0 m to 1.50m) and providing protection by earth filled cement bags during blasting to avoid damages to nearby structures (200 Nos. of earth filled cement bags for 10m <sup>3</sup> blasting) (Ref. Item No. 1004 A of T C)	195.918	cum	4093.4	801970.74	2547.30	499061.92
6	100.8.1 Fencing one side of trenches, 1.50 m height with two rows of 10 cm plastic caution tape in vertical casuarina pole (girth 15cm to 24cm) fixed at 2 m intervals. (Data Prepared based on PWD SDB - Item No.1009)	2900.00 0	metre	28.82	83578.00	29.10	84390.00
7	100.8.2 Fencing 1.50m high with two rows of casuarina poles (girth 15cm to 24cm) tied with coir yarn on vertical casuarina pole (girth 15cm to 24cm) fixed at 1.5m intervals. NEW DATA (Prepared based on PWD SDB - Item No.1009)	4000.00 0	metre	99.36	397440.00	100.25	401000.00
8	50.2.25.1 Filling with contractor's own earth ( excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge	350.000	cum	548.85	192097.50	342.40	119840.00
9	100.14.5 Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 300 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.19 in DAR	1833.00 0	metre	214.13	392500.29	199.55	365775.15
10	100.14.6 Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 350 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.20 in DAR	5248.00 0	metre	283.7	1488857.60	263.05	1380486.40



11	100.31.1.5 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 200 mm diameter. Class I" Data derived from item no.18.31.4.1 of DAR	5.000	Nos	1625.9	8129.50	1770.80	8854.00
12	100.31.1.7 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 300 mm diameter. Class I" Data derived from item no.18.31.6.1 of DAR	1.000	Nos	2708.11	2708.11	2949.60	2949.60
13	100.31.1.8 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 350 mm diameter. Class I" Observed Data derived from item no.18.31.of DAR	2.000	Nos	3616.3	7232.60	3827.40	7654.80
14	100.32.4 Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 80 mm Double acting Air Valve Data derived from item no.18.59.2 of DAR	4.000	Nos	229.21	916.84	259.35	1037.40
15	100.32.5 Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 100 mm Double acting Air Valve	6.000	Nos	351.21	2107.26	410.70	2464.20
16	18.30.7 Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:300 mm diameter pipe	70.000	Nos	603.77	42263.90	727.55	50928.50
17	18.30.8 Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:350 mm diameter pipe	100.000	Nos	811.46	81146.00	921.05	92105.00
18	18.70.5 Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:300 mm dia pipe						



		300.000	joint	430.68	129204.00	429.30	128790.00
19	18.70.6 Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:350 mm dia pipes						
		1000.00 0	joint	456.93	456930.00	452.50	452500.00
20	18.24 Laying in position S & S or flanged C.I. special such as tees, bends, collars, tapers and caps etc. ( excluding cost of specials).						
		59.982	quintal	603.91	36223.73	616.55	36981.90
21	18.67.1 Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Upto 300 mm dia						
		2.400	quintal	14708.65	35300.76	14043.50	33704.40
22	18.67.2 Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Above 300 mm dia						
		6.200	quintal	15492.79	96055.30	14786.85	91678.47
23	18.83.7 Labour for cutting C.I. pipe with steel saw.300 mm diameter C.I. pipe						
		10.000	Each Cut	671.63	6716.30	694.55	6945.50
24	18.83.8 Labour for cutting C.I. pipe with steel saw.350 mm diameter C.I pipe						
		25.000	Each Cut	781.1	19527.50	807.85	20196.25
25	100.35.5 Testing 300mm DI/CI pipeline with potable water to the required test pressure. 300 mm dia Observed Data derived from item no.1023 of PHED DATA						
		1833.00 0	metre	57.81	105965.73	60.95	111721.35
26	100.35.6 Testing 350mm DI/CI pipeline with potable water to the required test pressure. 350 mm dia Observed Data derived from item no.1024 of PHED DATA						



		5248.00 0	metre	70.53	370141.44	74.60	391500.80
27	4.1.3 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)						
		10.000	cum	8340.93	83409.30	10609.70	106097.00
28	5.9.1 Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete						
		40.000	sqm	350.0	14000.00	347.55	13902.00
29	2.8.1 Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil						
		65.341	cum	309.95	20252.44	319.55	20879.72
30	2.9.1 Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m.Ordinary rock						
		65.341	cum	550.62	35978.06	738.65	48264.13
31	4.1.6 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 ( 1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)						
		17.425	cum	7527.06	131159.02	9712.35	169237.70
32	5.1.2 Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:1:5:3 (1 cement 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size						
		69.409	cum	9483.15	658215.96	11828.25	820987.00
33	5.22.2 Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelHard drawn steel wire						
		7000.00 0	kilogram	105.23	736610.00	132.00	924000.00



34	5.9.2	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.						
		202.500	sqm	748.62	151595.55	766.40	155196.00	
35	13.1.1	12 mm cement plaster of mix:1:4 ( 1 cement : 4 fine sand)						
		170.100	sqm	327.85	55767.29	386.35	65718.14	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
11 Appendix A - (2) - Supply and laying 300 mm DI pumping main from Kalthotty sump to Nariyanpara (Re-arranging)- (a) cost of materials								
1	100.98.119	Supply of DI K9 Pipe Conforming to IS 8329/2000, 300mm Dia.						
		4927.00 0	metre	4520.63	22273144.01	4274.30	21059476.10	
2	100.98.461	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 200mm.						
		4.000	No	23723.65	94894.60	11794.00	47176.00	
3	100.98.463	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 300mm.						
		2.000	No	43312.35	86624.70	21653.95	43307.90	
4	100.98.440	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Small Orifice Type S1, Size 25mm.						
		3.000	No	5636.75	16910.25	966.75	2900.25	
5	100.98.444	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Large Orifice Type S2, Size 50mm.						
		5.000	No	6110.65	30553.25	1760.95	8804.75	
6	od41949/2020_2021	Supply DI specials, Tees, Bends, Collars, Tapers etc.						
		26.761	quintal	20384.0	545496.22	19397.05	519084.46	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
12 Appendix A - (2) - Supply and laying 300 mm DI pumping main from Kalthotty sump to Nariyanpara (Re-arranging)- (b) Working charges								





1	100.1.1 Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : All kinds of soil (Ref. Item No. 2.10.1 of DSR)	4528.12 5	cum	579.85	2625633.28	592.25	2681782.03
2	100.1.5 Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :" Ordinary Rock. (Ref. Item No. 2.13.1 of DSR)	905.625	cum	842.1	762626.81	1033.20	935691.75
3	100.2.2 Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 m <sup>2</sup> on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m. Medium Rock (blasting prohibited) New Data derived from Item No.2.9.3	301.875	cum	1106.34	333976.39	1547.00	467000.63
4	2.7.3 Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed. Hard rock (blasting prohibited)	181.125	cum	1248.58	226149.05	1781.60	322692.30
5	100.4.1 Excavating in hard rock for trenches by blasting for laying pipes and stacking useful materials for measurements and disposing unserviceable materials within the initial lead of 50m and lift upto 1.50m (initial depth 0 m to 1.50m) and providing protection by earth filled cement bags during blasting to avoid damages to nearby structures (200 Nos. of earth filled cement bags for 10m <sup>3</sup> blasting) (Ref. Item No. 1004 A of T C)	120.750	cum	4093.4	494278.05	2547.30	307586.48
6	50.2.25.1 Filling with contractor's own earth ( excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge						



		250.000	cum	548.85	137212.50	342.40	85600.00
7	100.8.1 Fencing one side of trenches, 1.50 m height with two rows of 10 cm plastic caution tape in vertical casuarina pole (girth 15cm to 24cm) fixed at 2 m intervals. (Data Prepared based on PWD SDB - Item No.1009)						
		4000.00 0	metre	28.82	115280.00	29.10	116400.00
8	100.14.5 Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 300 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.19 in DAR						
		4830.00 0	metre	214.13	1034247.90	199.55	963826.50
9	18.70.5 Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:300 mm dia pipe						
		800.000	joint	430.68	344544.00	429.30	343440.00
10	18.30.7 Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:300 mm diameter pipe						
		100.000	Nos	603.77	60377.00	727.55	72755.00
11	18.83.7 Labour for cutting C.I. pipe with steel saw.300 mm diameter C.I. pipe						
		50.000	Each Cut	671.63	33581.50	694.55	34727.50
12	100.35.5 Testing 300mm DI/CI pipeline with potable water to the required test pressure. 300 mm dia Observed Data derived from item no.1023 of PHED DATA						
		4830.00 0	metre	57.81	279222.30	60.95	294388.50
13	100.31.1.5 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 200 mm diameter. Class I" Data derived from item no.18.31.4.1 of DAR						
		4.000	Nos	1625.9	6503.60	1770.80	7083.20



14	100.31.1.7 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 300 mm diameter. Class I" Data derived from item no.18.31.6.1 of DAR	2.000	Nos	2708.11	5416.22	2949.60	5899.20
15	100.32.1 Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 25 mm Single acting Air Valve Observed Data derived from item no.18.59.of DAR	3.000	Nos	146.63	439.89	146.60	439.80
16	100.32.3 Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 50 mm Double acting Air Valve Data derived from item no.18.59.1 of DAR	5.000	Nos	229.21	1146.05	259.35	1296.75
17	18.24 Laying in position S & S or flanged C.I. special such as tees, bends, collars, tapers and caps etc. ( excluding cost of specials).	26.761	quintal	603.91	16161.24	616.55	16499.49
18	18.67.1 Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Upto 300 mm dia	4.800	quintal	14708.65	70601.52	14043.50	67408.80
19	2.8.1 Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil	10.891	cum	309.95	3375.67	319.55	3480.22
20	2.9.1 Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m.Ordinary rock	10.891	cum	550.62	5996.80	738.65	8044.64



21	4.1.6	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 ( 1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)	1.453	cum	7527.06	10936.82	9712.35	14112.04
22	5.1.2	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size)	7.832	cum	9483.15	74272.03	11828.25	92638.85
23	5.22.2	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth level Hard drawn steel wire	783.200	kilogram	105.23	82416.14	132.00	103382.40
24	5.9.2	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	33.750	sqm	748.62	25265.93	766.40	25866.00
25	13.1.1	12 mm cement plaster of mix:1:4 ( 1 cement : 4 fine sand)	28.350	sqm	327.85	9294.55	386.35	10953.02
26	4.1.3	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	10.000	cum	8340.93	83409.30	10609.70	106097.00
27	5.9.1	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	40.000	sqm	350.0	14000.00	347.55	13902.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
13	Appendix A - (3) - Supply and Laying 250mm DI pumping main from Nariyanpara to Idukki kavala (balance work re-arranging)- (a) Cost of materials							
1	100.98.118	Supply of DI K9 Pipe Conforming to IS 8329/2000, 250mm Dia.	1188.00 0	metre	3616.52	4296425.76	3438.05	4084403.40



2	od41949/2020_2021 Supply DI specials, Tees, Bends, Collars, Tapers etc.							
	7.450	quintal	20384.0	151860.80	19397.05	144508.02		
3	100.98.461 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 200mm.							
	1.000	No	23723.65	23723.65	11794.00	11794.00		
4	100.98.462 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 250mm.							
	3.000	No	34361.8	103085.40	18345.20	55035.60		
5	100.98.440 Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Small Orifice Type S1, Size 25mm.							
	3.000	No	5636.75	16910.25	966.75	2900.25		
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
23	Appendix A - (3) - Supply and Laying 250mm DI pumping main from Nariyanpara to Idukki kavala (balance work re-arranging)- (b) Working charges							
1	100.1.1 Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : All kinds of soil (Ref. Item No. 2.10.1 of DSR)							
	943.651	cum	579.85	547176.03	592.25	558877.30		
2	100.1.5 Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :" Ordinary Rock. (Ref. Item No. 2.13.1 of DSR)							
	188.730	cum	842.1	158929.53	1033.20	194995.84		



3	100.2.2 Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 m <sup>2</sup> on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m. Medium Rock (blasting prohibited) New Data derived from Item No.2.9.3	75.492	cum	1106.34	83519.82	1547.00	116786.12
4	2.7.3 Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed. Hard rock (blasting prohibited)	25.164	cum	1248.58	31419.27	1781.60	44832.18
5	100.4.1 Excavating in hard rock for trenches by blasting for laying pipes and stacking useful materials for measurements and disposing unserviceable materials within the initial lead of 50m and lift upto 1.50m (initial depth 0 m to 1.50m) and providing protection by earth filled cement bags during blasting to avoid damages to nearby structures (200 Nos. of earth filled cement bags for 10m <sup>3</sup> blasting) (Ref. Item No. 1004 A of T C)	25.164	cum	4093.4	103006.32	2547.30	64100.26
6	50.2.25.1 Filling with contractor's own earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge	10.000	cum	548.85	5488.50	342.40	3424.00
7	100.8.1 Fencing one side of trenches, 1.50 m height with two rows of 10 cm plastic caution tape in vertical casuarina pole (girth 15cm to 24cm) fixed at 2 m intervals. (Data Prepared based on PWD SDB - Item No.1009)	800.000	metre	28.82	23056.00	29.10	23280.00
8	100.14.4 Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 250 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.18 in DAR	1165.00 0	metre	170.19	198271.35	158.35	184477.75
9	18.70.4 Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket: 250 mm dia pipes	230.000	joint	329.84	75863.20	328.70	75601.00



10	18.30.6 Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:250 mm diameter pipe	25.000	Nos	595.56	14889.00	727.55	18188.75
11	18.83.6 Labour for cutting C.I. pipe with steel saw.250 mm diameter C.I. pipe	15.000	Each Cut	559.11	8386.65	578.20	8673.00
12	100.35.4 Testing 250mm DI/CI pipeline with potable water to the required test pressure . 250 mm dia Observed Data derived from item no.1022 of PHED DATA	1165.00 0	metre	52.99	61733.35	55.60	64774.00
13	100.31.1.5 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 200 mm diameter. Class I" Data derived from item no.18.31.4.1 of DAR	1.000	Nos	1625.9	1625.90	1770.80	1770.80
14	100.31.1.6 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 250 mm diameter. Class I" Data derived from item no.18.31.5.1 of DAR	3.000	Nos	2304.82	6914.46	2564.25	7692.75
15	100.32.1 Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 25 mm Single acting Air Valve Observed Data derived from item no.18.59.of DAR	3.000	Nos	146.63	439.89	146.60	439.80
16	18.24 Laying in position S & S or flanged C.I. special such as tees, bends, collars, tapers and caps etc. ( excluding cost of specials).	7.450	quintal	603.91	4499.13	616.55	4593.30
17	18.67.1 Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Upto 300 mm dia						



		1.440	quintal	14708.65	21180.46	14043.50	20222.64
18	2.8.1 Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil						
		10.891	cum	309.95	3375.67	319.55	3480.22
19	2.9.1 Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m.Ordinary rock						
		10.891	cum	550.62	5996.80	738.65	8044.64
20	4.1.6 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 ( 1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)						
		1.453	cum	7527.06	10936.82	9712.35	14112.04
21	5.1.2 Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement -All work up to plinth level:1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size						
		7.832	cum	9483.15	74272.03	11828.25	92638.85
22	5.9.2 Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.						
		33.750	sqm	748.62	25265.93	766.40	25866.00
23	5.22.2 Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelHard drawn steel wire						
		783.200	kilogram	105.23	82416.14	132.00	103382.40
24	13.1.1 12 mm cement plaster of mix:1:4 ( 1 cement : 4 fine sand)						
		28.350	sqm	327.85	9294.55	386.35	10953.02
25	4.1.3 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)						





SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
			5.000	cum	8340.93	41704.65	10609.70	53048.50
26	5.9.1	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete						
			20.000	sqm	350.0	7000.00	347.55	6951.00
24 Appendix B - (1) - Improvements at Kalthotty sump- (a) patch work, painting and providing toilet etc.								
1	2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared						
			40.000	sqm	15.43	617.20	15.60	624.00
2	2.8.1	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil						
			41.012	cum	309.95	12711.67	319.55	13105.38
3	15.7.4	Demolishing brick work manually / by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-Charge.In cement mortar						
			0.500	cum	1805.99	903.00	1829.35	914.68
4	15.2.1	Demolishing cement concrete manually / by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in-Charge.Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)						
			0.225	cum	2134.72	480.31	2162.25	486.51
5	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:Cement mortar 1:6 (1 cement : 6 coarse sand)						
			5.539	cum	7520.41	41655.55	8030.80	44482.60
6	4.1.5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)						
			2.192	cum	7690.32	16857.18	9884.65	21667.15



7	50.6.1.3 Solid block masonry using pre cast solid blocks (Factory made) of size 40x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 for super structure above floor two level up to floor V level thickness 20cm and above in: CM 1:6 ( 1 cement :6 coarse sand) etc complete	4.739	cum	7784.73	36891.84	8495.10	40258.28
8	10.5.2 Providing and fixing 1 mm thick M.S. sheet door with frame of 40x40x6 mm angle iron and 3 mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.Using flats 30x6 mm for diagonal braces and central cross piece	1.441	sqm	5256.35	7574.40	6114.35	8810.78
9	5.1.3 Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	0.814	cum	8964.72	7297.28	11245.05	9153.47
10	5.2.2 Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up tot floor five level excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3( 1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	4.657	cum	11433.93	53247.81	13791.85	64228.65
11	5.22.6 Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more	601.811	kilogram	102.61	61751.83	120.80	72698.77
12	5.9.1 Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	8.000	sqm	350.0	2800.00	347.55	2780.40
13	5.9.3 Centering and shuttering including strutting, etc. and removal of form for:Suspended floors, roofs, landings, balconies and access platform	29.311	sqm	851.52	24958.90	907.25	26592.40
14	5.9.5 Centering and shuttering including strutting, etc. and removal of form for:Lintels, beams, plinth beams, girders bressumers and cantilevers	17.740	sqm	678.28	12032.69	731.35	12974.15



15	5.9.6 Centering and shuttering including strutting, etc. and removal of form for:Columns, Pillars, Piers, Abutments, Posts and Struts	9.000	sqm	901.48	8113.32	910.10	8190.90
16	13.7.1 12 mm cement plaster finished with a floating coat of neat cement of mix:1:3 ( 1 cement : 3 fine sand)	14.081	sqm	418.79	5896.98	486.80	6854.63
17	13.2.1 15 mm cement plaster on the rough side of single or half brick wall of mix:1:4 (1 cement :4 fine sand)	68.840	sqm	378.31	26042.86	448.15	30850.65
18	13.44.1 Finishing walls with water proofing cement paint of required shade:New work (Two or more coats applied @ 3.84 kg/10 sqm)	328.177	sqm	112.09	36785.36	121.20	39775.05
19	13.48.3 Finishing with Deluxe Multi surface paint system for interiors and exteriors using primer as per manufacturers specifications:Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/10 sqm of approved brand and manufacture	0.641	sqm	154.62	99.11	157.30	100.83
20	11.21.1.1 Providing and fixing 10 mm thick acid and /or alkali resistant tiles of approved make and colour using acid and / or alkali resisting mortar bedding, and joints filled with acid and /or alkali resisting cement as per IS : 4457, complete as per the direction of Engineer-in-Charge.In flooring on a bed of 10 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)Acid and alkali resistant tile	3.750	sqm	1836.85	6888.19	2098.50	7869.38
21	11.21.2.1 Providing and fixing 10 mm thick acid and /or alkali resistant tiles of approved make and colour using acid and / or alkali resisting mortar bedding, and joints filled with acid and /or alkali resisting cement as per IS : 4457, complete as per the direction of Engineer-in-Charge.In dado/ skirting on 12 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)Acid and alkali resistant tile	18.240	sqm	1975.33	36030.02	2235.80	40780.99
22	13.71 Lettering with black Japan pint of approved brand and manufacture	1500.00 0	Letterxc m ht	5.8	8700.00	5.85	8775.00



23	50.10.1	Steel work in built up G I tubular ( round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting,fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete						
		152.460	kg	198.21	30219.10	201.90	30781.67	
24	13.48.2	Finishing with Deluxe Multi surface paint system for interiors and exteriors using primer as per manufacturers specifications:Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.75 ltr/10 sqm of approved brand and manufacture						
		7.968	sqm	160.0	1274.88	152.00	1211.14	
25	14.75	Repair to plaster of thickness 12mm to 20 mm in patches of area 2.5 sqm and under,including cutting the patch in proper shape, raking out joints and preparing plasteringthe wall surface with white cement based polymer modified self curing mortar, includingdisposal of rubbish, all complete as per the direction of Engineer-In-Charge.						
		50.000	sqm	629.03	31451.50	765.20	38260.00	
26	od41173/2020_2021	Providing sanitary facilities including 500 ltr water tank,PVC septic tank,water closet,wash basin and other plumbing works and electrical works etc.complete.						
		1.000	No	46398.41	46398.41	46562.55	46562.55	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
29	Appendix B - (1) - Improvements at Kalthotty sump- (b) Construction of retaining wall and compound wall							
1	2.31	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared						
		330.000	sqm	15.43	5091.90	15.60	5148.00	
2	2.8.1	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil						
		70.620	cum	309.95	21888.67	319.55	22566.62	
3	4.1.5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)						



			11.881	cum	7690.32	91368.69	9884.65	117439.53
4	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:Cement mortar 1:6 (1 cement : 6 coarse sand)						
			93.283	cum	7520.41	701526.41	8030.80	749137.12
5	5.2.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up tot floor five level excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3( 1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)						
			6.602	cum	11433.93	75486.81	13791.85	91053.79
6	5.22.6	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more						
			396.002	kilogram	102.61	40633.77	120.80	47837.04
7	50.2.25.1	Filling with contractor's own earth ( excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge						
			66.000	cum	548.85	36224.10	342.40	22598.40
8	50.6.1.3	Solid block masonry using pre cast solid blocks (Factory made) of size 40x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 for super structure above floor two level up to floor V level thickness 20cm and above in: CM 1:6 ( 1 cement :6 coarse sand) etc complete						
			20.401	cum	7784.73	158816.28	8495.10	173308.54
9	13.7.2	12 mm cement plaster finished with a floating coat of neat cement of mix:1:4 ( 1 cement : 4 fine sand)						
			206.400	sqm	403.29	83239.06	468.30	96657.12
10	50.10.1	Steel work in built up G I tubular ( round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting,fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete						
			61.621	kg	198.21	12213.90	201.90	12441.28
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
30 Appendix B - (2) - Design and Construction of Pipeline Bridge across kattappana river- (a)- RCC work								



1	2.31 Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared	85.000	sqm	15.43	1311.55	15.60	1326.00
2	2.8.1 Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil	23.520	cum	309.95	7290.02	319.55	7515.82
3	4.1.5 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	3.920	cum	7690.32	30146.05	9884.65	38747.83
4	5.33.1 Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.All work upto plinth level	6.032	cum	9825.93	59270.01	12022.00	72516.70
5	5.33.2 Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.All work above plinth level upto floor V level	14.280	cum	11550.4	164939.71	13768.90	196619.89
6	5.34.1 Extra for providing richer mixes at all floor levels. Note:- Excess/less cement over the specified cement content used is payable/ recoverable separately.Providing M-30 grade concrete instead of M-25 grade BMC/RMC. (Note:- Cement content considered in M-30 is @ 340 kg/cum).	20.300	cum	85.7	1739.71	101.65	2063.50



7	5.22.1	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelMild steel and Medium Tensile steel bars	2174.00 0	kg	100.91	219378.34	124.45	270554.30
8	5.9.1	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	21.440	sqm	350.0	7504.00	347.55	7451.47
9	5.9.3	Centering and shuttering including strutting, etc. and removal of form for:Suspended floors, roofs, landings, balconies and access platform	26.000	sqm	851.52	22139.52	907.25	23588.50
10	5.9.5	Centering and shuttering including strutting, etc. and removal of form for:Lintels, beams, plinth beams, girders bressumers and cantilevers	44.481	sqm	678.28	30170.57	731.35	32531.18
11	5.9.6	Centering and shuttering including strutting, etc. and removal of form for:Columns, Pillars, Piers, Abutments, Posts and Struts	62.400	sqm	901.48	56252.35	910.10	56790.24
12	13.7.1	12 mm cement plaster finished with a floating coat of neat cement of mix:1:3 ( 1 cement : 3 fine sand)	147.840	sqm	418.79	61913.91	486.80	71968.51
13	13.44.1	Finishing walls with water proofing cement paint of required shade:New work (Two or more coats applied @ 3.84 kg/10 sqm)	156.560	sqm	112.09	17548.81	121.20	18975.07
14	10.26.3	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approves steel primer.G.I. pipes	452.600	kg	194.18	87885.87	201.15	91040.49
15	100.7.1	Bailing out water with 5 HP engine and pumpset including conveyance to the site, erection, dismantling and taking back of engine and pump, cost of fuel lubricating oil and other stores pay of staff etc. complete. NEW DATA (Prepared based on PHED SDB - Item No.1070)	894.840	Kwh	38.57	34513.98	37.00	33109.08
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
35 Appendix B - (2) - Design and Construction of pipeline bridge across kattappana river- (b) Steel bridge								



1	10.2	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.						
		4019.05	kg	125.04	502542.01	155.85	626368.94	
2	13.52.1	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete. On steel work						
		81.429	sqm	233.1	18981.10	241.40	19656.96	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
36	Appendix B - (2) - Design and Construction of pipeline bridge across at kattappana river- (c) Supply and laying M S pipe and connecting to the existing line							
1	100.37.8.1	Fabricating MS pipes of size 250mm (ID) using 8 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For pipes fabricated with 8mm thick MS plates.						
		42.000	metre	7163.54	300868.68	10098.45	424134.90	
2	100.1.1	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : All kinds of soil (Ref. Item No. 2.10.1 of DSR)						
		7.680	cum	579.85	4453.25	592.25	4548.48	
3	100.37.8.3	Cutting 250 mm (ID) MS pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.						
		36.000	No	272.02	9792.72	534.80	19252.80	
4	100.37.8.4	Welding 250mm (ID) MS pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods ,all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.						
		50.000	No	1040.81	52040.50	1817.55	90877.50	
5	100.37.8.5	Grinding cut and weld edges of 250 mm (ID) MS pipes during fabrication work including all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.						
		50.000	No	195.17	9758.50	196.40	9820.00	





6	100.14.4 Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 250 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.18 in DAR	42.000	metre	170.19	7147.98	158.35	6650.70	
7	18.67.1 Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Upto 300 mm dia	0.960	quintal	14708.65	14120.30	14043.50	13481.76	
8	5.1.3 Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	6.912	cum	8964.72	61964.14	11245.05	77725.79	
9	5.22.6 Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth level Thermo - Mechanically Treated bars of grade Fe-500D or more	622.800	kilogram	102.61	63905.51	120.80	75234.24	
10	100.32.2 Kerala Water Authority Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 40 mm Single acting Air Valve Observed Data derived from item no.18.59.of DAR	1.000	Nos	184.41	184.41	184.40	184.40	
11	100.31.1.1 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) :80 mm diameter. Class I" Observed Data derived from item no.18.31.of DAR	1.000	Nos	613.74	613.74	673.30	673.30	
12	100.98.448 Supply of CI Air Valve with Flanges, Conforming to IS 14845 - 2000, Kinetic Air Valve Type DS1, Size 40mm	1.000	No	7646.15	7646.15	2693.75	2693.75	
13	100.98.457 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 80mm.	1.000	No	6624.05	6624.05	3131.05	3131.05	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
41 Appendix B - (3) - Wash water disposal arrangements at TP- (a) - Cost of materials								



1	100.98.120	Supply of DI K9 Pipe Conforming to IS 8329/2000, 350mm Dia.						
		408.000	metre	5506.95	2246835.60	5238.35	2137246.80	
2	18.71.6	Providing and laying Double Flanged ( screwed / welded) Centrifugally (Spun) Cast Iron, Class B ( IS : 1536):350 mm dia C.I Double Flanges Pipe						
		40.000	metre	10799.16	431966.40	10297.50	411900.00	
3	100.98.464	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 350mm.						
		2.000	No	77806.55	155613.10	31667.35	63334.70	
4	od81358/2020_2021	Supply DI specials, Tees, Bends, Collars, Tapers etc.						
		18.201	quintal	20384.0	371009.18	19397.05	353045.71	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
42 Appendix B - (3) - Wash water disposal arrangements at TP- (b) Working charges								
1	100.1.1	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : All kinds of soil (Ref. Item No. 2.10.1 of DSR)						
		572.001	cum	579.85	331674.78	592.25	338767.59	
2	100.14.6	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 350 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.20 in DAR						
		400.000	metre	283.7	113480.00	263.05	105220.00	
3	100.31.2.8	Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 350 mm diameter. Class II" Observed Data derived from item no.18.31.of DAR						
		2.000	Nos	4148.1	8296.20	4357.00	8714.00	



4	18.83.8 Labour for cutting C.I. pipe with steel saw.350 mm diameter C.I pipe						
		15.000	Each Cut	781.1	11716.50	807.85	12117.75
5	18.70.6 Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:350 mm dia pipes						
		85.000	joint	456.93	38839.05	452.50	38462.50
6	18.67.2 Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Above 300 mm dia						
		1.240	quintal	15492.79	19211.06	14786.85	18335.69
7	18.24 Laying in position S & S or flanged C.I. special such as tees, bends, collars, tapers and caps etc. ( excluding cost of specials).						
		18.201	quintal	603.91	10991.77	616.55	11221.83
8	100.35.6 Testing 350mm DI/CI pipeline with potable water to the required test pressure. 350 mm dia Observed Data derived from item no.1024 of PHED DATA						
		400.000	metre	70.53	28212.00	74.60	29840.00
9	5.1.3 Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)						
		61.208	cum	8964.72	548712.58	11245.05	688287.02
10	5.22.6 Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more						
		2448.32 0	kilogram	102.61	251222.12	120.80	295757.06
11	5.9.1 Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete						
		262.416	sqm	350.0	91845.60	347.55	91202.68



12	od41799/2020_2021 Construction of RCC valve chamber of size 1mx1mx1.4 m cost of excavation work,75mm thick M10 concrete base,150 mm side wall,150mm bottom and cover slab of chamber with M20 concrete with reinforcement including plastering inside and out side of wall.etc.complete.							
			2.000	No	42969.05	85938.10	49377.30	98754.60
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
47	Appendix B - (4) - supply and laying 80 mm GI pumping main from intermediate sump at Nariyanpara to GLSR at Nariyanpara top using 80 mm GI pipe- (a) Cost of materials							
1	100.98.440 Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Small Orifice Type S1, Size 25mm.							
			3.000	No	5636.75	16910.25	966.75	2900.25
2	100.98.457 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 80mm.							
			1.000	No	6624.05	6624.05	3131.05	3131.05
3	od41959/2020_2021 Supply of 80mm GI pipe(m)							
			1177.00 0	metre	830.16	977098.32	789.80	929594.60
4	od41983/2020_2021 Specials for 80mm GI pipe -10 % of value of pipe supply-(supplying and laying 80 mm GI pipes from intermediate sump at Nariyanpara to GLSR at Nariyanpara top-(a) Cost of materials)							
			1.000	set	81318.93	81318.93	81318.95	81318.95
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
48	Appendix B - (4) - supply and laying 80 mm GI pumping main from intermediate sump at Nariyanpara to GLSR at Nariyanpara top using 80 mm GI pipe-(b) Working charges							
1	100.12.8 Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 80 mm dia nominal bore Data derived from item no.18.12.8 of DAR Data for 10 m							
			1177.00 0	metre	217.74	256279.98	220.35	259351.95



2	100.31.2.1 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 80 mm diameter. Class II" Observed Data derived from item no.18.31.of DAR	1.000	Nos	652.74	652.74	712.15	712.15	
3	100.32.1 Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 25 mm Single acting Air Valve Observed Data derived from item no.18.59.of DAR	3.000	Nos	146.63	439.89	146.60	439.80	
4	5.2.2 Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up tot floor five level excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3( 1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	3.841	cum	11433.93	43917.73	13791.85	52974.50	
5	5.22.6 Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more	192.050	kilogram	102.61	19706.25	120.80	23199.64	
6	5.9.1 Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	19.200	sqm	350.0	6720.00	347.55	6672.96	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
49 Appendix B - (5) - Design and construction of intermediate sump at Nariyanpara								
1	2.31 Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared	225.000	sqm	15.43	3471.75	15.60	3510.00	
2	2.8.1 Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil	162.000	cum	309.95	50211.90	319.55	51767.10	



3	2.7.2 Earth work in excavation by mechanical means (Hydraulic excavator )/ manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed.Hard rock (requiring blasting)	96.000	cum	749.05	71908.80	1047.20	100531.20
4	4.1.6 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 ( 1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)	13.300	cum	7527.06	100109.90	9712.35	129174.26
5	7.1.1 Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:Cement mortar 1:6 (1 cement : 6 coarse sand)	66.500	cum	7520.41	500107.27	8030.80	534048.20
6	4.1.5 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	9.729	cum	7690.32	74819.12	9884.65	96167.76
7	5.33.2 Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.All work above plinth level upto floor V level	46.775	cum	11550.4	540269.96	13768.90	644040.30
8	5.34.1 Extra for providing richer mixes at all floor levels. Note:- Excess/less cement over the specified cement content used is payable/ recoverable separately.Providing M-30 grade concrete instead of M-25 grade BMC/RMC. (Note:- Cement content considered in M-30 is @ 340 kg/cum).	46.775	cum	85.7	4008.62	101.65	4754.68
9	5.22.6 Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more	5613.00 0	kilogram	102.61	575949.93	120.80	678050.40



10	5.9.1 Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	18.841	sqm	350.0	6594.35	347.55	6548.19
11	5.9.2 Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	141.000	sqm	748.62	105555.42	766.40	108062.40
12	5.9.3 Centering and shuttering including strutting, etc. and removal of form for:Suspended floors, roofs, landings, balconies and access platform	71.450	sqm	851.52	60841.10	907.25	64823.01
13	5.9.5 Centering and shuttering including strutting, etc. and removal of form for:Lintels, beams, plinth beams, girders bressumers and cantilevers	10.320	sqm	678.28	6999.85	731.35	7547.53
14	5.9.6 Centering and shuttering including strutting, etc. and removal of form for:Columns, Pillars, Piers, Abutments, Posts and Struts	3.600	sqm	901.48	3245.33	910.10	3276.36
15	13.7.1 12 mm cement plaster finished with a floating coat of neat cement of mix:1:3 ( 1 cement : 3 fine sand)	125.900	sqm	418.79	52725.66	486.80	61288.12
16	13.8.2 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix:1: 4 ( 1 cement : 4 fine sand)	235.622	sqm	453.75	106913.48	530.10	124903.22
17	100.41.33 Supplying and fixing 500mm dia CI manhole cover with frame( medium duty) charges including all cost, labour charges etc complete.	2.000	Nos	7835.95	15671.90	8938.60	17877.20
18	13.44.1 Finishing walls with water proofing cement paint of required shade:New work (Two or more coats applied @ 3.84 kg/10 sqm)	235.622	sqm	112.09	26410.87	121.20	28557.39
19	10.26.3 Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approves steel primer.G.I. pipes						



			83.950	kg	194.18	16301.41	201.15	16886.54
20	od149225/2018_2019	DOWEL BARS - Supplying and providing MS dowel bars of size 16 mm dia of 2m long (1m in rock and 1m in concrete ) including drilling holes of 20mm dia to a depth of 1m in rock and filling the gap with cement grout( 0.10kg/each) etc complete.						
			50.000	No	481.8	24090.00	676.55	33827.50
21	od148944/2018_2019	Supplying and fixing 100mm dia vent cowl incl. fitting charges etc. complete						
			2.000	No	3484.5	6969.00	3484.50	6969.00
22	od148945/2018_2019	Supplying & fixing wall casting pipes 300mm - 2 Nos ,150mm - 3 Nos, 80mm - 1 Nos for outlet, scour and overflow including labour charges etc. Complete and interconnecting overflow units distribution line ( rate as per order no : KWA/HO/SP-5160/2014-15/CI Specials dated 29.07.2015)						
			1.000	No	48175.54	48175.54	48175.55	48175.55
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
50	Appendix B - (6) - construction of intermediate pump house at Nariyanpara- (a) Construction of pump house							
1	2.8.1	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil						
			24.307	cum	309.95	7533.95	319.55	7767.30
2	50.2.25.1	Filling with contractor's own earth ( excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge						
			19.800	cum	548.85	10867.23	342.40	6779.52
3	7.1.1	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:Cement mortar 1:6 (1 cement : 6 coarse sand)						
			14.198	cum	7520.41	106774.78	8030.80	114021.30
4	4.1.6	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 ( 1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)						





		13.099	cum	7527.06	98596.96	9712.35	127222.07
5	50.6.1.3 Solid block masonry using pre cast solid blocks (Factory made) of size 40x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 for super structure above floor two level up to floor V level thickness 20cm and above in: CM 1:6 ( 1 cement :6 coarse sand) etc complete						
		33.406	cum	7784.73	260056.69	8495.10	283787.31
6	10.6.1 Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.80x1.25 mm M.S. laths with 1.25 mm thick top cover						
		9.000	sqm	3617.29	32555.61	4136.05	37224.45
7	10.5.1 Providing and fixing 1 mm thick M.S. sheet door with frame of 40x40x6 mm angle iron and 3 mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.Using M.S. angels 40x40x6 mm for diagonal braces						
		7.081	sqm	5440.63	38525.10	6399.50	45314.86
8	9.6.1 Providing and fixing 35 mm thick factory made laminated veneer lumber door shutter conforming to IS: 14616 and TADS 15:2001 (Part B), including ISI marked M.S.pressed butt hinges bright finished of required size with necessary screws, all complete as per directions of Engineer-in-Charge and panelling with panels of:12 mm thick plain grade- 1, medium density flat pressed three layer particle board FPT- I or graded wood particle board FPT-I, IS : 3087 marked, bonded with BWP type synthetic resin adhesive as per IS: 848:						
		1.441	sqm	3239.48	4668.09	3301.95	4758.11
9	5.1.2 Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size						
		4.628	cum	9483.15	43888.02	11828.25	54741.14
10	5.2.2 Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up tot floor five level excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3( 1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)						
		12.898	cum	11433.93	147474.83	13791.85	177887.28
11	5.22.6 Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more						



		2103.12 0	kilogram	102.61	215801.14	120.80	254056.90
12	5.9.1 Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete						
		15.900	sqm	350.0	5565.00	347.55	5526.05
13	5.9.3 Centering and shuttering including strutting, etc. and removal of form for:Suspended floors, roofs, landings, balconies and access platform						
		80.391	sqm	851.52	68454.54	907.25	72934.73
14	5.9.5 Centering and shuttering including strutting, etc. and removal of form for:Lintels, beams, plinth beams, girders bressumers and cantilevers						
		22.026	sqm	678.28	14939.80	731.35	16108.72
15	5.9.6 Centering and shuttering including strutting, etc. and removal of form for:Columns, Pillars, Piers, Abutments, Posts and Struts						
		11.520	sqm	901.48	10385.05	910.10	10484.35
16	13.7.1 12 mm cement plaster finished with a floating coat of neat cement of mix:1:3 ( 1 cement : 3 fine sand)						
		187.680	sqm	418.79	78598.51	486.80	91362.62
17	13.8.2 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix:1: 4 ( 1 cement : 4 fine sand)						
		307.362	sqm	453.75	139465.51	530.10	162932.60
18	13.44.1 Finishing walls with water proofing cement paint of required shade:New work (Two or more coats applied @ 3.84 kg/10 sqm)						
		495.043	sqm	112.09	55489.37	121.20	59999.21
19	13.50.1 Applying priming coat:With ready mixed pink or Grey primer of approved and manufacture on wood work (hard and soft wood)						
		9.000	sqm	70.13	631.17	74.75	672.75
20	13.48.3 Finishing with Deluxe Multi surface paint system for interiors and exteriors using primer as per manufacturers specifications:Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/10 sqm of approved brand and manufacture						
		15.601	sqm	154.62	2412.23	157.30	2454.04



21	13.71	Lettering with black Japan pint of approved brand and manufacture						
		1500.00 0	Letterxc m ht	5.8	8700.00	5.85	8775.00	
22	od148939/2018_2019	Providing sanitary facilities and electrical works including water closet ,flushing cistern ,wash basin,septic tank and 100ltr water tank and other required sanitary and electrical fittings.						
		1.000	No	86206.16	86206.16	89801.50	89801.50	
23	od148926/2018_2019	Dry rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:						
		6.783	cum	4957.19	33624.62	4681.30	31753.26	
24	11.21.1.1	Providing and fixing 10 mm thick acid and /or alkali resistant tiles of approved make and colour using acid and / or alkali resisting mortar bedding, and joints filled with acid and /or alkali resisting cement as per IS : 4457, complete as per the direction of Engineer-in-Charge.In flooring on a bed of 10 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)Acid and alkali resistant tile						
		4.200	sqm	1836.85	7714.77	2098.50	8813.70	
25	11.21.2.1	Providing and fixing 10 mm thick acid and /or alkali resistant tiles of approved make and colour using acid and / or alkali resisting mortar bedding, and joints filled with acid and /or alkali resisting cement as per IS : 4457, complete as per the direction of Engineer-in-Charge.In dado/ skirting on 12 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand)Acid and alkali resistant tile						
		24.040	sqm	1975.33	47486.93	2235.80	53748.63	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
51	Appendix B - (6) - construction of intermediate pump house at Nariyanpara- (b) Construction of protection wall and compound wall							
1	2.8.1	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil						
		41.400	cum	309.95	12831.93	319.55	13229.37	
2	4.1.5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)						



		5.520	cum	7690.32	42450.57	9884.65	54563.27	
3	7.1.1 Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) up to plinth level with:Cement mortar 1:6 (1 cement : 6 coarse sand)							
		33.120	cum	7520.41	249075.98	8030.80	265980.10	
4	5.2.2 Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up tot floor five level excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3( 1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)							
		3.795	cum	11433.93	43391.76	13791.85	52340.07	
5	50.2.25.1 Filling with contractor's own earth ( excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge							
		48.600	cum	548.85	26674.11	342.40	16640.64	
6	50.6.1.3 Solid block masonry using pre cast solid blocks (Factory made) of size 40x20x20cm or nearest available size confirming to IS 2185 Part I of 1979 for super structure above floor two level up to floor V level thickness 20cm and above in: CM 1:6 ( 1 cement :6 coarse sand) etc complete							
		19.201	cum	7784.73	149474.60	8495.10	163114.42	
7	13.7.2 12 mm cement plaster finished with a floating coat of neat cement of mix:1:4 ( 1 cement : 4 fine sand)							
		204.800	sqm	403.29	82593.79	468.30	95907.84	
8	50.10.1 Steel work in built up G I tubular ( round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting,fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete							
		61.621	kg	198.21	12213.90	201.90	12441.28	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
54	Appendix B - (7) - Supplying and laying 80mm GI pumping main from sump at TP to Alady Kurisumala GLSR - (a) Cost of materials							
1	od190319/2018_2019	Supply of 80mm GI pipe(m)						
			310.000	metre	830.16	257349.60	789.80	244838.00



2	od190323/2018_2019 Specials for 80mm GI pipe			1.000	set	21417.9	21417.90	21417.90	21417.90
3	100.98.428 Supply of CI Non Return Valve, Conforming to IS 5312 Part I - 1984, PN 1.6, Size 80mm.			2.000	No	5943.4	11886.80	4160.65	8321.30
4	100.98.440 Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Small Orifice Type S1, Size 25mm.			2.000	No	5636.75	11273.50	966.75	1933.50
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount	
55	Appendix B - (7) - Supplying and laying 80mm GI pumping main from sump at TP to Alady Kurisumala GLSR- (b) Working charges								
1	100.4.1 Excavating in hard rock for trenches by blasting for laying pipes and stacking useful materials for measurements and disposing unserviceable materials within the intial lead of 50m and lift upto 1.50m(intial depth 0 m to 1.50m) and providing protection by earth filled cement bags during blasting to avoid damages to nearby structures(200 Nos. of earth filled cement bags for 10m3 blasting) (Ref. Item No. 1004 A of T C)			8.000	cum	4093.4	32747.20	2547.30	20378.40
2	100.12.8 Kerala Water Authority Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 80 mm dia nominal bore Data derived from item no.18.12.8 of DAR Data for 10 m			310.000	metre	217.74	67499.40	220.35	68308.50
3	100.31.2.1 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 80 mm diameter. Class II" Observed Data derived from item no.18.31.of DAR			2.000	Nos	652.74	1305.48	712.15	1424.30
4	100.32.1 Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 25 mm Single acting Air Valve Observed Data derived from item no.18.59.of DAR			2.000	Nos	146.63	293.26	146.60	293.20



5	5.2.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3( 1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)						
		4.557	cum	11433.93	52104.42	13791.85	62849.46	
6	5.22.6	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth level Thermo - Mechanically Treated bars of grade Fe-500D or more						
		227.851	kilogram	102.61	23379.79	120.80	27524.40	
7	5.9.1	Centering and shuttering including strutting, etc. and removal of form for: Foundations, footings, bases of columns, etc for mass concrete						
		40.500	sqm	350.0	14175.00	347.55	14075.78	
8	od1153/2019_2020	DOWEL BARS - Supplying and providing MS dowel bars of size 16 mm dia of 2m long (1m in rock and 1m in concrete ) including drilling holes of 20mm dia to a depth of 1m in rock and filling the gap with cement grout( 0.10kg/each) etc complete.						
		200.000	No	481.8	96360.00	676.55	135310.00	
9	od1154/2019_2020	80mm GI pipes by cutting and jointing by three run welding to make a water tight joint, painting the welded portion, testing the line to the required pressure, including the charges hire and conveyance of tools, plant and materials to site, as per the direction of departmental officers etc. complete.						
		45.000	No	468.28	21072.60	768.40	34578.00	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
62 Appendix B - (8)- Line charging, stabilization & interconnection								
No Specifications added under this Estimate								
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
64	Appendix B - (8)- Line charging, stabilization & interconnection - (a) Interconnection work of Distribution Zone I from T P sump using 200 mm D I K9 Pipe							
1	100.1.1	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : All kinds of soil (Ref. Item No. 2.10.1 of DSR)						



		67.200	cum	579.85	38965.92	592.25	39799.20
2	100.1.5 Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :" Ordinary Rock. (Ref. Item No. 2.13.1 of DSR)						
		19.201	cum	842.1	16169.16	1033.20	19838.47
3	100.2.1 Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 m <sup>2</sup> on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m. Medium Rock (Requiring Blasting) New Data derived from Item No.2.9.2 of DAR.						
		6.721	cum	749.12	5034.84	1021.25	6863.82
4	100.1.13 "Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : Hard Rock(Blasting Prohibited) (Ref. Item No. 2.13.3 Of DSR)						
		2.880	cum	1624.48	4678.50	2180.20	6278.98
5	100.8.1 Fencing one side of trenches, 1.50 m height with two rows of 10 cm plastic caution tape in vertical casuarina pole (girth 15cm to 24cm) fixed at 2 m intervals. (Data Prepared based on PWD SDB - Item No.1009)						
		100.000	metre	28.82	2882.00	29.10	2910.00
6	50.2.25.1 Filling with contractor's own earth ( excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge						
		5.000	cum	548.85	2744.25	342.40	1712.00
7	100.14.3 Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 200 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.17 in DAR						
		100.000	metre	127.45	12745.00	119.25	11925.00



8	18.70.3 Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:200 mm dia pipes	20.000	joint	270.11	5402.20	274.60	5492.00
9	18.30.5 Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:200 mm diameter pipe	3.000	Nos	436.83	1310.49	510.85	1532.55
10	18.67.1 Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Upto 300 mm dia	0.960	quintal	14708.65	14120.30	14043.50	13481.76
11	18.25.1 Providing and laying S & S C.I standard specials such as tees, bends, collars, tapers, caps etc. (Heavy class):Upto 300 mm dia	0.930	quintal	6536.99	6079.40	7875.95	7324.63
12	18.83.5 Labour for cutting C.I. pipe with steel saw.200 mm diameter C.I. pipe	7.000	Each Cut	449.57	3146.99	464.85	3253.95
13	100.35.3 Testing 200mm DI/CI pipeline with potable water to the required test pressure 200 mm dia Observed Data derived from item no.1020 of PHED DATA	100.000	metre	41.56	4156.00	43.50	4350.00
14	4.1.3 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	3.000	cum	8340.93	25022.79	10609.70	31829.10
15	5.9.1 Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	12.000	sqm	350.0	4200.00	347.55	4170.60





16	100.31.1.5 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 200 mm diameter. Class I" Data derived from item no.18.31.4.1 of DAR	1.000	Nos	1625.9	1625.90	1770.80	1770.80	
17	100.32.3 Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 50 mm Double acting Air Valve Data derived from item no.18.59.1 of DAR	2.000	Nos	229.21	458.42	259.35	518.70	
18	od190175/2018_2019 Construction of RCC valve chamber of size 1mx1mx1m -cost excavation work,75mm thick M10 concrete base,125mm side wall,150mm bottom and cover slab of chamber with M20 concrete with reinforcement including plastering inside and out side of wall.etc.complete.including man hole cover.	1.000	No	42076.66	42076.66	47834.95	47834.95	
19	100.98.117 Supply of DI K9 Pipe Conforming to IS 8329/2000, 200mm Dia.	100.000	metre	2589.08	258908.00	2462.40	246240.00	
20	100.98.435 Supply of CI Air Valve, Conforming to IS 14848 - 2000, Kinetic Air Valve Type DK, Size 50mm.	2.000	No	7951.65	15903.30	3600.75	7201.50	
21	100.98.461 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 200mm.	1.000	No	23723.65	23723.65	11794.00	11794.00	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
65	Appendix B - (8)- Line charging, stabilization& interconnection- (b) Interconnection work to Zone 1A-Marykulam using 80 mm G I pipe							
1	100.12.8 Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 80 mm dia nominal bore Data derived from item no.18.12.8 of DAR Data for 10 m	250.000	metre	217.74	54435.00	220.35	55087.50	



2	100.31.1.1 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) :80 mm diameter. Class I" Observed Data derived from item no.18.31.of DAR	1.000	Nos	613.74	613.74	673.30	673.30	
3	od190319/2018_2019 Supply of 80mm GI pipe(m)	250.000	metre	830.16	207540.00	789.80	197450.00	
4	od3655/2019_2020 Specials for 80 mm GI(m) pipe - 10 % of value of pipe supply.	1.000	set	17272.5	17272.50	17272.50	17272.50	
5	100.98.457 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 80mm.	1.000	No	6624.05	6624.05	3131.05	3131.05	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
66	Appendix B - (8)- Line charging, stabilization& interconnection - (c)- Interconnection work to Labbakada Tank using 150 mm D I K9 Pipe for Pumping main							
1	100.1.1 Kerala Water Authority Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidatingeach deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : All kinds of soil (Ref. Item No. 2.10.1 of DSR)	115.920	cum	579.85	67216.21	592.25	68653.62	
2	100.1.5 Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidatingeach deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :" Ordinary Rock. (Ref. Item No. 2.13.1 of DSR)	33.120	cum	842.1	27890.35	1033.20	34219.58	



3	100.2.1 Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 m <sup>2</sup> on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m. Medium Rock (Requiring Blasting) New Data derived from Item No.2.9.2 of DAR.	11.592	cum	749.12	8683.80	1021.25	11838.33
4	100.1.13 "Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : Hard Rock(Blasting Prohibited) (Ref. Item No. 2.13.3 Of DSR)	4.968	cum	1624.48	8070.42	2180.20	10831.23
5	100.8.1 Fencing one side of trenches, 1.50 m height with two rows of 10 cm plastic caution tape in vertical casuarina pole (girth 15cm to 24cm) fixed at 2 m intervals. (Data Prepared based on PWD SDB - Item No.1009)	180.000	metre	28.82	5187.60	29.10	5238.00
6	50.2.25.1 Filling with contractor's own earth ( excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge	5.000	cum	548.85	2744.25	342.40	1712.00
7	100.14.2 Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 150 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.16 in DAR	180.000	metre	91.5	16470.00	86.65	15597.00
8	18.70.2 Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:150 mm dia pipes	28.000	joint	184.13	5155.64	185.60	5196.80
9	18.30.4 Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:150 mm diameter pipe	7.000	Nos	402.3	2816.10	499.20	3494.40



10	18.67.1	Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Upto 300 mm dia						
		0.310	quintal	14708.65	4559.68	14043.50	4353.49	
11	18.66.1	Providing and laying S&S.C.I Standard specials such as tees, bends, collars tapers and caps etc., suitable for flanged jointing as per IS: 1538:Upto 300 mm dia						
		2.120	quintal	9150.76	19399.61	8747.05	18543.75	
12	18.83.4	Labour for cutting C.I. pipe with steel saw.150 mm diameter C.I. pipe						
		8.000	Each Cut	337.12	2696.96	348.55	2788.40	
13	100.35.2	Testing 150mm DI/CI pipeline with potable water to the required test pressure 150 mm dia Observed Data derived from item no.1018 of PHED DATA						
		180.000	metre	32.88	5918.40	34.20	6156.00	
14	100.98.116	Supply of DI K9 Pipe Conforming to IS 8329/2000, 150mm Dia.						
		180.000	metre	1890.44	340279.20	1800.35	324063.00	
Sl No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
67		Appendix B - (8)- Line charging, stabilization & interconnection - (d) Interconnection work to distribution line at Labbakada using 250 mm D I k9 pipe						
1	100.1.1	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : All kinds of soil (Ref. Item No. 2.10.1 of DSR)						
		67.200	cum	579.85	38965.92	592.25	39799.20	
2	100.1.5	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :" Ordinary Rock. (Ref. Item No. 2.13.1 of DSR)						
		19.201	cum	842.1	16169.16	1033.20	19838.47	



3	100.2.1 Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 m <sup>2</sup> on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m. Medium Rock (Requiring Blasting) New Data derived from Item No.2.9.2 of DAR.	6.721	cum	749.12	5034.84	1021.25	6863.82
4	100.1.13 "Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : Hard Rock(Blasting Prohibited) (Ref. Item No. 2.13.3 Of DSR)	2.880	cum	1624.48	4678.50	2180.20	6278.98
5	100.8.1 Fencing one side of trenches, 1.50 m height with two rows of 10 cm plastic caution tape in vertical casuarina pole (girth 15cm to 24cm) fixed at 2 m intervals. (Data Prepared based on PWD SDB - Item No.1009)	100.000	metre	28.82	2882.00	29.10	2910.00
6	50.2.25.1 Filling with contractor's own earth ( excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge	5.000	cum	548.85	2744.25	342.40	1712.00
7	100.14.4 Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 250 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.18 in DAR	100.000	metre	170.19	17019.00	158.35	15835.00
8	18.70.4 Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:250 mm dia pipes	18.000	joint	329.84	5937.12	328.70	5916.60
9	18.30.6 Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:250 mm diameter pipe	5.000	Nos	595.56	2977.80	727.55	3637.75



10	18.67.1 Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Upto 300 mm dia	0.720	quintal	14708.65	10590.23	14043.50	10111.32
11	18.66.1 Providing and laying S&S.C.I Standard specials such as tees, bends, collars tapers and caps etc., suitable for flanged jointing as per IS: 1538:Upto 300 mm dia	1.360	quintal	9150.76	12445.03	8747.05	11895.99
12	18.83.6 Labour for cutting C.I. pipe with steel saw.250 mm diameter C.I. pipe	5.000	Each Cut	559.11	2795.55	578.20	2891.00
13	100.35.4 Testing 250mm DI/CI pipeline with potable water to the required test pressure . 250 mm dia Observed Data derived from item no.1022 of PHED DATA	100.000	metre	52.99	5299.00	55.60	5560.00
14	100.31.1.6 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 250 mm diameter. Class I" Data derived from item no.18.31.5.1 of DAR	1.000	Nos	2304.82	2304.82	2564.25	2564.25
15	100.32.3 Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 50 mm Double acting Air Valve Data derived from item no.18.59.1 of DAR	1.000	Nos	229.21	229.21	259.35	259.35
16	100.98.118 Supply of DI K9 Pipe Conforming to IS 8329/2000, 250mm Dia.	100.000	metre	3616.52	361652.00	3438.05	343805.00
17	100.98.462 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 250mm.	1.000	No	34361.8	34361.80	18345.20	18345.20
18	100.98.444 Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Large Orifice Type S2, Size 50mm.						



SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
68 Appendix B - (8)- Line charging, stabilization& interconnection - (e) Interconnection to Kochuthovala Gravity main using 125 mm G I pipe			1.000	No	6110.65	6110.65	1760.95	1760.95
1	100.12.10	"Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 125 mm dia nominal bore Observed Data derived from item no.18.12 of DAR	100.000	metre	274.99	27499.00	277.80	27780.00
2	4.1.3	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	2.049	cum	8340.93	17090.57	10609.70	21739.28
3	5.9.1	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	10.241	sqm	350.0	3584.35	347.55	3559.26
4	od189995/2018_2019	Supplying 125mm GI(m) pipe	100.000	metre	1434.45	143445.00	1434.45	143445.00
5	od3663/2019_2020	Specials for 125 mm GI(m) pipe - 10 % of value of pipe supply.	1.000	set	14345.0	14345.00	14345.00	14345.00
69 Appendix B - (8)- Line charging, stabilization& interconnection - (f) Interconnection work to Distribution from Kochuthovala G L tank using 200 mm D I pipe			67.200	cum	579.85	38965.92	592.25	39799.20
1	100.1.1	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidatingeach deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : All kinds of soil (Ref. Item No. 2.10.1 of DSR)	67.200	cum	579.85	38965.92	592.25	39799.20



2	100.1.5 Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :" Ordinary Rock. (Ref. Item No. 2.13.1 of DSR)	19.201	cum	842.1	16169.16	1033.20	19838.47
3	100.2.1 Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 m <sup>2</sup> on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m. Medium Rock (Requiring Blasting) New Data derived from Item No.2.9.2 of DAR.	6.721	cum	749.12	5034.84	1021.25	6863.82
4	100.1.13 "Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : Hard Rock(Blasting Prohibited) (Ref. Item No. 2.13.3 Of DSR)	2.880	cum	1624.48	4678.50	2180.20	6278.98
5	100.8.1 Fencing one side of trenches, 1.50 m height with two rows of 10 cm plastic caution tape in vertical casuarina pole (girth 15cm to 24cm) fixed at 2 m intervals. (Data Prepared based on PWD SDB - Item No.1009)	100.000	metre	28.82	2882.00	29.10	2910.00
6	50.2.25.1 Filling with contractor's own earth ( excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge	5.000	cum	548.85	2744.25	342.40	1712.00
7	100.14.3 Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 200 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.17 in DAR	100.000	metre	127.45	12745.00	119.25	11925.00





8	18.70.3 Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:200 mm dia pipes	18.000	joint	270.11	4861.98	274.60	4942.80
9	18.30.5 Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:200 mm diameter pipe	4.000	Nos	436.83	1747.32	510.85	2043.40
10	18.67.1 Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Upto 300 mm dia	0.540	quintal	14708.65	7942.67	14043.50	7583.49
11	18.66.1 Providing and laying S&S.C.I Standard specials such as tees, bends, collars tapers and caps etc., suitable for flanged jointing as per IS: 1538:UPto 300 mm dia	1.960	quintal	9150.76	17935.49	8747.05	17144.22
12	18.83.5 Labour for cutting C.I. pipe with steel saw.200 mm diameter C.I. pipe	5.000	Each Cut	449.57	2247.85	464.85	2324.25
13	100.35.3 Testing 200mm DI/CI pipeline with potable water to the required test pressure 200 mm dia Observed Data derived from item no.1020 of PHED DATA	100.000	metre	41.56	4156.00	43.50	4350.00
14	4.1.3 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	4.000	cum	8340.93	33363.72	10609.70	42438.80
15	5.9.1 Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete	16.000	sqm	350.0	5600.00	347.55	5560.80



16	od192891/2018_2019 Construction of RCC valve chamber of size 1mx1mx1.4 m cost of excavation work,75mm thick M10 concrete base,150 mm side wall,150mm bottom and cover slab of chamber with M20 concrete with reinforcement including plastering inside and out side of wall.etc.complete.		1.000	No	42969.05	42969.05	49377.30	49377.30
17	100.31.1.5 "Conveying and fixing C.I. sluice valves (with cap) by providing complete with bolts, nuts, rubber insertions etc. excluding the cost of valve (the tail pieces if required will be paid separately) : 200 mm diameter. Class I" Data derived from item no.18.31.4.1 of DAR		1.000	Nos	1625.9	1625.90	1770.80	1770.80
18	100.32.1 Conveying and fixing C I Single acting Air Valve of approved quality with bolts,nuts,rubber insertions etc . excluding the cost of air valve(the tail pieces if required will be paid seperately): 25 mm Single acting Air Valve Observed Data derived from item no.18.59.of DAR		1.000	Nos	146.63	146.63	146.60	146.60
19	100.98.117 Supply of DI K9 Pipe Conforming to IS 8329/2000, 200mm Dia.		100.000	metre	2589.08	258908.00	2462.40	246240.00
20	100.98.461 Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 200mm.		1.000	No	23723.65	23723.65	11794.00	11794.00
21	100.98.440 Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Small Orifice Type S1, Size 25mm.		1.000	No	5636.75	5636.75	966.75	966.75
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
70	Appendix B - (8)- Line charging, stabilization& interconnection- (g) Interconnection between Idukkikavala to Market junction Kattappana							
1	100.12.10 "Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 125 mm dia nominal bore Observed Data derived from item no.18.12 of DAR		950.000	metre	274.99	261240.50	277.80	263910.00



2	15.2.1 Demolishing cement concrete manually / by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in-Charge.Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	90.000	cum	2134.72	192124.80	2162.25	194602.50	
3	4.1.3 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	94.320	cum	8340.93	786716.52	10609.70	1000706.90	
4	od189995/2018_2019 Supplying 125mm GI(m) pipe	950.000	metre	1434.45	1362727.50	1434.45	1362727.50	
5	od3664/2019_2020 Specials for 125 mm GI(m) pipe - 10 % of value of pipe supply.	1.000	set	136277.5	136277.50	136277.50	136277.50	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
71	Appendix B - (8)- Line charging, stabilization& interconnection - (h) Gap filling works at various places of distribution system							
1	100.12.6 Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 50 mm dia nominal bore Observed Data derived from item no.18.12.6 of DAR Data for 10 m	300.000	metre	174.65	52395.00	176.90	53070.00	
2	100.12.7 Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 65 mm dia nominal bore Data derived from item no.18.12.7 of DAR Data for 10 m	450.000	metre	217.39	97825.50	220.35	99157.50	
3	100.12.8 Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 80 mm dia nominal bore Data derived from item no.18.12.8 of DAR Data for 10 m							



		600.000	metre	217.74	130644.00	220.35	132210.00
4	100.12.9 Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 100 mm dia nominal bore Observed Data derived from item no.18.12 of DAR						
		300.000	metre	245.48	73644.00	248.15	74445.00
5	100.12.10 "Conveying and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. but excluding cost of pipes and fittings - External work. 125 mm dia nominal bore Observed Data derived from item no.18.12 of DAR						
		150.000	metre	274.99	41248.50	277.80	41670.00
6	5.1.3 Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 ( 1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)						
		5.760	cum	8964.72	51636.79	11245.05	64771.49
7	od189999/2018_2019 Supply of 50mm GI pipe (M).						
		300.000	metre	509.59	152877.00	476.20	142860.00
8	od190454/2018_2019 Supply 65 mm GI pipe(m) as per direction						
		450.000	metre	649.33	292198.50	604.00	271800.00
9	od190319/2018_2019 Supply of 80mm GI pipe(m)						
		600.000	metre	830.16	498096.00	789.80	473880.00
10	od190456/2018_2019 Supply of 100 mm GI(m) pipe						
		300.000	metre	1052.32	315696.00	1052.30	315690.00
11	od189995/2018_2019 Supplying 125mm GI(m) pipe						
		150.000	metre	1434.45	215167.50	1434.45	215167.50



12	od269/2019_2020 Specials for GI (m) pipes- KIIFB Ayyappancovil Gap filling works - 50mm, 65mm, 80mm, 100mm, 125mm GI(m) pipes.						
			1.000	set	128868.0	128868.00	128868.00
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate
72	Appendix B - (8)- Line charging, stabilization& interconnection - (i) Leak rectification works in distribution system in Zone I, II, III, IV & VI						
1	100.47.1.3	Leak rectification work in 50 mm PVC (Class 2 to 6) pipe line including detecting and locating leak, earth work excavation in all kinds of soil for for exposing leak portion of the pipe including tar cutting / concrete cutting, cutting the pipe diametrically perpendicular to the axis of pipe line with out causing any damages to the remaining portion, dismantling and lifting the pipe from trenches, smoothening the cut ends, conveying the new pipe to the site, cutting and lowering new pipe in to the trenches,placing in position aligning the pipe to line and level and jointing the new pipe with the existing pipe with solvent cement or or any available joint and testing the pipe line by operating the valves concerned, and rectifying the defects if noticed and without causing any damages to the existing utilities and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, charges for removing surplus soil from work site, including hire for tools and plant, conveyance of tools and materials, bailing out water, providing caution boards,lighting,watching, ribbon fencing, traffic controlling etc.complete as per the direction of Departmental officers including the cost of pipe and PVC specials; PVC Pipes and specials shall be of good quality and conforming to relevant standards: All Socketed Jointing.					
			20.000	Leak	1399.52	27990.40	1417.85
2	100.47.1.4	Leak rectification work in 63 mm PVC (Class 2 to 6) pipe line including detecting and locating leak, earth work excavation in all kinds of soil for for exposing leak portion of the pipe including tar cutting / concrete cutting, cutting the pipe diametrically perpendicular to the axis of pipe line with out causing any damages to the remaining portion, dismantling and lifting the pipe from trenches, smoothening the cut ends, conveying the new pipe to the site, cutting and lowering new pipe in to the trenches,placing in position aligning the pipe to line and level and jointing the new pipe with the existing pipe with solvent cement or or any available joint and testing the pipe line by operating the valves concerned, and rectifying the defects if noticed and without causing any damages to the existing utilities and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, charges for removing surplus soil from work site, including hire for tools and plant, conveyance of tools and materials, bailing out water, providing caution boards,lighting,watching, ribbon fencing, traffic controlling etc.complete as per the direction of Departmental officers including the cost of pipe and PVC specials; PVC Pipes and specials shall be of good quality and conforming to relevant standards: All Socketed Jointing.					
			30.000	Leak	1692.18	50765.40	1711.40
							51342.00



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3	100.47.1.5	Leak rectification work in 75 mm PVC (Class 2 to 6) pipe line including detecting and locating leak, earth work excavation in all kinds of soil for for exposing leak portion of the pipe including tar cutting / concrete cutting, cutting the pipe diametrically perpendicular to the axis of pipe line with out causing any damages to the remaining portion, dismantling and lifting the pipe from trenches, smoothening the cut ends, conveying the new pipe to the site, cutting and lowering new pipe in to the trenches,placing in position aligning the pipe to line and level and jointing the new pipe with the existing pipe with solvent cement or or any available joint and testing the pipe line by operating the valves concerned, and rectifying the defects if noticed and without causing any damages to the existing utilities and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, charges for removing surplus soil from work site, including hire for tools and plant, conveyance of tools and materials, bailing out water, providing caution boards,lighting,watching, ribbon fencing, traffic controlling etc.complete as per the direction of Departmental officers including the cost of pipe and PVC specials; PVC Pipes and specials shall be of good quality and conforming to relevant standards; PVC Pipes and specials shall be of good quality and conforming to relevant standards: All Socketed Jointing.		15.000	Leak	1817.26	27258.90	1837.20	27558.00
4	100.47.1.6	Leak rectification work in 90 mm PVC (Class 2 to 6) pipe line including detecting and locating leak, earth work excavation in all kinds of soil for for exposing leak portion of the pipe including tar cutting / concrete cutting, cutting the pipe diametrically perpendicular to the axis of pipe line with out causing any damages to the remaining portion, dismantling and lifting the pipe from trenches, smoothening the cut ends, conveying the new pipe to the site, cutting and lowering new pipe in to the trenches,placing in position aligning the pipe to line and level and jointing the new pipe with the existing pipe with solvent cement or or any available joint and testing the pipe line by operating the valves concerned, and rectifying the defects if noticed and without causing any damages to the existing utilities and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, charges for removing surplus soil from work site, including hire for tools and plant, conveyance of tools and materials, bailing out water, providing caution boards,lighting,watching, ribbon fencing, traffic controlling etc.complete as per the direction of Departmental officers including the cost of pipe and PVC specials; PVC Pipes and specials shall be of good quality and conforming to relevant standards: All Socketed Jointing.		15.000	Leak	2046.8	30702.00	2060.20	30903.00



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5	100.47.2.1	Leak rectification work in 90 mm PVC (Class 2 to 6) pipe line including detecting and locating leak, earth work excavation in all kinds of soil for for exposing leak portion of the pipe including tar cutting / concrete cutting, cutting the pipe diametrically perpendicular to the axis of pipe line with out causing any damages to the balance portion, dismantling and lifting the pipe from trenches, smoothening the cut ends, conveying the new pipe, cutting and lowering new pipe in to the trenches,placing in position aligning the pipe to line and level and jointing the new pipe with the existing pipe with solvent cement or repairable joint and testing the pipe line by operating the valves concerned, and rectifying the defects if noticed and refilling the trenches in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, charges for removing surplus soil from work site without causing any damages to the existing utilities, including hire for tools and plant, conveyance of tools and materials, bailing out water, providing caution boards,lighting, ribbon fencing, watching, traffic control etc.complete as per the direction of Departmental officers, including the cost of pipe & specials but excluding the cost of CIR Joints; PVC Pipes and specials shall be of good quality and conforming to relevant standards: Socket & CIR Jointing.		7.000	Leak	2294.7	16062.90	2317.85	16224.95
6	100.47.2.2	Leak rectification work in 110 mm PVC (Class 2 to 6) pipe line including detecting and locating leak, earth work excavation in all kinds of soil for for exposing leak portion of the pipe including tar cutting / concrete cutting, cutting the pipe diametrically perpendicular to the axis of pipe line with out causing any damages to the balance portion, dismantling and lifting the pipe from trenches, smoothening the cut ends, conveying the new pipe, cutting and lowering new pipe in to the trenches,placing in position aligning the pipe to line and level and jointing the new pipe with the existing pipe with solvent cement or repairable joint and testing the pipe line by operating the valves concerned, and rectifying the defects if noticed and refilling the trenches in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, charges for removing surplus soil from work site without causing any damages to the existing utilities, including hire for tools and plant, conveyance of tools and materials, bailing out water, providing caution boards,lighting, ribbon fencing, watching, traffic control etc.complete as per the direction of Departmental officers, including the cost of pipe & specials but excluding the cost of CIR Joints; PVC Pipes and specials shall be of good quality and conforming to relevant standards: Socket & CIR Jointing.		10.000	Leak	2679.96	26799.60	2702.20	27022.00
7	100.47.2.3	Leak rectification work in 140 mm PVC (Class 2 to 6) pipe line including detecting and locating leak, earth work excavation in all kinds of soil for for exposing leak portion of the pipe including tar cutting / concrete cutting, cutting the pipe diametrically perpendicular to the axis of pipe line with out causing any damages to the balance portion, dismantling and lifting the pipe from trenches, smoothening the cut ends, conveying the new pipe, cutting and lowering new pipe in to the trenches,placing in position aligning the pipe to line and level and jointing the new pipe with the existing pipe with solvent cement or repairable joint and testing the pipe line by operating the valves concerned, and rectifying the defects if noticed and refilling the trenches in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, charges for removing surplus soil from work site without causing any damages to the existing utilities, including hire for tools and plant, conveyance of tools and materials, bailing out water, providing caution boards,lighting, ribbon fencing, watching, traffic control etc.complete as per the direction of Departmental officers, including the cost of pipe & specials but excluding the cost of CIR Joints; PVC Pipes and specials shall be of good quality and conforming to relevant standards: Socket & CIR Jointing.							



		10.000	Leak	3225.99	32259.90	3250.70	32507.00
8	100.47.2.4 Leak rectification work in 160 mm PVC (Class 2 to 6) pipe line including detecting and locating leak, earth work excavation in all kinds of soil for exposing leak portion of the pipe including tar cutting / concrete cutting, cutting the pipe diametrically perpendicular to the axis of pipe line with out causing any damages to the balance portion, dismantling and lifting the pipe from trenches, smoothing the cut ends, conveying the new pipe, cutting and lowering new pipe in to the trenches, placing in position aligning the pipe to line and level and jointing the new pipe with the existing pipe with solvent cement or repairable joint and testing the pipe line by operating the valves concerned, and rectifying the defects if noticed and refilling the trenches in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, charges for removing surplus soil from work site without causing any damages to the existing utilities, including hire for tools and plant, conveyance of tools and materials, bailing out water, providing caution boards, lighting, ribbon fencing, watching, traffic control etc. complete as per the direction of Departmental officers, including the cost of pipe & specials but excluding the cost of CIR Joints; PVC Pipes and specials shall be of good quality and conforming to relevant standards: Socket & CIR Jointing.						
		56.000	Leak	3690.21	206651.76	3717.85	208199.60
9	100.49.1.2 Rectification of joint leakages in 150mm DI Pipe (cutting, removing and laying back a length of 1.0m from one side of the joint) including earth work excavation in all kinds of soil for exposing leak portion of the pipe including tar cutting / concrete cutting, by cutting and removing a portion of pipe from the damaged joint without causing any damages to the remaining portion of the line and specials and replacing the pipe with mechanical and tyton joint after cleaning the ends, centering the pipe, providing the joints, testing the line to the required test pressure, rectifying any defects noticed and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, removing the surplus soil from the work site, without causing any damages to any other utilities, including the charges of hire and conveyance of tools, plants and materials to the leak site, bailing out water, lighting, watching, ribbon fencing, caution boards, traffic diversion but excluding cost of mechanical joint and as per the direction of departmental officers etc. complete.						
		5.000	Leak	5858.48	29292.40	5953.75	29768.75
10	100.49.1.3 Rectification of joint leakages in 200mm DI Pipe (cutting, removing and laying back a length of 1.0m from one side of the joint) including earth work excavation in all kinds of soil for exposing leak portion of the pipe including tar cutting / concrete cutting, by cutting and removing a portion of pipe from the damaged joint without causing any damages to the remaining portion of the line and specials and replacing the pipe with mechanical and tyton joint after cleaning the ends, centering the pipe, providing the joints, testing the line to the required test pressure, rectifying any defects noticed and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, removing the surplus soil from the work site, without causing any damages to any other utilities, including the charges of hire and conveyance of tools, plants and materials to the leak site, bailing out water, lighting, watching, ribbon fencing, caution boards, traffic diversion but excluding cost of mechanical joint and as per the direction of departmental officers etc. complete.						
		3.000	Leak	6986.86	20960.58	7097.35	21292.05





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11	<p>100.49.1.4 Rectification of joint leakages in 250mm DI Pipe (cutting, removing and laying back a length of 1.0m from one side of the joint) including earth work excavation in all kinds of soil for exposing leak portion of the pipe including tar cutting / concrete cutting, by cutting and removing a portion of pipe from the damaged joint without causing any damages to the remaining portion of the line and specials and replacing the pipe with mechanical and tyton joint after cleaning the ends, centering the pipe, providing the joints, testing the line to the required test pressure, rectifying any defects noticed and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, removing the surplus soil from the work site, without causing any damages to any other utilities, including the charges of hire and conveyance of tools, plants and materials to the leak site, bailing out water, lighting, watching, ribbon fencing, caution boards, traffic diversion but excluding cost of mechanical joint and as per the direction of departmental officers etc. complete.</p>	3.000	Leak	7912.5	23737.50	8027.10	24081.30
12	<p>100.49.1.5 Rectification of joint leakages in 300mm DI Pipe (cutting, removing and laying back a length of 1.0m from one side of the joint) including earth work excavation in all kinds of soil for exposing leak portion of the pipe including tar cutting / concrete cutting, by cutting and removing a portion of pipe from the damaged joint without causing any damages to the remaining portion of the line and specials and replacing the pipe with mechanical and tyton joint after cleaning the ends, centering the pipe, providing the joints, testing the line to the required test pressure, rectifying any defects noticed and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, removing the surplus soil from the work site, without causing any damages to any other utilities, including the charges of hire and conveyance of tools, plants and materials to the leak site, bailing out water, lighting, watching, ribbon fencing, caution boards, traffic diversion but excluding cost of mechanical joint and as per the direction of departmental officers etc. complete.</p>	1.000	Leak	8846.13	8846.13	8972.00	8972.00
13	<p>100.50.1.1 Rectification of leakages of 32 mm, 40mm &amp; 50mm GI Pipes by replacing lengths up to 1.0m including earth work excavation in all kindss of soil for exposing leak portion of the pipe including tar / concrete cutting, by cutting, removing and stacking the damaged portion from the existing line without causing any damages to the remaining portion and specials and conveying and replacing with GI Pipes of suitable size and jointing by thraded coupler and union of suitable size including threading, alignment, laying and jointing to make a water tight joint, testing the line to the required pressure, rectifying any defects noticed and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, removing the surplus soil from the work site, without causing any damages to any other utilities, including the charges hire and conveyance of tools, plant and materials to the leak site, bailing out water, lighting, watching, ribbon fencing, caution boards, traffic diversion, including the cost of specials but excluding cost of pipe and as per the direction of departmental officers etc. complete.</p>	40.000	Leak	2279.32	91172.80	2299.65	91986.00



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14	<p>100.50.1.2                  Rectification of leakages of 65 mm GI Pipes by replacing lengths up to 1.0m including earth work excavation in all kindss of soil for exposing leak portion of the pipe including tar / concrete cutting, by cutting, removing and stacking the damaged portion from the existing line without causing any damages to the remaining portion and specials and conveying and replacing with GI Pipes of suitable size and jointing by thraded coupler and union of suitable size including threading, alignment, laying and jointing to make a water tight joint, testing the line to the required pressure, rectifying any defects noticed and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, removing the surplus soil from the work site, without causing any damages to any other utilities, including the charges hire and conveyance of tools, plant and materials to the leak site, bailing out water, lighting, watching, ribbon fencing, caution boards, traffic diversion, including the cost of specials but excluding cost of pipe and as per the direction of departmental officers etc. complete.</p>	25.000	Leak	3251.11	81277.75	3268.35	81708.75
15	<p>100.50.1.3                  Rectification of leakages of 80 mm GI Pipes by replacing lengths up to 1.0m including earth work excavation in all kindss of soil for exposing leak portion of the pipe including tar / concrete cutting, by cutting, removing and stacking the damaged portion from the existing line without causing any damages to the remaining portion and specials and conveying and replacing with GI Pipes of suitable size and jointing by thraded coupler and union of suitable size including threading, alignment, laying and jointing to make a water tight joint, testing the line to the required pressure, rectifying any defects noticed and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, removing the surplus soil from the work site, without causing any damages to any other utilities, including the charges hire and conveyance of tools, plant and materials to the leak site, bailing out water, lighting, watching, ribbon fencing, caution boards, traffic diversion, including the cost of specials but excluding cost of pipe and as per the direction of departmental officers etc. complete.</p>	16.000	Leak	3630.4	58086.40	3807.85	60925.60
16	<p>100.50.1.4                  Rectification of leakages of 100 mm GI Pipes by replacing lengths up to 1.0m including earth work excavation in all kindss of soil for exposing leak portion of the pipe including tar / concrete cutting, by cutting, removing and stacking the damaged portion from the existing line without causing any damages to the remaining portion and specials and conveying and replacing with GI Pipes of suitable size and jointing by thraded coupler and union of suitable size including threading, alignment, laying and jointing to make a water tight joint, testing the line to the required pressure, rectifying any defects noticed and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, removing the surplus soil from the work site, without causing any damages to any other utilities, including the charges hire and conveyance of tools, plant and materials to the leak site, bailing out water, lighting, watching, ribbon fencing, caution boards, traffic diversion, including the cost of specials but excluding cost of pipe and as per the direction of departmental officers etc. complete.</p>	5.000	Leak	3728.38	18641.90	3794.70	18973.50



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17	100.50.1.5 Rectification of leakages of 125 mm GI Pipes by replacing lengths up to 1.0m including earth work excavation in all kindss of soil for exposing leak portion of the pipe including tar / concrete cutting, by cutting, removing and stacking the damaged portion from the existing line without causing any damages to the remaining portion and specials and conveying and replacing with GI Pipes of suitable size and jointing by thraded coupler and union of suitable size including threading, alignment, laying and jointing to make a water tight joint, testing the line to the required pressure, rectifying any defects noticed and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, removing the surplus soil from the work site, without causing any damages to any other utilities, including the charges hire and conveyance of tools, plant and materials to the leak site, bailing out water, lighting, watching, ribbon fencing, caution boards, traffic diversion, including the cost of specials but excluding cost of pipe and as per the direction of departmental officers etc. complete.	6.000	Leak	4314.97	25889.82	4390.55	26343.30
18	100.50.1.6 Rectification of leakages of 150 mm GI Pipes by replacing lengths up to 1.0m including earth work excavation in all kindss of soil for exposing leak portion of the pipe including tar / concrete cutting, by cutting, removing and stacking the damaged portion from the existing line without causing any damages to the remaining portion and specials and conveying and replacing with GI Pipes of suitable size and jointing by thraded coupler and union of suitable size including threading, alignment, laying and jointing to make a water tight joint, testing the line to the required pressure, rectifying any defects noticed and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, removing the surplus soil from the work site, without causing any damages to any other utilities, including the charges hire and conveyance of tools, plant and materials to the leak site, bailing out water, lighting, watching, ribbon fencing, caution boards, traffic diversion, including the cost of specials but excluding cost of pipe and as per the direction of departmental officers etc. complete.	4.000	Leak	4938.51	19754.04	5024.05	20096.20
19	100.37.3 Welding MS sheet, pipe and special by gas or electric plant for three run welding including cost of welding rod / gas, all labour and hire charges of tools etc complete.	1789.80 0	cm	12.45	22283.01	21.75	38928.15
20	100.58.1 Rectifying the leakages in vertical pipe of public tap connection including earth work excavation in all kinds of soil for exposing the pipeline including concrete / tar cutting,cutting and removing damaged portion of pipe, fixing new 20/25 mm GI pipe and specials in place of damaged portion of pipe and connecting with existing pipe line,testing the line to the required pressure, rectifying any defects noticed and refilling the trenches using excavated earth in layers not exceeding 20cm depth including consolidating each layers by ramming, watering, removing the surplus soil from the work site, without causing any damages to any other utilities, including the charges of hire and conveyance of tools, plants and materials to the leak site, bailing out water, lighting, watching, ribbon fencing, caution boards, traffic diversion, including cost of pipe and specials and as per the direction of departmental officers etc. complete.	10.000	Leak	824.64	8246.40	797.75	7977.50



21	100.56.1	Supplying and fixing 15 / 20 mm PVC public tap after dismantling the damaged tap including all cost of materials, labour charges, hire for tools and as per the direction of the department officers etc complete.	15.000	Nos	133.53	2002.95	136.10	2041.50
22	100.98.1008	Engaging Coolie	40.000	Day	917.26	36690.40	929.20	37168.00
23	13.44.1	Finishing walls with water proofing cement paint of required shade:New work (Two or more coats applied @ 3.84 kg/10 sqm)	1200.00 0	sqm	112.09	134508.00	121.20	145440.00
24	100.98.48	Supply of PVC Tap	15.000	No	75.15	1127.25	75.15	1127.25
Sl No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
81	Appendix B - (8)- Line charging, stabilization& interconnection - (j) Interconnection work of raw water pumping main with aerator at treatment plant using 350mm DIK9 pipes and providing surge arrestor in raw water pumping main							
1	100.1.1	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : All kinds of soil (Ref. Item No. 2.10.1 of DSR)	85.801	cum	579.85	49751.71	592.25	50815.64
2	100.1.5	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :" Ordinary Rock. (Ref. Item No. 2.13.1 of DSR)	22.881	cum	842.1	19268.09	1033.20	23640.65



3	100.2.2 Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 m <sup>2</sup> on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m. Medium Rock (blasting prohibited) New Data derived from Item No.2.9.3	5.721	cum	1106.34	6329.37	1547.00	8850.39
4	50.2.25.1 Filling with contractor's own earth ( excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift up to 1.5 m as per direction of site Engineer-in-charge	5.000	cum	548.85	2744.25	342.40	1712.00
5	100.14.6 Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials : 350 mm dia Ductile Iron Class K-9 Pipes Data derived from 18.72.20 in DAR	80.000	metre	283.7	22696.00	263.05	21044.00
6	18.70.6 Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:350 mm dia pipes	16.000	joint	456.93	7310.88	452.50	7240.00
7	18.30.8 Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:350 mm diameter pipe	2.000	Nos	811.46	1622.92	921.05	1842.10
8	18.26.2 Providing and laying flanged C.I. Standard specials such as tees, bends, collars, tapers, caps etc., suitable for flanged jointing as per IS : 1538 :Over 300 mm dia	5.910	quintal	9660.34	57092.61	10512.55	62129.17
9	18.83.8 Labour for cutting C.I. pipe with steel saw.350 mm diameter C.I pipe	8.000	Each Cut	781.1	6248.80	807.85	6462.80
10	100.35.6 Testing 350mm DI/CI pipeline with potable water to the required test pressure. 350 mm dia Observed Data derived from item no.1024 of PHED DATA	80.000	metre	70.53	5642.40	74.60	5968.00



11	4.1.3 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	30.000	cum	8340.93	250227.90	10609.70	318291.00
12	5.22.6 Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth level Thermo - Mechanically Treated bars of grade Fe-500D or more	1200.00 0	kilogram	102.61	123132.00	120.80	144960.00
13	100.37.10.1 Fabricating MS pipes of size 350mm (ID) using 8 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For pipes fabricated with 8mm thick MS plates.	10.000	metre	9145.95	91459.50	12734.15	127341.50
14	100.37.10.3 Cutting 350 mm (ID) MS pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	5.000	No	374.28	1871.40	735.90	3679.50
15	100.37.10.4 Welding 350 mm (ID) MS pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	5.000	No	1432.07	7160.35	2500.85	12504.25
16	100.37.10.5 Grinding cut and weld edges of 350 mm (ID) MS pipes during fabrication work including all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	5.000	No	268.48	1342.40	270.20	1351.00
17	100.37.6.1 Fabricating MS pipes of size 150mm (ID) using 8 mm thick MS plate including cost and conveyance charges of MS plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under coat of primer etc. complete: For pipes fabricated with 8mm thick MS plates.	2.000	metre	5174.62	10349.24	7454.00	14908.00
18	100.37.6.3 Cutting 150mm (ID) MS pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	3.000	No	169.77	509.31	333.75	1001.25



19	100.37.6.4 Welding 150mm (ID) MS pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods ,all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	3.000	No	649.48	1948.44	1134.25	3402.75
20	100.37.6.5 Grinding cut and weld edges of 150mm (ID) MS pipes during fabrication work including all labour and hire charges of tools etc. complete: For pipes fabricated with 8mm thick MS plates.	3.000	No	121.79	365.37	122.55	367.65
21	100.98.120 Supply of DI K9 Pipe Conforming to IS 8329/2000, 350mm Dia.	80.000	metre	5506.95	440556.00	5238.35	419068.00
22	od83893/2020_2021 Providing 350mm surge arrestor- Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All classes of soil (Rate as per DSR Observed data)	15.000	cum	425.54	6383.10	425.55	6383.25
23	od83894/2020_2021 Providing 350mm surge arrestor- Providing 350mm surge arrestor having test pressure 45Kg/cm2 to the clear water pumping main including cost of specials such as 2 Nos. Tail piece, 2 Nos. Mechanical joints, cutting the existing DI pipe, inserting surge arrestor, jointing with flanged joints etc. including cost of surge arrestor.(Rate as per DSR Observed data)	1.000	No	600000.0	600000.00	600000.0 0	600000.00
24	od83895/2020_2021 Providing 350mm surge arrestor- Cement concrete 1:2:4 using 20mm nominay size metal for anchore block including charges of form work and labour charges etc. complete.(Rate as per DSR Observed data)	5.000	cum	8941.83	44709.15	8941.85	44709.25
25	od83896/2020_2021 Providing 350mm surge arrestor- Providing air cushion valve of diameter - 200mm & test pressure 45 Kg/cm2 with flanged ends including all cost of materials such as 200mm air cushion valve - 1 No., 200mm D/F CI sluice valve - 1 No. etc and all labour charges for fitting the same in position as directed by the departmental officers.(Rate as per DSR Observed data)	1.000	No	409500.0	409500.00	409500.0 0	409500.00



26	od83897/2020_2021 Providing 350mm surge arrestor- Constructing RCC valve chamber of size 2.50m x 1.20m x 1.20m for providing the zero velocity valve including all cost of materials, labour charge, form work etc complete as directed by the departmental officers. (Rate as per DSR Observed data)							
			1.000	No	63841.4	63841.40	63841.40	63841.40
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
82 Appendix B- (9) - Road restoration works-(a) PWD road								
1	od178589/2018_2019 Removal of unserviceable soil including excavation, loading and disposal upto 1000 metres lead but excluding replacement by suitable soil which shall be paid separately (PWD sanctioned price rate-specification code-3.11)							
			1246.87 5	cum	47.61	59363.72	47.60	59351.25
2	od178591/2018_2019 Maintenance of Earthen Shoulder (filling with fresh soil) Making up loss of material/ irregularities on shoulder to the design level by adding fresh approved soil and compacting it with appropriate equipment.(PWD sanctioned rate-specification code- 10.2)							
			4987.50 0	sqm	41.25	205734.38	41.25	205734.38
3	od178592/2018_2019 Construction of granular sub-base by providing graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401. Grading-IV - For lower sub base - Mix in Place Method (PWD sanctioned rate-specification code-4.2.A2)							
			225.000	cum	3178.82	715234.50	3178.80	715230.00
4	od178593/2018_2019 Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.(PWD sanctioned rate-specification code- 4.12)							
			150.000	cum	3344.36	501654.00	3344.35	501652.50
5	od178594/2018_2019 Prime Coat- Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.7kg/sqm using mechanical means.(PWD sanctioned rate- specification code-5.1)							





		1500.00 0	sqm	54.39	81585.00	54.40	81600.00	
6	od178595/2018_2019 Supplying and stacking 12mm hard blue granite broken stone in standard heaps for measurement(IRC 3.2.1.a)- PWD sanctioned rate-specification code- 55.2							
		40.500	cum	2631.07	106558.34	2631.05	106557.53	
7	od178596/2018_2019 Supplying and stacking 6mm hard blue granite broken stone in standard heaps for measurement(IRC 3.2.1.a)- PWD sanctioned rate-specification code- 55.3							
		13.500	cum	2631.07	35519.45	2631.05	35519.18	
8	od178597/2018_2019 Supplying and stacking 36mm size hard broken stone in standard heaps for measurement.(PWD sanctioned rate- specification code- 55.4)							
		150.000	cum	2537.36	380604.00	2537.35	380602.50	
9	od178598/2018_2019 Providing, laying and rolling of open graded premix carpet of 20 mm thickness with 0.27 cum of 12 mm departmental aggregates premixed with 12.96 kg of bitumen per 10 sqm using penetration grade bitumen to required line, grade and level on a previously prepared base, after priming the existing surface with 5 kg of bitumen (VG 30) 10 sqm including mixing in a suitable plant, laying and rolling with a three wheel static roller of 80-100 KN capacity, finished to required level and grades, followed by a seal coat of 0.09 cum of 6 mm departmental aggregates premixed with 8.64 kg of bitumen per 10 sqm. By Manual Means- PWD sanctioned rate-specification code-55.1.a							
		1500.00 0	sqm	192.02	288030.00	192.00	288000.00	
10	od178599/2018_2019 Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregate 40 mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days.( PWD sanctioned rate- specification code- 12.4)							
		196.875	cum	7032.06	1384436.81	7032.05	1384434.84	
11	od178600/2018_2019 CPlain/Reinforced Cement Concrete in Open Foundation complete as per Drawing and Technical Specifications PCC Grade M20 (Without formwork) -PWD sanctioned rate-spification code-12.8.b							
		98.438	cum	8523.47	839033.34	8523.45	839031.37	
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
83 Appendix B - (9) - Road restoration works- (b) Village/ Panchayat/ PMGSY roads								



1	od178592/2018_2019 Construction of granular sub-base by providing graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per clause 401. Grading-IV - For lower sub base - Mix in Place Method (PWD sanctioned rate-specification code-4.2.A2)	154.688	cum	3178.82	491725.31	3178.80	491722.21
2	od178593/2018_2019 Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.(PWD sanctioned rate-specification code- 4.12)	103.125	cum	3344.36	344887.13	3344.35	344886.09
3	od178594/2018_2019 Prime Coat- Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.7kg/sqm using mechanical means.(PWD sanctioned rate- specification code-5.1)	1031.25 0	sqm	54.39	56089.69	54.40	56100.00
4	od178595/2018_2019 Supplying and stacking 12mm hard blue granite broken stone in standard heaps for measurement(IRC 3.2.1.a)- PWD sanctioned rate-specification code- 55.2	27.845	cum	2631.07	73262.14	2631.05	73261.59
5	od178596/2018_2019 Supplying and stacking 6mm hard blue granite broken stone in standard heaps for measurement(IRC 3.2.1.a)- PWD sanctioned rate-specification code- 55.3	9.282	cum	2631.07	24421.59	2631.05	24421.41
6	od178597/2018_2019 Supplying and stacking 36mm size hard broken stone in standard heaps for measurement.(PWD sanctioned rate- specification code- 55.4)	92.813	cum	2537.36	235499.99	2537.35	235499.07



7	od178598/2018_2019 Providing, laying and rolling of open graded premix carpet of 20 mm thickness with 0.27 cum of 12 mm departmental aggregates premixed with 12.96 kg of bitumen per 10 sqm using penetration grade bitumen to required line, grade and level on a previously prepared base, after priming the existing surface with 5 kg of bitumen (VG 30) 10 sqm including mixing in a suitable plant, laying and rolling with a three wheel static roller of 80-100 KN capacity, finished to required level and grades, followed by a seal coat of 0.09 cum of 6 mm departmental aggregates premixed with 8.64 kg of bitumen per 10 sqm. By Manual Means- PWD sanctioned rate-specification code-55.1.a							
	1031.25 0	sqm	192.02	198020.63	192.00	198000.00		
8	4.1.3 Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)							
	67.500	cum	8340.93	563012.78	10609.70	716154.75		
SI No	Spec	Description	Quantity	Unit	DSOR Rate	TS Amount	LMR Rate	LMR Amount
84 Appendix B - (8)- Line charging, stabilization& interconnection - (k)- Providing Flow Meters								
1	od90786/2020_2021 Supplying and fixing 200mm Dia Mechanical Flow meter of Woltman type conforming to ISO 4064 Class B of ARAD/ ZENNER/ REYCHEM RPG/ ITRON make and the flow meter shall be tested and certified by FCRI-Palakkad.							
	3.000	No	39140.29	117420.87	39215.55	117646.65		
2	od90787/2020_2021 Supplying and fixing 250mm Dia Mechanical Flow meter of Woltman type conforming to ISO 4064 Class B of ARAD/ ZENNER/ REYCHEM RPG/ ITRON make and the flow meter shall be tested and certified by FCRI-Palakkad.							
	2.000	No	81012.36	162024.72	81087.60	162175.20		
3	od93515/2020_2021 Supplying and fixing 300mm Dia Electromagnetic Flow meter conforming to protection level of IP-68 for flow sensor and IP-67 for transmitter and having an accuracy level of 0.5 % with (LED/LCD) display unit, UPS and battery. This flow meter should have the housing (flow sensor) to be made of SS304/ carbon steel with anti corrosive protection and inside liner to be made of hard rubber or neoprene all conforming to drinking water standards. The flow meter should be coupled Hart for data acquisition and transfer ,with provision for wireless transfer through GSM. The manufacturer should have the calibration standard. AS per ISO 17.0.25 and the product shall have sufficient warranty provisions.							



	1.000	No	198254.1 7	198254.17	198329.4 0	198329.40
<b>Estimate PAC</b>						<b>121218018.9 4</b>
<b>LMR Estimate PAC</b>						<b>119935752.0 0</b>
<b>Percentage Excess</b>						<b>-1.06</b>
Rupees Eleven Crore Ninety Nine Lakh Thirty Five Thousand Seven Hundred and Fifty Two Only						



Kerala Water Authority

**PRICE**

