

# BIHAR URBAN INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED

### Volume-II FINANCIAL BID

### **FOR**

CONSTRUCTING OF INTERCEPTION & DIVERSION WORKS INCLUDING PUMPING STATIONS, RISING MAIN, SEWER LINE, NEW TAPPINGS, RENOVATIONS OF OLD TAPPINGS & CLEANING OF LINE FOR WITH 4 IPS, 5 NALLA (KRISHAN GARH NALA, CHHUJA GALI NALA, BISHARISTHAN GOPAL ROAD NALA, NEAR RAILWAY STATION NALLA & AJGAIBINATH NALA) AND CONSTRUCTION OF SEWAGE TREATMENT PLANT OF CAPACITY 10 MLD INCLUDING DISPOSAL AND REUSE FACILITY WITH 2 MONTHS TRIAL, RUN, TESTING, COMMISSIONING & MAINTENANCE ON DESIGN BUILD OPERATE TRANSFER (DBOT) BASIS & THERE AFTER OPERATION & MAINTENANCE FOR 15 YEARS FOR SULTANGANJ TOWN (Dist. BHAGALPUR)

**UNDER** 

### "NAMAMI GANGE" SCHEME

Date of Downloading of Bid document 12.10.2017 to 13.11.2017 up to 3:00 PM **Date of Pre-Bid Meeting** 18.10.2017 at 3:00 PM at BUIDCo Office. Last date and time for receipt (upload) of bids 14.11.2017 up to 4.00 PM Last date and time for Submission of Hard Copy of 15.11.2017 up to 3:30 P.M. Time and Date of Opening of Technical Bids 15.11.2017 at 4:00 P.M. **Completion period** 18 months (Including 2 months trial, run, testing & commissioning & stabilization period.) **Operation & Maintenance** 180 months since completion of successful stabilization period

> Managing Director, BUIDCo

CONSTRUCTING OF INTERCEPTION & DIVERSION WORKS INCLUDING PUMPING STATIONS, RISING MAIN, SEWER LINE, NEW TAPPINGS, RENOVATIONS OF OLD TAPPINGS & CLEANING OF LINE FOR WITH 4 IPS, 5 NALLA (KRISHAN GARH NALA, CHHUJA GALI NALA, BISHARISTHAN GOPAL ROAD NALA, NEAR RAILWAY STATION NALLA & AJGAIBINATH NALA) AND CONSTRUCTION OF SEWAGE TREATMENT PLANT OF CAPACITY 10 MLD INCLUDING DISPOSAL AND REUSE FACILITY WITH 2 MONTHS TRIAL, RUN, TESTING, COMMISSIONING & MAINTENANCE ON DESIGN BUILD OPERATE TRANSFER (DBOT) BASIS & THERE AFTER OPERATION & MAINTENANCE FOR 15 YEARS FOR SULTANGANJ TOWN (Dist. BHAGALPUR)

#### ABSTRACT OF TOTAL COST

### SEWAGE TREATMENT PLANT AND I & D ALLIED WORKS INCLUDING SPSs

### **Grand Summary**

No.	Component	Price	
1.	Design-Build price for STP and allied infrastructure		
	(Schedule A)		
2	Design-Build price for I & D and allied Works including SPSs (Schedule B)		
3 A.	Total O & M Price of STP for 15 years		
3 B	NPV of Total O & M Price of STP for 15 years		
4 A.	Total O & M Price of I & D works including SPSs for 15 years		
4 B	NPV of Total O & M Price of I & D works including SPSs for 15 years		
5.	Cost of Land requirement for setting up the STP facility as indicated in the bid		
Total Price based on quoted O&M prices including price of land (1+2+3A+4A+5) =			
[in figures	sJ		
[In words	[In words]		
Total Price based on NPV of quoted O&M prices including price of land (1+2+3B+4B+5) =			
[in figures	[in figures]		
[In words	[In words]		

### SCHEDULE A

### Table Ab2 - Price Schedule: PART A (STP) – Design-Build Price

S.N.	Works Activity		Design-Build Price
1	CONSTRUCTING OF STP OF CAPACITY 10 MLD		
Break-up of Price	of item 1 above		
1A	Civil and Structural Works		
	(including that required for disposal a	and reuse)	
	Installation, testing and commissioning of Electro – mechanical and Instrumentation equipment and accessories including equipments for electricity generation from solar photovoltaic arrangement.		
С	Ancillary works like, internal roads, area grading etc.		
	Total Design Build Price		
	Amount in Words		

## **Indicative Flow**

Indicative Flow for the purpose of evaluation of bids during the Operations Period shall be as follows:

Year of Operations	Indicative Sewage flow rate for STP& MPS (MLD)*
1- Year One	<mark>6.2</mark>
2- Year Two	<mark>6.4</mark>
3- Year Three	<mark>6.7</mark>
4- Year Four	<mark>6.9</mark>
5- Year Five	<mark>7.2</mark>
6- Year Six	<mark>7.4</mark>
7- Year Seven	<mark>7.7</mark>
8- Year Eight	<mark>7.9</mark>
9- Year Nine	<mark>8.2</mark>
10- Year Ten	<mark>8.5</mark>
11- Year Eleven	<mark>8.8</mark>
12- Year Twelve	<mark>9.1</mark>
13- Year Thirteen	<mark>9.4</mark>
14- Year Fourteen	<mark>9.7</mark>
15- Year Fifteen	<mark>10.00</mark>

\*"Indicative flow rate for STP" means the rate of sewage flow which is projected by the Owner to be available for treatment in the STP facility for each of the 15 years of the O & M period.

## $\label{eq:continuous} Table~Ab3 - Price~Schedule\\ PARTS~B~\&~C~(STP)~and~Annual~O\&M~Price~and~Additional~O\&M~Price\\$

ear of	Currency	PART B	PART C	Total Annual O&M	NPV factor (d)	Value e = c*d
peratio	INR	Annual O & M	Annual Additional	Price, assuming		
ıs		Price for treatment	O&M Price for	Indicative Sewage	(Based on discount	
		of Threshold	treatment of	Flow reaching the	factor of 10% p.a.)	
		Sewage Flow of	additional sewage	STP		
		7.21 MLD	flow in excess of	c = a + b* x		
		(Amount)	the Threshold flow	(x = indicative flow		
		(a)	on a per MLD basis	minus threshold		
			(Amount Per MLD)	sewage flow)		
			(b)			
1					0.909	
2					0.826	
3					0.751	
4					0.683	
5					0.621	
6					0.564	
7					0.513	
8					0.467	
9					0.424	
10					0.386	
11					0.350	
12					0.319	
13					0.290	
14					0.263	
15					0.239	
	, ,	r 15 years assuming "I	ndicative Sewage Flo	w Rate"		
-	otal of Column 'c')					
n figures:						
n words:						
		r 15 years assuming "	Indicative Sewage Fl	ow Rate"		
•	otal of Column 'e')					
n figures						
n words:						

The area of the land that is required for the STP, roads, drains and other appurtenant reuse infrastructure in accordance ...... square meters.

### **Cost of Land**

S. N.	Component	
1.	Area of Land Required for STP as per given Technology by Bidder SQM	
2.	Price of Land per square meter as per Bid Data Sheet clause 3.3 (c)	
Total Pr	ice of Land(INR):	
Amount	in Words:	

### 1.9 Part D (STP) The Electricity Consumption guaranteed by the bidder

Table Ab4 - Part D (STP) Guaranteed Electricity Consumption

Year of Operations	Guaranteed Electricity Consumption for the year
	(KWh / MLD)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

#### Notes B:

- 1. Bidder shall indicate the land requirement for STP, roads, drains and other appurtenant structures in Square Metres, along with calculations considering the proposed treatment process.
- 2. The Bidder shall provide along with the price schedule a separate table giving details of taxes, GST, duties, levies and other applicable taxes considered by him and included in the prices offered under Part A & Part B.
- 3. The prices quoted in each of the sub parts of the Price Schedules shall be supported by sufficient justification, financial model and support materials / calculations showing the methods and the rates assumed at arriving these numbers.

Signature of the Bidder Name of the Bidders Rubber stamp with Designation Signature of the Engineer Name of the Engineer Designation

Date

## SCHEDULE "B"

### I&D & Allied works

### Table Ab3, Design-Build Price of I & D with Allied works including SPSs.

S.N.	Works Activity		Design-Build Price
	CONSTRUCTING OF INTERCEPTION & DIVERSION WORKS INCLUDING PUMPING STATIONS, RISING MAIN, SEWER LINE, NEW TAPPINGS, RENOVATIONS OF OLD TAPPINGS & CLEANING OF LINE FOR WITH 4 IPS, 5 NALLA (KRISHAN GARH NALA,, Chhuja Gali Nala, Bisharisthan Gopal road Nala, Near Railway Station Nalla & Ajgaibinath Nala)		
Break-up of Price	of item 1 above		
1A	Civil & Electromechanical Works of I & D Works (including SPSs and Rising Main)		
	Total Design Build Price		
	Amount in Words		

## Indicative Sewage Flow Rate for SPS

Year of	Indicative Sewage flow rate (MLD)			
Operations	SPS A	SPS B	SPS C	SPS D
1st year	0.69	0.60	3.02	0.61
2 nd Year	0.705	0.613	3.085	0.624
3 rd year	0.72	0.626	3.15	0.637
4 th year	0.735	0.639	3.215	0.649
5 th Year	0.75	0.652	3.28	0.662
6 th year	0.765	0.665	3.345	0.675
7 th Year	0.78	0.678	3.41	0.688
8 th year	0.795	0.691	3.475	0.701
9 th year	0.81	0.704	3.54	0.714
10 th year	0.825	0.717	3.605	0.727
11 <sup>th</sup> year	0.84	0.73	3.67	0.74
12 <sup>th</sup> year	0.855	0.743	3.735	0.753
13 <sup>th</sup> year	0.87	0.756	3.8	0.77
14 <sup>th</sup> year	0.895	0.77	3.9	0.795
15 <sup>th</sup> year	0.92	0.79	4.0	0.81

**Indicative Sewage flow** rate for SPS means the rate of sewage flow which is projected by the Owner to be available for handling in the SPS for each of the 15 years of the O&M period.

## O&M Price for Operation and Maintenance of the Sewerage Network and Sewage Pumping Stations in each of the 15 years of the Operations Period as provided in the table below

### Overall O&M Prices for Sewerage Network including Rising Mains and SPSs etc

Table 5

Year of Operations	Annual Operation and Maintenance Price for Sewerage Network including Rising Main and SPSs <sup>1</sup>		NPV Factor (Based on discount factor of 10% p.a.)	NPV of O&M Price $Col\ 5 = Col\ 2 * Col\ 4$
	In Figures	In words		Cui 4
(1)	(2)	(3)	(4)	(5)
1			0.909	
2			0.826	
3			0.751	
4			0.683	
5			0.621	
6			0.564	
7			0.513	
8			0.467	
9			0.424	
10			0.386	
11			0.350	
12			0.319	
13			0.290	
14			0.263	
15			0.239	
		NPV of Total O&M	I Price for 15 years	

Figures in Table 3 are derived from Figures in Table 4

#### Note:

- 1. The bidder shall furnish break-up of the O&M prices as under for each year along with the respective calculation sheets in support of the Part B (lump-sum) prices quoted in the Table above.
  - [i] O&M charges for as applicable for each size of sewerage lineseparately on per Km basis;
  - [ii] O&M charges for the each set of pumping stations; and
  - [iii] O& M charges for other assets, if any.
- 2. . The break-up of charges quoted by the bidder (Operator) shall be basis for determining the variation in the O&M payments for any period during which the scope of O&M services of the Operator is varied by the Owner owing to variation in the lengths of sewerage lines and number of pumping stations to be operated and maintained during the contract term, (Please refer Article 2 of Schedule 6 to the contract relating to Terms and procedure of Payment.)

<sup>&</sup>lt;sup>1</sup>Bidder may quote in more than one currency in accordance with ITB 3.12.

3.	The Bidder shall provide along with the price schedule a separate table giving details of taxes, duties, levies and other applicable taxes considered by him and included in the prices offered under Part A & Part B.Service Tax shall not be included in the prices and the same shall be paid separately by the Owner, if applicable, against proof of applicability and payment.
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### 

The Electricity Consumption guaranteed by the bidder shall be as under: For SPS A (at Krishan Gargh Nala)

Year of Operations	Guaranteed Annual Energy Consumption for Sewage flow rate (KWh / MLD of Sewage pumped over the year)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

### Table 7 B

The Electricity Consumption guaranteed by the bidder shall be as under: For SPS B (at Chhujja Galli Nala)

Year of Operations	Guaranteed Annual Energy Consumption for Sewage flow rate (KWh / MLD of Sewage pumped over the year)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

### Table 7 C

The Electricity Consumption guaranteed by the bidder shall be as under: For SPS C ( Near Railway Station)

Year of Operations	Guaranteed Annual Energy Consumption for Sewage flow rate (KWh / MLD of Sewage pumped over the year)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

### Table 7 D

The Electricity Consumption guaranteed by the bidder shall be as under: For SPS D (at Ajgaibinath Nala)

Year of Operations	Guaranteed Annual Energy Consumption for Sewage flow rate (KWh / MLD of Sewage pumped over the year)
1	(, s, consign pumper con , con ,
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

## Summary of O & M Price Table 8

Year			Quoted Bid Price for 15 Years O&M						
	Sewer network & rising mains	SPS A	SPS B	SPS C	SPS D	Total Price (2+3+4+5+6)			
1	2	3	4	5	6	7			
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
Total									

### 2.0 - I&D Nallah I\_Krishan Garh Nala

Item Description	Quantity	Total Amount, Rs					
Drain construction Cost	Detailes are attached						
Outfall Structure Cost	Detailes are attached						
Generator Room Cost	Detailes are attached						
Operator Quarter Cost	Detailes are attached						
Elctrical Component Cost	Detailes are attached						
DG Cost	Detailes are attached						
Rising Main Cost	Detailes are attached						
Pump and Screen Cost	Detailes are attached						
Total Co	Total Cost, Rs						

### 2.1 Drain Construction Cost

## **Existing Drain**

### **Proposed Drain Size**

SI. No.	Name of Drains/ Nallah falling in Ganga River	Length of Drain (m) to be constructed	Velocity (m/sec)	Width	Depth /	<b>\</b> rea	Effective flow area	Flow	Flow (MLD)	Width	Height	Cost	Drain Cost	Width I	leight	I&D	Remark
1	Krishan Garh Nala	300	0.14	1	1	1	10%	0.01	1.19	91.00	1.00			1.00	1.00	Pumping	TO STP

	2.2.1 Cost Estir	nate for (	Outfall Stru	ctures	
SI no.	Description of Item	Unit	Quantity	Rate (INR)	Amount (INR)
1	Earth work excavation in foundation trenches or drains including dressing of sides and ramming of bottoms, lift as follows, including getting out the excavated soil and disposal of surplus excavated soil as directed, with all lead and lift complete as per the specification and as directed by the Engineer.  All kinds of soils				(Huk)
1.1.1	Upto1.50m depth	cum	27.60		
1.1.1	1.5 m to 3 m	cum	23.40		
2	Sand filling upto 300mm in Plinth including watering and compacting in layers of 150 mm thick as per specifications and as directed by the Engineer.	cum	5.52		
3	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level in 1:3:6 (1 Cement : 3 coarse sand : 6 granded stone)	Cum	5.93		
4	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.	Cum	21.49		
5	Centring and Shuttering including strutting, propping etc. and removal of form for vertical walls	sqm	63.00		
6	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars TMTC - 500 (Quantity at 90 kg/cum)	Kg	1934.10		
	Carriage of the following materials from quarry to work site including oading, unloading and staking at work site as per specification & direction of E/I.				
7	Aggregate	Cum	45.51		
	Sand Cement	Cum	22.75 20.43		
	Steel	MT	1.93		
8	Wrought iron and mild steel welded work (using angles, square bars, tees and channel grills, grating frames, gates and tree guards of any size and design etc. including cost of screens and welding rods or bolts and nuts complete fixed in position but without the cost of excavation and concrete for fixing which will be paid separately	Kg	240.00		
	Erection of gates (a) 30% item NO- 8		240.00		
8.0	Centring and Shuttering including strutting, propping etc. and removal of form for Roof slab				
8.1	For roof slab	Sqm	18.00		
8.2	Weather shade,Chajjas, corbels etc. including edges	Sqm	1.20		
9.0	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars		9.00		
	steel quantities	kg	810.00		
10.0	Brick work with bricks of class designation 100A in foundations and plinth in :Extra for Brick work in superstructure above plinth level upto floor V cum	Cum	5.87		
11.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for Internal walls)	Sqm	25.50		
12.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for ceiling)	Sqm	18.00		
13.0	20 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for External walls)	Sqm	26.40		
14.0	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work (for Internal walls)	Sqm	25.50		
15.0	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work (for ceiling)	Sqm	25.50		
16.0	Appying one coat of cement primer of approved brand and manufacture on wall surface (for External walls)	Sqm	18.00		
17.0	Providing wood work in frames of door, window clerestory windows and other frames, wrought framed and fixed in position in local wood for Door	Cum	26.40		
			•		

SI no.	Description of I tem	Unit	Quantity	Rate (INR)	Amount (INR)
18.0	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including black enameled MS butt hinges with necessary screws excluding panelling which will be paid for separately - 30 mm thick		0.50		
	For Doors	Sqm	1.80		
	Providing and fixing glazing in aluminium door, window V shutters and partition etc with PVC / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer incharge. (Cost of aluminium snap bading shall be paid in basic item). With glass pans of 5.50 mm thickness (Weight not less than 13.75 kg/sqm)	Sqm	0.50		
	Providing and laying Ceramic glazed floor tiles (400x400) mm (thickness to be specified by the manufacturer) of 1st quality conforming to 15:13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent 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 grouting the joints with white cement and matching pigments etc, complete.		18.00		
	Total Cost ( INR )				

				Rate	Amount
. No.	Item description Earth work	Unit	Quantity	(INR)	(INR)
	Earthwork in excavation in foundation trenches or drains (not exceeding				
1.0	1.5 m width or 10 sqm on plan) including dressing of sides and ramming     of bottoms, lift upto 1.5 m including getting out the excavated soil and				
	disposals of surplus excavated soil as directed, within a lead of 50 m. (For all kinds of soil)				
1.1	From 0 m to 1.5 m	Cum	22.54		
1.2	From 1.5 m to 3 m	Cum	1.35		
2.0	Supplying and Filling on plinth with local sand and under floors including watering, ramming consolidating and dressing complete. For Generater room	Cum	7.20		
3.0	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level in 1:3:6 (1 Cement : 3 coarse sand : 6 granded stone upto 20 mm nominal size)	Cum	7.33		
4.0	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.				
4.1	For Footings	Cum	1.44		
4.2	Column below GL up to Plinth	Cum	0.26		
4.3	Plinth beams	Cum	1.61		
4.4	For columns above Ground levels	Cum	0.87		
4.5	Lintel beams	Cum	1.43		
4.6	Roof Beams	Cum	1.33		
4.7	For roof slab	Cum	4.32		
4.8	For Sunshades over Door & Windows :	Cum	0.23		
5.0	Centring and Shuttering including strutting, propping etc. and removal of form for				
5.1	For footing – F	Sqm	4.80		
5.2	Column upto GL – C	Sqm	4.60		
5.3	Plinth beams :	Sqm	14.00		
6.0	Centring and Shuttering including strutting, propping etc. and removal of form for	Sqm			
6.1	Lintel beams	Sqm	12.40		
6.2	Roof beams	Sqm	12.40		
7.0	Centring and Shuttering including strutting, propping etc. and removal of form for				
7.0	Column	Sqm	15.09		
8.0	Centring and Shuttering including strutting, propping etc. and removal of form for Roof slab				
8.1	For roof slab	Sqm	24.00		
8.2	Weather shade,Chajjas, corbels etc. including edges	Sqm	4.13		
9.0	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete.  Thermo - Mechanically Treated bars				
	steel quantities	MT	1.34		
10.0	Brick work with bricks of class designation 100A in foundations and plinth in : Extra for Brick work in superstructure above plinth level upto floor V Cum	Cum	17.53		
11.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for Internal walls)	Sqm	64.48		
12.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for ceiling)				

		,		ī	
	Generator room	Sqm	24.00		
13.0	20 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for External walls)	Sqm	89.54		
14.0	Wall painting With plastic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work (for Internal walls)	Sqm	64.48		
15.0	Wall painting With plastic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work (for ceiling)	Sqm	24.00		
16.0	Appying one coat of cement primer of approved brand and manufacture on wall surface (for External walls)	Sqm	89.54		
17.0	Providing wood work in frames of door, window clerestory windows and other frames, wrought framed and fixed in position in local wood for Door	Cum	0.16		
18.0	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including black enameled MS butt hinges with necessary screws excluding panelling which will be paid for separately - 30 mm thick				
	For Doors	Sqm	4.20		
19.0	Providing and fixing glazing in aluminium door, window V shutters and partition etc with PVC / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer incharge. (Cost of aluminium snap bading shall be paid in basic item). With glass pans of 5.50 mm thickness (Weight not less than 13.75 kg/sqm)	Sqm	4.32		
20.0	Providing and laying Ceramic glazed floor tiles (400x400) mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS:13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent 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 grouting the joints with white cement and matching pigments etc, complete.				
	Generater room	Sqm	24.00		
21.0	Cement plaster skirting (upto 30 cm height) with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement. 18 mm thick	Sqm	2.70		
22.0	Providing and laying in situ five course water proofing treatment with glass fibre tissue reinforced bitumen over roof consisting of first coat of bitumen primer @ 0.40 kg per sqm, 2nd and 4th courses of bonding material 1.60 kg per sqm which shall consist of blown type bitumen of grade 85/25 conforming to IS: 702, third layer of glass fibre tissue course as specified, fifth, the top most layer of stone grit 6 mm and down size or pea-seized gravel sprad @ 6 dm <sup>3</sup> per sqm including preparation of surface excluding grading for slope etc. compete.	Sqm	24.00		
23.0	Providing and fixing on wall face unplastidsed-PVC (working pressure 4 kgf per sqm) rain water pipes conforming to IS: 4985 including jointing with seal ring conforming to IS: 5382 leaving 10 mm gap for thermal expansion.  110 mm diameter	m	13.50		
24.0	Filling available excavated 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 wateing lead.	Cum	14.86		
	Carriage of Materials :				
	Aggregate	Cum	16.66		
	Coarse Sand	Cum	31.07		
25.0		Cum	7.20		
	Cement	MT	6.01		
	Steel	MT	0.14		
	Brick (1000 Nos)		8.59		
	Total Cost				

I. No	I tem description	Unit	Quantity	Rate (INR)	Amount (INR)
1	Earthwork in excavation in foundation trenches or drains (not exceeding 1.5 m width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m including getting out the excavated soil and disposals of surplus excavated soil as directed, within a lead of 50 m. (For all kinds of soil)				
1.1	From 0 m to 1.5 m	Cum	36.72		
1.2	From 1.5 m to 3 m	Cum	3.24		
2	Supplying and Filling on plinth with local sand and under floors including watering, ramming consolidating and dressing complete.	Cum	18.82		
3	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level in 1:3:6 (1 Cement : 3 coarse sand : 6 granded stone)		23.51		
4	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.				
4.1	For Columnn Footing	Cum	4.48		
4.2	For Column below GL up to plinth	Cum	0.74		
4.3	For Plinth beams-PB	Cum	5.08		
4.4	For columns above GL	Cum	2.45		
4.5	For lintel beams	Cum	2.04		
4.6	For Roof beams	Cum	3.59		
4.7	For Roof slab	Cum	12.03		
4.8	For Parapet	Cum	2.39		
5	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.				
5.1	Sunshade over Windows	Cum	0.89		
5.2	For Lofts & Racks	Cum	1.88		
6	Centring and Shuttering including strutting, propping etc. and removal of form for				
6.1	For Columnn Footing (C1 F1)	Sqm	10.80		
6.2	For Column below GL up to plinth	Sqm	51.36		
6.3	For Plinth beams-PB	Sqm	41.65		
6.4	For columns above GL	Sqm	42.66		
6.5	For lintel beams	Sqm	23.43		
6.6	For Roof beams	Sqm	30.97		
6.7	For Roof slab	Sqm	131.94		
6.8	For Parapet	Sqm	4.90		
7	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars	MT	4.14		
8	Brick work with bricks of class designation 100A in foundations and plinth in :Extra for Brick work in superstructure above plinth level upto floor V cum	Cum	31.58		
9	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for Internal walls)	Sqm	167.68		
10	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for ceiling)	Sqm	58.41		
11	20 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for External walls)	Sqm	147.88		

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12	Wall painting with plastic emulsion paint of approved brand and	Sqm	226.09		
13	Appying one coat of cement primer of approved brand and manufacture on wall surface (for External walls)	Sqm	191.98		
14	Providing wood work in frames of door, window clerestory windows and other frames, wrought framed and fixed in position in local wood	Cum	0.50		
15	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including black enameled MS butt hinges with necessary screws excluding panelling which will be paid for separately - 30 mm thick	Sqm	6.93		
16	Providing and fixing glazing in aluminium door, window ventilator shutters and partition etc with PVC / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer incharge. (Cost of aluminium snap bading shall be paid in basic item). With glass pans of 5.50 mm thickness (Weight not less than 13.75 kg/sqm)				
16.1	For Windows	Sqm	8.28		
16.2	For Ventilators	Sqm	0.72		
17	Providing and fabricating and fixing of M S grill for window protection etc ,. As per specification, drawing and as directed by the engineer				
	For Windows & Ventilators	kg	9.00		
18	Providing and laying in situ five course water proofing treatment with glass fibre tissue reinforced bitumen over roof consisting of first coat of bitumen primer @ 0.40 kg per sqm, 2nd and 4th courses of bonding material 1.60 kg per sqm which shall consist of blown type bitumen of grade 85/25 conforming to IS: 702, third layer of glass fibre tissue course as specified, fifth, the top most layer of stone grit 6 mm and down size or pea-seized gravel sprad @ 6 dm <sup>3</sup> per sqm including preparation of surface excluding grading for slope etc. compete.				
18.1	Slope concrete	Sqm	74.92		
19	Providing and laying Ceramic glazed floor tiles 400x400 mm (thickness to be specified by the manufacturer) of 1 st quality conforming to IS: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent make in colours such as white, Ivory, Grey, Fume, Red, Brown, laid on 20 mm thick cement motar 1:4 (1 cement: 4 Coarse sand) including grouting the joints with white cement and matching pigments etc, complete.				
	Total quantity		58.41		
20	Providing and fixing first quality ceramic glazed wall tiles conforming to IS 15622 (thickness to be specified by the manufacturer) of approved maike in all colours shades except burgundy, bottle green, black of any size as approved by engineer incharge in skirting risers of steps and dados over 12 mm thick bed of cement mortar (1:3) and jointing with grey cement slurry at 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete				
	Total quantity	Rmt	55.67		
21	Providing and laying Ceramic glazed floor tiles 400x400 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent make in colours except white, Ivory, Grey, Fume, Red, Brown, laid on 20 mm thick cement motar 1:4 (1 cement: 4 Coarse sand) including grouting the joints with white cement and matching pigments etc, complete.				
21.1	Toilet	Sqm	5.85		
22	Providing and laying Ceramic glazed floor tiles 400x400 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent make in colours except white, Ivory, Grey, Fume, Red, Brown, laid on 20 mm thick cement motar 1:4 (1 cement: 4 Coarse sand) including grouting the joints with white cement and matching pigments etc, complete.				
22.1	Toilet Walls	Sqm	17.54		
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23	Providing and fixing on wall face unplastidsed-PVC(working pressure 4 kgf per sqm) rain water pipes conforming to IS: 4985 including jointing with seal ring conforming to IS: 5382 leaving 10 mm gap for thermal expansion	Rmt	15.60		
24	Filling available excavated 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 wateing lead.	Cum	25.88		
	Carriage of Materials :				
	Aggregate	Cum	52.34		
	Coarse Sand	Cum	68.34		
25	Local Sand	Cum	18.82		
	Cement	MT	18.80		
	Steel	MT	0.00		
	Brick (1000 Nos)		15.48		
	Total Cost				
26.0	Plumbing work:				<u> </u>
26.1	Stainless steel kitchen sink - without drain board 470 mm X 420 mm bowl depth 178 mm	No.	1		
26.2	Salem Stainless steel AISI - 304 (18/8) Round basin 405 mm X 355 mm	No.	2		
26.3	PTMT - Soap Dish/Holder 138 mm X 102 mm X 75 mm	No.	3		
26.4	White vitreous china dual purpose closet (Anglo Indian W.C.) suitable for use as squatting pan or European type water closet as per manufacturer's specifications	No.	1		
26.4.1	White Vitreous china 10 lit. (full flush) capacity controlled low evelflushing cistern with all fittings	No.	1		
26.5	C.P.brass toilet paper holder of standard size	No.	3		
26.6	PTMT - Towel Rail (600 mm)	No.	3		
26.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.				
26.7.1	15 mm nominal outer dia Pipes	m	25		
26.7.2	25 mm nominal outer dia Pipes	m	25		
26.7.3	32 mm nominal outer dia Pipes	m	15		
26.8	uPVC pipes (working pressure 4 kg / cm2 ) Single socketed pipe				
26.8.1	75 mm	m	30		
26.8.2	110 mm	m	30		
26.9	15 mm C.P. brass tap with elbow operation lever	No.	4		
26.10	Gunmetal non-return valve-horizontal (screwed end) 25 mm dia	No.	1		
26.11	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, ISI: 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	lit	2000		
26.12	Brass full way valve with C.I. wheel (screwed end) 40 mm dia	No	1		
26.13	Gunmetal non-return valve-horizontal (screwed end) 25 mm dia	No	1		
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26.14	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No	1	
26.15	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No	1	
26.16	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D 35	No	1	
	Total Cost of Sanitary items			
	Grand Total, Rs			

No	Description	Unit	Quantity	Rate (INR)	Amount (INR)
1.0	EARTHING				
1.1	Neutral Earthing - Earthing with Copper earth plate 600mmx600mmx3mm thick including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe of 2.7m long etc with charcoal/coke and salt as required.	No	2		
1.2	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and 2providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	No	2		
2.0	LT PANEL BOARD (Indoor type)				
2.1	Supplying and fixing following way prewired SP&N MCB distribution board of steel sheet for 240 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size FRLS IPVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc. as required. (But without MCB/ RCCB/ Isolator) 2 + 3 way/10 way, Double door	No	1		
2.2	MCCB DISTRIBUTION BOARDS				
	Providing and fixing 100A rating and 16KA breaking capacity and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as required.	No	1		
2.3	MINIATURE CIRCUIT BREAKERS				
	Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and commitioning etc as required.	No	2		
2.4	MINIATURE CIRCUIT BREAKERS				
	Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and commitioning etc as required.	No	1		

	long, 40mm dia including accesseries, and			
1.2	providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	No	2	
2.0	LT PANEL BOARD (Indoor type)			
2.1	Supplying and fixing following way prewired SP&N MCB distribution board of steel sheet for 240 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size FRLS PVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc. as required. (But without MCB/ RCCB/ Isolator) 2 + 3 way/10 way, Double door	No	1	
2.2	MCCB DISTRIBUTION BOARDS			
	Providing and fixing 100A rating and 16KA breaking capacity and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as required.	No	1	
2.3	MINIATURE CIRCUIT BREAKERS			
	Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and commitioning etc as required.	No	2	
2.4	MINIATURE CIRCUIT BREAKERS			
	Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and commitioning etc as required.	No	1	
2.5	EARTHING			
	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	No	2	
3.0	DISTRIBUTION BOARD			
3 1	Supply and fixing 4+12 way, single door, norizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted	m	1	
3.1	including earthing etc as required. (but without MCB/RCCB/isolators)			

Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	No	2	
4CABLES			
Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)			
4.14Cx16 sq mm + 2x16 sq mm earth wire	m	1	
4.24Cx10 sq mm + 2x10 sq mm earth wire	m	6.5	
4.3 4Cx4 sq mm + 2x4 sq mm earth wire	m	15	
4.4 2Cx2.5 sq mm + 1x2.5 sq mm earth wire	m	14	
5.0 LUMINARIES, SOCKETS AND SWITCHES			
5.1120W Gate lamp with fitting	No	2	
5.240W flourescent lamp	No	4	
5.370W MH Lamp for site lighting	No	4	
5.4 Single switched socket with multi purpose	No	2	
5.5Switches	No	6	
TOTAL AMOUNT, Rs			

	2.7 Cost estima	ate For [	G System		
SI.N o	Description	Unit	Quantity	Rate (INR)	Amount (INR)
_	DIESEL GENERATOR 50 KVA 50 KVA, 40KW, 415V, 50 Hz, comprising of Perkins Engine Coupled to Stamford make Alternator, complete with all Standard accessories and ATS with Acoustic enclosure.	No	1		
	EARTHING				
1.2.1	Neutral Earthing - Earthing with Copper earth plate 600mmx600mmx3mm thick including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe of 2.7m long etc with charcoal/coke and salt as required.	No	2		
1.2.2	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	No	2		
2.0	LT PANEL BOARD (Indoor type)				
2.1	Supplying and fixing 4 ways surface/recess mounting, vertical type, 415V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, with provision of 100A TP 16KA MCCB as incommer, interconnection between incomer MCCB and bus bars (but without MCB,s /MCCB's) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required.)	No	1		
2.2	MCCB DISTRIBUTION BOARDS				
	Providing and fixing 100A rating and 16KA breaking capacity and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as required.	No	1		
2.3	MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and commitioning etc as required.		2		
2.4	MINIATURE CIRCUIT BREAKERS				
	Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and commitioning etc as required.		1		
2.5	EARTHING				
	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	No	2		
3.0	DISTRIBUTION BOARD				

3.1	Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)	m	1				
3.2	EARTHING						
	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	No	2				
4	CABLES						
	Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire / steel tap armoured cable with PVC outer sheathing 1.1 KV class)						
4.1	4Cx16 sq mm + 2x16 sq mm earth wire	m	1				
4.2	4Cx10 sq mm + 2x6 sq mm earth wire	m	6.5				
4.3	4Cx4 sq mm + 2x4 sq mm earth wire	m	15				
4.4	2Cx2.5 sq mm + 1x2.5 sq mm earth wire	m	14				
5.0	LUMINARIES, SOCKETS AND SWITCHES						
5.1	120W Gate lamp with fitting	No	2				
5.2	40W flourescent lamp	No	4				
5.3	70W MH Lamp for site lighting	No	4				
5.4	Single switched socket with multi purpose	No	2				
5.5	Switches	No	6				
	TOTAL AMOUNT, Rs						

		2.8.2 Risir	ng Main - Cost Estimate	e		
SI. No.	Description of Item	Unit	Q	- ⊇uantity	Rate (	Amount (INR)
1.0soil	Excavating trenches of required width for pipes cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m including getting out the excavated, 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.				INR)	
	0.0 to 1.5 mtr. Depth					
1.1	do - in all kindes of soil - 100%	m		2.69		
2.0	Supplying and Filling in plinth with local sand and under floors including , watering, ramming consolidation and dressing complete.	cum		269.06		
3.0	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron. Pipes conforming to IS: 8329 :DI - K9					
3.1	150.00	m		2391.7		
4	Providing push on joints to Centifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes inculding testing of joints and the cost or rubber gasket (one at every 6m).					
4.1	150.00	Joint		166		
5.0	Providing and laying D.I. specials of class K-12 suitable for push- on jointing as per IS: 9523:					
5.1	Bends-As per BS 4772 code					
	90 degree (63.5 Kg)	kg		317.50		
5.2	Taper-As per BS 4772 code					
	300x200mm (34.5 Kg)  Tee-As per BS 4772 code	kg		34.50		
5.3	300x300x300 mm (79.5 Kg)	kg		79.50		
6.0	Providing and fixing <b>C.1. sluice valves</b> (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately)	9		77.00		
6.1	150.00	No		4.00		
7.0	Providing and fixing <b>C.I. sluice valves for Scouring</b> (with cap) complete with bolts, nuts, rubber insertions etc.(the tail pieces if required will be paid separately)					
7.1	150.00	No		3.00		
8.0	Providing & Constructing masonry Chamber 1.5x1.5x1.5 m inside, in brick work in cement mortar 1:3 (1 cement : 3 coarse sand) for valve, with cast insitu RCC slab with necessary reinforcment. The valve chamber shall be plastered with CM 1:4, A levelling coars of M10 shall be provided. The cost is inclusive of excavation, disposal and construction of valve chamber with moduar bricks plasting with cement mortar with all lead and lift etc., as per specification & drawing.					
8.1	Sluice valve chambers	No		4.00		
8.2	Scour valve chambers	No		4.00		
9.0	Providing and constructing of the RCC Thrust Blocks for DI bends including the excavations of soils up to the required depth, disposal of soils after refilling with selected available earth, providing PCC including cost of labours, materials tools, curing etc., complete as per drawing and as directed by the Engineer (inclusive of cost of steel)					
	90 degree	No		2.00		
9.1	Enter Total pipe length	2391.65		m		
	Percentage of CC Road in town	70.00		%		
	Percentage of Asphalt Road in town	30.00		%		
10	Dismantling and restoration of roads :					
10.1	Dismantling of cement concrete pavement (dismantling of cement concrete pavements by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable material	cum		226.01		

Dismantalling of flexible Pavements (dismantling of flexible pavements and disposal of dismantled materials up to a lead of 100 m, stacking serviceable and unserviseable materials separately)  Bituminous courses by mechanical means  cum  32.29  Granular courses by manualmeans  cum  376.68  11 Restoration of road as per the specification and as directed by the engineer  Compacting original ground supporting subgrade (Loosening of the ground upto a level of 500 mm below the subgrade level, as a watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.) Rolling with vibratory roller  Wet Mix Macadam - 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 mathod of tipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification.  Cement Concrete Pavement (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement # 400 kg per cum, coarse and fine aggregate conforming to 15 383, maximum size of coarse aggregate on forming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maxim
Granular courses by manualmeans  cum  376.68  11 Restoration of road as per the specification and as directed by the engineer  11.1 Restoration of CC road  Compacting original ground supporting subgrade (Loosening of the ground upto a level of 500 mm below the subgrade level,  a watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.) Rolling with vibratory roller  Wet Mix Macadam - 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 mathod of tipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification  Cement Concrete Pavement (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement well 400 kg per cum, coarse and fine aggregate conforming to 1S 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction,
Restoration of road as per the specification and as directed by the engineer  11.1 Restoration of CC road  Compacting original ground supporting subgrade (Loosening of the ground upto a level of 500 mm below the subgrade level,  a watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.) Rolling with vibratory roller  Wet Mix Macadam - 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 mathod of tipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification  Cement Concrete Pavement (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction,
a watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.) Rolling with vibratory roller  Wet Mix Macadam - 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 mathod of tipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification  Cement Concrete Pavement (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction,
Compacting original ground supporting subgrade (Loosening of the ground upto a level of 500 mm below the subgrade level, watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.) Rolling with vibratory roller  Wet Mix Macadam - 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 mathod of tipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification  Cement Concrete Pavement (Construction of un-reinforced, dowel Jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction,
the ground upto a level of 500 mm below the subgrade level,  a watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.) Rolling with vibratory roller  Wet Mix Macadam - 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 mathod of tipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification  Cement Concrete Pavement (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared subbase with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate conforming to 15 383, maximum size of coarse aggregate on exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction,
compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed mathod of tipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification  Cement Concrete Pavement (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate conforming to IS 383, maximum size of coarse aggregate exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction,
jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to 15 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction,
expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing )
12 Pavement Courses - Granular
Granular Sub-base with Close graded Material (By Mix in Place Method) - Construction of Granular sub-base(GSB) by providing close graded Material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density, complete as per Technical Specification
cum
Total for Grading II Matrerial ( 50% of Total) cum 113.01
Total for Grading I Matrerial ( 50% of Total) cum 113.01
Wet Mix Macadam - 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 mathod of tipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification
c Pavement Courses - Bituminous
Prime Coat - Providing and applying primer coat with Bitumen emulsion on prepared surface of granular base including cleaning sqm 1506.74
of road surface and spraying primer at the rate of 0.6kg/sqm using mechnical means complete
of road surface and spraying primer at the rate of 0.6kg/sqm
using mechnical means complete  Tack Coat - Providing and applying tack coat with Bitumen emulsion using emulsion pressure distributor at the rate of 0.2 kg per sqm on the prepared bituminous/granular surface cleaned

	2.9 STANDARD COSTING OF STORM W	IAGE SYSTI	EM E&M WORKS		
	DESIGNS, REDESIGN WHEREVER NECESSARY AND BU	ILD NEW STO	ORM WATE	R DRAINAGE PUM	PING STATION
	SITC of Mechanical Components at each Pumping Station				
SI.No	Description	Quantity	Units	Rate	Amount
1	Manually Cleaned Bar Screen				
	The screen shall be of removable type and shall consist of a welded stainless steel (AISI410) frame with vertical flats spaced at 30 mm. The flats shall not be less than 10 mm in thickness and not less than 50 mm deep. The flats shall not have any joint. The spacing between the flats shall be uniform and preferably so maintained by adequate number of spacers, which shall be so located as not to interfere with the raking operation. To facilitate the manual cleaning of the screen the inclination of the screen shall be between 45° and 60° to the horizontal. Single piece screen width should not be more than 1.5 m. Two numbers stainless steel rollers shall be fixed on each side of frame to facilitate rolling contact with guide channel during lifting and lowering of screen.				
1.2	(500 X 1500) mm	4	Nos		
2	Providing, erecting and giving test of Non clog sewage submersible pump set with SS CF8 M impeller,CI casing,SS 316 shaft suitable for 3 Ph ,415 V , 50 Hz A.C. Supply, submersible motor having TEFC encloouser with class F insulation and IP 68 protection .The pump shall be operated at 1450 RPM .The scope shall include required accessories viz automatic coupling device,guide pipe,,chain with shakle,flat submersible cable upto starter panel through suitable GI pipe (30 mtr 3 Core flat copper for each pump with necessary electrical connection with the starter panel and as per specifications. (HP)				
	4 HP	4	Nos		
3	Providing Supplying erection testing and commissioning of 2 Tonne capacity Mobile Crane				
3.1	1 T Capacity for 7 m lift.	1	Nos		
	Total Cost, Rs				

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3.0 - I&D Nallah 2	_Chujja Gali Nala & Bi	isharisthan Gopal Road Nala
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Ite	em Description	Quantity	Total Amount
Drain co	nstruction Cost	Detailes are attached	
Outfall S	tructure Cost	Detailes are attached	
Generat	or Room Cost	Detailes are attached	
Operato	r Quarter Cost	Detailes are attached	
Elctrical	Component	Detailes are attached	
DG Cost		Detailes are attached	
Rising m	nain Cost	Detailes are attached	
Pump ai	nd Screen Cost	Detailes are attached	
	Total Cost		

### 3.1 Outfall II: Drain Construction Cost

### **Existing Drain Size**

### **Proposed Drain Size**

SI.	Name of Drains/ Nallah falling in Ganga River	Length of Drain (m) to be constructed	Velocity (m/sec)	Width	Depth	Area	effective flow area	Flow	Flow (MLD)	Width	Height	cost	Drain Cost	Width	Height	I&D	remark
1	Chhuja Gali Nala	300	0.17	0.5	1	0.5	10%	0.008	0.72	1.00	0.50			1.00	0.50	Pumping	TO STP
2	Bisharisthan Gopal road Nala	400	0.19	0.5	1	0.5	10%	0.010	0.84	0.50	1.00			1.00	1.00	Gravity/Diversion	Chhuja Gali Nala
														Drain construction cost including diversion			

	3.2.1 Cost Est	imate 1	for Outfall S	Structure	
SI no.	Description of Item	Unit	Quantity	Rate (INR)	Amount
1	Earth work excavation in foundation trenches or drains including dressing of sides and ramming of bottoms, lift as follows, including getting out the excavated soil and disposal of surplus excavated soil as directed, with all lead and lift complete as per the specification and as directed by the Engineer.  All kinds of soils				(INR)
1.1.1	Upto1.50m depth	cum	27.60		
1.1.1	1.5 m to 3 m	cum	20.15		
2	Sand filling upto 300mm in Plinth including watering and compacting in layers of 150 mm thick as per specifications and as directed by the Engineer.	cum	5.52		
3	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level in 1:3:6 (1 Cement : 3 coarse sand : 6 granded stone)	Cum	5.28		
4	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.	Cum	19.11		
5	Centring and Shuttering including strutting, propping etc. and removal of form for vertical walls	sqm	56.00		
6	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars TMTC - 500 ( Quantity at 90 kg/cum)	Kg	1719.90		
	Carriage of the following materials from quarry to work site including loading, unloading and staking at work site as per specification & direction of E/I.				
7	Aggregate	Cum	40.47		
	Sand	Cum	20.24		
	Cement	MT	18.16		
	Steel	MT	1.7199		
8	Wrought iron and mild steel welded work (using angles, square bars, tees and channel grills, grating frames, gates and tree guards of any size and design etc. including cost of screens and welding rods or bolts and nuts complete fixed in position but without the cost of excavation and concrete for fixing which will be paid separately	Kg	240.00		
	Erection of gates (a) 30% item NO- 8		240.00		
8.0	Centring and Shuttering including strutting, propping etc. and removal of form for Roof slab				
8.1	For roof slab	Sqm	16.00		
8.2	Weather shade, Chajjas, corbels etc. including edges	Sqm	1.20		
9.0	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars		8.00		
	steel quantities	Kg	720.00		
10.0	Brick work with bricks of class designation 100A in foundations and plinth in :Extra for Brick work in superstructure above plinth level upto floor V cum	Cum	5.52		
11.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for Internal walls)	Sqm	24.00		
12.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for ceiling)		16.00		

SI no.	Description of I tem	Unit	Quantity	Rate (INR)	Amount (INR)
13.0	20 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for External walls)	Sqm	24.90		
14.0	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work (for Internal walls)	Sqm	24.00		
15.0	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade : Two or more coats on new work (for ceiling)	Sqm	24.00		
16.0	Appying one coat of cement primer of approved brand and manufacture on wall surface (for External walls)	Sqm	16.00		
17.0	Providing wood work in frames of door, window clerestory windows and other frames, wrought framed and fixed in position in local wood for Door		24.90		
18.0	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including black enameled MS butt hinges with necessary screws excluding panelling which will be paid for separately - 30 mm thick		0.50		
	For Doors	Sqm	1.80		
19.0	Providing and fixing glazing in aluminium door, window V shutters and partition etc with PVC / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer incharge. (Cost of aluminium snap bading shall be paid in basic item). With glass pans of 5.50 mm thickness (Weight not less than 13.75 kg/sqm)	Sqm	0.50		
20.0	Providing and laying Ceramic glazed floor tiles (400x400) mm (thickness to be specified by the manufacturer) of 1st quality conforming to 1s: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent 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 grouting the joints with white cement and matching pigments etc, complete.		16.00		
	Total Cost ( INR )				

	3.3 Cost estimat	e of Gene	rator Room		
SI. No.	I tem description	Unit	Quantity	Rate (INR)	Amount (INR)
	Earth work Earthwork in excavation in foundation trenches or drains (not exceeding				
1.0	1.5 m width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m including getting out the excavated soil and disposals of surplus excavated soil as directed, within a lead of 50 m.				
1.1	(For all kinds of soil) From 0 m to 1.5 m	Cum	22.54		
1.2	From 1.5 m to 3 m	Cum	1.35		
2.0	Supplying and Filling on plinth with local sand and under floors including watering, ramming consolidating and dressing complete. For Generater room	Cum	7.20		
3.0	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level In 1:3:6 (1 Cement : 3 coarse sand : 6 granded stone upto 20 mm nominal size)	Cum	7.33		
4.0	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.				
4.1	For Footings	Cum	1.44		
4.2	Column below GL up to Plinth	Cum	0.26		
4.3	Plinth beams	Cum	1.61		
4.4	For columns above Ground levels	Cum	0.87		
4.5	Lintel beams	Cum	1.43		
4.6	Roof Beams	Cum	1.33		
4.7	For roof slab	Cum	4.32		
4.8	For Sunshades over Door & Windows :	Cum	0.23		
5.0	Centring and Shuttering including strutting, propping etc. and removal of form for				
5.1	For footing – F	Sqm	4.80		
5.2	Column upto GL – C	Sqm	4.60		
5.3	Plinth beams :	Sqm	14.00		
6.0	Centring and Shuttering including strutting, propping etc. and removal of form for	Sqm			
6.1	Lintel beams	Sqm	12.40		
6.2	Roof beams	Sqm	12.40		
7.0	Centring and Shuttering including strutting, propping etc. and removal of form for				
	Column	Sqm	15.09		
8.0	Centring and Shuttering including strutting, propping etc. and removal of form for Roof slab				
8.1	For roof slab	Sqm	24.00		
8.2	Weather shade,Chajjas, corbels etc. including edges	Sqm	4.13		
9.0	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars				
	steel quantities	MT	1.34		
10.0	Brick work with bricks of class designation 100A in foundations and plinth in :Extra for Brick work in superstructure above plinth level upto floor V cum	Cum	17.53		
11.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for Internal walls)	Sqm	64.48		
12.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for celling)				

	20 0			
13.0	20 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for External walls)	Sqm	89.54	
14.0	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade : Two or more coats on new work (for Internal walls)	Sqm	64.48	
15.0	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade : Two or more coats on new work (for ceiling)	Sqm	24.00	
16.0	Appying one coat of cement primer of approved brand and manufacture on wall surface (for External walls)	Sqm	89.54	
17.0	Providing wood work in frames of door, window clerestory windows and other frames, wrought framed and fixed in position in local wood for Door	Cum	0.16	
18.0	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including black enameled MS butt hinges with necessary screws excluding panelling which will be paid for separately - 30 mm thick			
	For Doors	Sqm	4.20	
19.0	Providing and fixing glazing in aluminium door, window V shutters and partition etc with PVC / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer incharge. (Cost of aluminium snap bading shall be paid in basic item). With glass pans of 5.50 mm thickness (Weight not less than 13.75 kg/sqm)	Sqm	4.32	
20.0	Providing and laying Ceramic glazed floor tiles (400x400) mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS:13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent 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 grouting the joints with white cement and matching pigments etc, complete.			
	Generater room	Sqm	24.00	
21.0	Cement plaster skirting (upto 30 cm height) with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement.  18 mm thick	Sqm	2.70	
22.0	Providing and laying in situ five course water proofing treatment with glass fibre tissue reinforced bitumen over roof consisting of first coat of bitumen primer @ 0.40 kg per sqm, 2nd and 4th courses of bonding material 1.60 kg per sqm which shall consist of blown type bitumen of grade 85/25 conforming to IS: 702, third layer of glass fibre tissue course as specified, fifth, the top most layer of stone grit 6 mm and down size or pea-seized gravel sprad @ 6 dm³ per sqm including preparation of surface excluding grading for slope etc. compete.	Sqm	24.00	
23.0	Providing and fixing on wall face unplastidsed-PVC (working pressure 4 kgf per sqm) rain water pipes conforming to IS : 4985 including jointing with seal ring conforming to IS: 5382 leaving 10 mm gap for thermal expansion.  110 mm diameter	m	13.50	
24.0	Filling available excavated 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 wateing lead.	Cum	14.86	
	Carriage of Materials :			
	Aggregate	Cum	16.66	
	Coarse Sand	Cum	31.07	
25.0	Local Sand	Cum	7.20	
	Cement	MT	6.01	
	Steel	MT	0.14	
	Brick (1000 Nos)		8.59	
	Total Cost			

	3.4 Cost Estima	ate of Operators Quarter					
SI. No	I tem description	Unit	Quantity	Rate (INR)	Amount (I NR)		
1	Earthwork in excavation in foundation trenches or drains (not exceeding 1.5 m width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m including getting out the excavated soil and disposals of surplus excavated soil as directed, within a lead of 50 m. (For all kinds of soil)						
1.1	From 0 m to 1.5 m	Cum	36.72				
1.2	From 1.5 m to 3 m	Cum	3.24				
2	Supplying and Filling on plinth with local sand and under floors including watering, ramming consolidating and dressing complete.	Cum	18.82				
3	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level in 1:3:6 (1 Cement : 3 coarse sand : 6 granded stone)	Cum	23.51				
4	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.						
4.1	For Columnn Footing	Cum	4.48				
4.2	For Column below GL up to plinth	Cum	0.74				
4.3	For Plinth beams-PB	Cum	5.08				
4.4	For columns above GL	Cum	2.45				
4.5	For lintel beams	Cum	2.04				
4.6	For Roof beams	Cum	3.59				
4.7	For Roof slab	Cum	12.03				
4.8	For Parapet	Cum	2.39				
5	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.						
5.1	Sunshade over Windows	Cum	0.89				
5.2	For Lofts & Racks	Cum	1.88				
6	Centring and Shuttering including strutting, propping etc. and removal of form for						
6.1	For Columnn Footing (C1 F1)	Sqm	10.80				
6.2	For Column below GL up to plinth	Sqm	51.36				
6.3	For Plinth beams-PB	Sqm	41.65				
6.4	For columns above GL	Sqm	42.66				
6.5	For lintel beams	Sqm	23.43				
6.6	For Roof beams	Sqm	30.97				
6.7	For Roof slab	Sqm	131.94				
6.8	For Parapet	Sqm	4.90				
0.0	Reinforcement for R. C. C work including straightening,	Sqiii	4.90				
7	cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars	MT	4.14				
8	Brick work with bricks of class designation 100A in foundations and plinth in :Extra for Brick work in superstructure above plinth level upto floor V cum	Cum	31.58				
9	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for Internal walls)	Sqm	167.68				
10	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for ceiling)	Sqm	58.41				
11	20 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for External walls)	Sqm	147.88				

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12	Wall painting with plastic emulsion paint of approved brand an	Sqm	226.09		
13	Appying one coat of cement primer of approved brand and manufacture on wall surface (for External walls)	Sqm	191.98		
14	Providing wood work in frames of door, window clerestory windows and other frames, wrought framed and fixed in position in local wood	Cum	0.50		
15	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including black enameled MS butt hinges with necessary screws excluding panelling which will be paid for separately - 30 mm thick	Sqm	6.93		
16	Providing and fixing glazing in aluminium door, window ventilator shutters and partition etc with PVC / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer incharge. (Cost of aluminium snap bading shall be paid in basic item). With glass pans of 5.50 mm thickness (Weight not less than 13.75 kg/sqm)				
16.1	For Windows	Sqm	8.28		
16.2	For Ventilators	Sqm	0.72		
17	Providing and fabricating and fixing of M S grill for window protection etc ,. As per specification, drawing and as directed by the engineer				
	For Windows & Ventilators	kg	9.00		
18	Providing and laying in situ five course water proofing treatment with glass fibre tissue reinforced bitumen over roof consisting of first coat of bitumen primer @ 0.40 kg per sqm, 2nd and 4th courses of bonding material 1.60 kg per sqm which shall consist of blown type bitumen of grade 85/25 conforming to IS: 702, third layer of glass fibre tissue course as specified, fifth, the top most layer of stone grit 6 mm and down size or pea-seized gravel sprad @ 6 dm³ per sqm including preparation of surface excluding grading for slope etc. compete.				
18.1	Slope concrete	Sqm	74.92		
19	Providing and laying Ceramic glazed floor tiles 400x400 mm (thickness to be specified by the manufacturer) of 1 st quality conforming to IS: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent make in colours such as white, Ivory, Grey, Fume, Red, Brown, laid on 20 mm thick cement motar 1:4 (1 cement: 4 Coarse sand) including grouting the joints with white cement and matching pigments etc, complete.				
	Total quantity		58.41		
20	Providing and fixing first quality ceramic glazed wall tiles conforming to 1S 15622 ( thickness to be specified by the manufacturer) of approved maike in all colours shades except burgundy, bottle green, black of any size as approved by engineer incharge in skirting risers of steps and dados over 12 mm thick bed of cement mortar (1:3) and jointing with grey cement slurry at 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete				
	Total quantity	Rmt	55.67		
21	Providing and laying Ceramic glazed floor tiles 400x400 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent make in colours except white, Ivory, Grey, Fume, Red, Brown, laid on 20 mm thick cement motar 1:4 (1 cement: 4 Coarse sand) including grouting the joints with White cement and matching pigments etc, complete.				
21.1	Toilet	Sqm	5.85		
22	Providing and laying Ceramic glazed floor tiles 400x400 mm (thickness to be specified by the manufacturer) of 1st quality conforming to 1s: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent make in colours except white, Ivory, Grey, Fume, Red, Brown, laid on 20 mm thick cement motar 1:4 (1 cement: 4 Coarse sand) including grouting the joints with White cement and matching pigments etc, complete.				
22.1	Toilet Walls	Sqm	17.54		
22.1	Tonot Trails	3	17.54	l	

23	Providing and fixing on wall face unplastidsed-PVC(working pressure 4 kgf per sqm) rain water pipes conforming to IS: 4985 including jointing with seal ring conforming to IS: 5382 leaving 10 mm gap for thermal expansion	Rmt	15.60	
24	Filling available excavated 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 wateing lead.	Cum	25.88	
	Carriage of Materials :			
	Aggregate	Cum	52.34	
	Coarse Sand	Cum	68.34	
25	Local Sand	Cum	18.82	
25	Cement	MT	18.80	
	Steel	MT	0.00	
	Brick (1000 Nos)		15.48	
	Total Cost			
26.0	Plumbing work :			
26.1	Stainless steel kitchen sink - without drain board 470 mm X 420 mm bowl depth 178 mm	No.	1	
26.2	Salem Stainless steel AISI - 304 (18/8) Round basin 405 mm X 355 mm	No.	2	
26.3	PTMT - Soap Dish/Holder 138 mm X 102 mm X 75 mm	No.	3	
20.3	·	NO.	3	
26.4	White vitreous china dual purpose closet (Anglo Indian W.C.) suitable for use as squatting pan or European type water closet as per manufacturer's specifications	No.	1	
26.4.1	White Vitreous china 10 lit. (full flush) capacity controlled low levelflushing cistern with all fittings	No.	1	
26.5	C.P.brass toilet paper holder of standard size	No.	3	
26.6	PTMT - Towel Rail (600 mm)	No.	3	
26.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.			
26.7.1	15 mm nominal outer dia Pipes	m	25	
26.7.2	25 mm nominal outer dia Pipes	m	25	
26.7.3	32 mm nominal outer dia Pipes	m	15	
26.8	uPVC pipes (working pressure 4 kg / cm2 ) Single socketed Pipe			
26.8.1	75 mm	m	30	
26.8.2	110 mm	m	30	
26.9	15 mm C.P. brass tap with elbow operation lever	No.	4	
	Gunmetal non-return valve-horizontal (screwed end) 25 mm			
26.10	Dia	No.	1	
26.11	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, ISI: 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	lit	2000	
26.12	Brass full way valve with C.I. wheel (screwed end) 40 mm dia	No	1	
26.13	Gunmetal non-return valve-horizontal (screwed end) 25 mm Dia	No	1	 
26.14	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No	1	

26.15	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No	1		
	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. – 35	No	1		
	Total Cost of Sanitary items				
•	Total Cost				

SI.No Description Unit Quantity Rate Amount (INR)  1.0 EARTHING  Neutral Earthing - Earthing with Copper earth plate 600mms600mms600mms60mms thek including accessories, and providing meanoury enclosure with covery plate having locking arrangement and watering pipe of 2.7m long dtc with characcal/coke and salt as required.  1.1 providing meanoury enclosure with covery plate having locking arrangement and watering pipe of 2.7m long dtc with characcal/coke and salt as required.  1.2 Body Earthing - Earthing with Gl earth pipe 4.5m long, 40mm did including accessories, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  2. LT PANEL BOARD (Indoor type) Supplying and fixing 100 looking arrangement and watering pipe etc with charcoal/coke and salt as required.  2. MINATURE CIRCUIT BREAKERS  Supplying and fixing 100 Arrang and 16KA breaking capacity and pole IP MCCB in existing cubic lepanel board including artifling tools in cubicle panel, making connections, ets as required.  2. MINATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB D6 complete with connections, testing and committed in the connections, ets as required.  2. MINATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB D6 complete with connections, testing and committed in the connections, etc. step and committed in the connections, testing
Description  EARTHING  Neutral Earthing - Earthing with Copper earth plate 600mmx600mmx600mmx6mm thick including accessories, and committed grant and watering pipe of 2.7m long etc with charcoal/coke and sate are required.  1.1 providing manonary enclosure with cover plate having locking arrangement and watering pipe of 2.7m long etc with charcoal/coke and sate a required.  2.2 Body Earthing - Earthing with Gl earth pipe 4.5m long, 40mm did including accessories, and providing manonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and satt as required.  2.0 LT PANEL BOARD (Indoor type)  Supplying and fixing following way prewired SP&N MCB distribution board of steel sheet for 240 volts on surface/ roress complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with incoming and congress of the provided of the provided copper conductor up to terminal blocks, timed copper bus bar, neutral link, earth bar, din bar, detachable gland pitale, interconnections, power partial cincluding acriting pote in outches panel, making connections, etc.  2.2 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A triple pole and neutral. 24DV, "Courve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and committoning etc as required.  2.3 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral. 24DV, "Courve, miniature circuit breaker for inductive load of single pole and neutral in the coker for inductive load of single pole and neutral in the coker for inductive load of single pole and
Noutral Earthing - Earthing with Copper earth plate 600mmx600mmx600mmx3mm thick including accesseries, and 1.1 providing masonary endouser with cover plate having locking arrangement and watering pipe of 2.7m long etc with charcoal/coke and sail as required.  1.2 Bddy Earthing - Earthing with Glearth pipe 4.5m long, 40mm dia including accesseries, and providing masonary endosure with cover plate having locking arrangement and watering pipe etc: with charcoal/coke and sail as required.  2.0 LT PANEL BOARD (Indoor type)  Supplying and fixing following way prewired SPAN ICO distribution beard including accesseries and incenning and outgoing circuits, duly prewired with suitable size FRES PVC  Insulated copper conductor up to terminal blocks, tinned cooper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconections, powder painted including earthing etc. as required. (But without MCB/ RCCB/ Isolator)  2.2 MCCB DISTRIBUTION BOARDS  Providing and fixing 100A rating and 16/A breaking capacity and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as a required.  2.3 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and committed in plate as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature excuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committening et as required.  2.5 EARTHING  Body Earthing - Earthing with Gl carth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with connections, testing and committening et as required.  Body Earthing - Earthing with Gl carth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement an
oOommxoOommxoTmm thick including accesseries, and providing mesonary enclosure with cover plate having locking arrangement and watering pipe of 2.7m long etc. with charcoal/coke and salt as required.  1.2 Body Farthing - Farthing with Gi earth pipe 4.5m long, 40mm dis including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/coke and salt as required.  1.2 LT PANEL BOARD (Indoor type)  Supplying and fixing following way prowired SP&N MCB distribution board of steel sheet for 240 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prowired with suitable accept boar and an acceptable accept boar and acceptable acceptable bear and acceptable acceptable bear in the steel of the steel o
1.1 providing masonary enclosure with cover plate having locking strangement and watering pipe of 2.7m long etc. with charcoal/coke and salt as required.  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing misonary enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/coke and salt as required.  2.0 LI PAMEL BOARD (Indoor type)  Supplying and fixing following way preweed SP&M MCB distribution board of steel sheet for 240 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prevised with suitable size FRLS PVC  1.1 insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder panted including earthing etc. as required. (But without MCB/ RCCB/ Isolator)  2.2 MCCB DISTRIBUTION BOARDS  Providing and fixing 100 rating and 16KA breaking capacity and pole TP MCCB in existing cubicle panel board including drilling bloes in cubic legand, making connections, ets as required.  2.3 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 415V, "C" cover, miniature circuit prewater for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and committioning etc as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committioning etc as required.  2.5 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with characoticoke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4-12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, 00 surface/re
dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  2.0 LT PANEL BOARD (Indoor type)  Supplying and fixing following way prewired SP&N MCB distribution board of steel sheet for 240 volts on surface/ recess complete with losse wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with surface and outgoing circuits, duly prewired with surface and plate, interconnections, boxeder patheta including earthing etc. as required. (But without McD/ RCCB/ Isolator)  2.1 insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc. as required. (But without McD/ RCCB/ Isolator)  2.2 MCCB DISTRIBUTION BOARDS  Providing and fixing 100A rating and 16KA breaking capacity and pole 17 MCCB in existing dubles panel board including drilling holes in cubicle panel, making connections, ets as required.  2.3 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of fitple pole and neutral in the existing MCB D8 complete with connections, tosting and committeding etc as required.  2.4 MINIATURE CIRCUIT BREAKER S  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB D8 complete with connections, testing and committeding etc as required.  2.5 EARTHING  Body Earthing - Earthing with Gi earth plpe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 32A, single door, horizontal type thee pole and neutral, sheet steel, MCB D8, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, are that
Supplying and fixing following way prewired SP&N MCB distribution board of steel sheef for 240 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size FRLS PVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din har, detachable gland plate, interconnections, powder painted including earthing etc. as required. (But without MCB/ RCCB/ Isolator) 2 + 8 way/10 way, Double door 2 - 2 + 8 way/10 way, Double door 3 tripling holes in cubicle panel, making connections, ets as required.  2.3 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and committening etc as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committening etc as required.  2.5 EARTHING  Body Earthing - Earthing with Gl earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcaculcoke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powdered painted including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcaculcoke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated. Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)
distribution board of steel sheet for 240 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with submitted copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc. as required. (But without MCB/ RCCB/ Isolator) 2.1 8 way/10 way. Double door 2.2 MCCB DISTRIBUTION BOARDS  Providing and fixing 100A rating and 16KA breaking capacity and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as required.  2.3 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB Bo complete with connections, testing and committioning etc as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB Bo complete with connections, testing and committioning etc as required.  2.5 EARTHING  Body Earthing - Earthing with Gl earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having bocking arrangement and watering pipe etc with charcoal/coke and saft as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutrals, beet steel. MCB B. 415V, on surface/reces, complete with tinned copper bus bar, nuetral was reached including earthing etc as required. (but without MCB/RCCB/solators)  3.1 susper, earth bar, in her interconnections, powdered painted including accesseries, and providing masonary enclosure with cover plate having bocking arrangement and watering pipe etc with charcoal/coke and saft as required.  4 CABLES
Providing and fixing 100A rating and 16KA breaking capacity and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as required.  2.3 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and committoning et as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committoning et as required.  2.5 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe et with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on an additional circuit of the pole and neutral, sheet steel, MCB DB, 415V, on an additional connections prompted with timed copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powdered painted including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)
and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as required.  2.3 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and committoning etc as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committioning etc as required.  2.5 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with thinned copper bus bar, nuetral bust, and in bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)
Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and committoning etc as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committoning etc as required.  2.5 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powdered painted including earthing et as required. (but without MCB/RCCB/isolators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4CX16 sq mm + 2x16 sq mm earth wire m 1
curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and committoning et as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committoning etc as required.  2.5 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire
Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committoning etc as required.  2.5 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on substar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed ,galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1
Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1
dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1
Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1
thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1
Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1
dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1
Supply of LT UG cable having Copper conductor PVC insulated, Sheathed ,galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1
insulated, Sheathed , galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1
4.2 4Cx10 sq mm + 2x10 sq mm earth wire m 6.5
4.3 4Cx4 sq mm + 2x4 sq mm earth wire m 15
4.4 2Cx2.5 sq mm + 1x2.5 sq mm earth wire m 14
5.0 LUMINARIES, SOCKETS AND SWITCHES
5.1 120W Gate lamp with fitting No 2
5.2 40W flourescent lamp No 4
5.3 70W MH Lamp for site lighting No 4
5.4 Single switched socket with multi purpose No 2
5.5 Switches No 6
Total Cost

	3.6.2 Raw wate	r Transpo	rt main form I&D	to STP - Es	timate	
SI. No.	Description of Item	Unit	No.	Quantity	Rate (INR)	Amount (INR)
1.0	Excavating trenches of required width for pipes cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m including getting out the excavated					
1.0	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.					
	0.0 to 1.5 mtr. Depth					
1.1	do - in all kindes of soil - 100%	m		2.05		
2.0	Supplying and Filling in plinth with local sand and under floors including , watering, ramming consolidation and dressing complete.	cum		204.71		
3.0	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron. Pipes conforming to IS: 8329:DI-K9					
3.1	100.00	m		1819.6		
4	Providing push on joints to Centifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes inculding testing of joints and the cost of rubber gasket (one at every 6m).					
4.1	100.00	Joint		166		
5.0	Providing and laying D.I. specials of class K-12 suitable for push-	on jointing	as per IS : 9523 :			
5.1	Bends-As per BS 4772 code					
J. 1	90 degree (63.5 Kg)	kg		317.50		
5.2	Taper-As per BS 4772 code					
	300x200mm (34.5 Kg)	kg		34.50		
5.3	Tee-As per BS 4772 code					
	300x300x300 mm (79.5 Kg)	kg		79.50		
6.0	Providing and fixing <b>C.1. sluice valves (</b> with cap) complete with bolts, nuts, rubber insertions etc.(the tail pieces if required will be paid separately)					
6.1	100.00	No		4.00		
7.0	Providing and fixing <b>C.I. sluice valves for Scouring (</b> with cap) complete with bolts, nuts, rubber insertions etc.(the tail pieces if required will be paid separately)					
7.1	100.00	No		3.00		
8.0	Providing & Constructing masonry Chamber 1.5x1.5x1.5 m inside, in brick work in cement mortar 1:3 (1 cement : 3 coarse sand) for valve, with cast insitu RCC slab with necessary reinforcment. The valve chamber shall be plastered with CM 1:4, A levelling coars of M10 shall be provided. The cost is inclusive of excavation, disposal and construction of valve chamber with moduar bricks plasting with cement mortar with all lead and lift etc., as per specification & drawing.					
8.1	Sluice valve chambers	No		4.00		
8.2	Scour valve chambers	No		4.00		
9.0	Providing and constructing of the RCC Thrust Blocks for DI bends including the excavations of soils up to the required depth ,disposal of soils after refilling with selected available earth, providing PCC including cost of labours, materials tools, curing etc., complete as per drawing and as directed by the Engineer (inclusive of cost of steel)					
	90 degree	No		2.00		
9.1	Enter Total pipe length	1819.64		М		
•	Percentage of CC Road in town	70.00		%		
	Percentage of Asphalt Road in town	30.00		%		
10	Dismantling and restoration of roads :					
10.1	Dismantling of cement concrete pavement (dismantling of cement concrete pavements by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable material	cum		171.96		
10.2	Dismantalling of flexible Pavements( dismantling of flexible pavements and disposal of dismantled materials up to a lead of 1000 m, stacking serviceable and unserviseable materials separately)					
	Bituminous courses by mechanical means	cum		24.57		
	Granular courses by manualmeans	cum		286.59		
11	Restoration of road as per the specification and as directed by the engineer					
11.1	Restoration of CC road			1		
			<u> </u>	<u> </u>		

а	Compacting original ground supporting subgrade (Loosening of the ground upto a level of 500 mm below the subgrade level, watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.) Rolling with vibratory roller	cum	818.84	
b	Wet Mix Macadam - 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 mathod of tipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification	cum	61.41	
С	Cement Concrete Pavement (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing)	cum	171.96	
	Pavement Courses - Granular			
12	Granular Sub-base with Close graded Material (By Mix in Place Method) - Construction of Granular sub-base(GSB) by providing close graded Material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density, complete as per Technical Specification			
	Total for Grading II Matrerial ( 50% of Total)	cum	85.98	
	Total for Grading I Matrerial ( 50% of Total)	cum	85.98	
b	Wet Mix Macadam - 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 mathod of tipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification	cum	286.59	
	Pavement Courses - Bituminous			
	Prime Coat - Providing and applying primer coat with Bitumen emulsion on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.6kg/sqm using mechnical means complete	sqm	1146.37	
С	Tack Coat - Providing and applying tack coat with Bitumen emulsion using emulsion pressure distributor at the rate of 0.2 kg per sqm on the prepared bituminous/granular surface cleaned with mechancial broom .	sqm	1146.37	
	Providing and laying <b>Dense graded bituminous macadam</b> with 100-120 TPH batch HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5 % by weight of total mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specifications Clause 507. (Grading II -19mm nominal size)	cum	28.66	
-	Total Co			

3.7 Cost estimate For Electrical Components For Pumphouse

	3.7 Cost estimate For Electr	icai comp	onents FOI		
SI.No	Description	Unit	Quantity	Rate (INR)	Amount (INR)
1.0	DIESEL GENERATOR 50 KVA				
1.1	50 KVA, 40KW, 415V, 50 Hz, comprising of Perkins Engine Coupled to Stamford make Alternator, complete with all Standard accessories and ATS with Acoustic enclosure.	No	1		
1.2	EARTHING				
1.2.1	Neutral Earthing - Earthing with Copper earth plate 600mmx600mmx3mm thick including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe of 2.7m long etc with charcoal/coke and salt as required.	No	2		
1.2.2	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement andwateringpipeetc with charcoal/coke and salt as required.	No	2		
2.0	LT PANEL BOARD (Indoor type)				
2.1	Supplying and fixing 4 ways surface/recess mounting, vertical type, 415V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, with provision of 100A TP 16KA MCCB as incommer, interconnection between incomer MCCB and bus bars (but without MCB,s /MCCB's) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required.)	No	1		
2.2	MCCB DISTRIBUTION BOARDS				
	Providing and fixing 100A rating and 16KA breaking capacity and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as required.	No	1		
2.3	MINIATURE CIRCUIT BREAKERS				
	Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and commitioning etc as required.	No	2		
2.4	MINIATURE CIRCUIT BREAKERS				
	Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committoning etc as required.	No	1		
2.5	EARTHING				
	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement andwateringpipeetc with charcoal/coke and salt as required.	No	2		
3.0	DISTRIBUTION BOARD				
3.1	Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral Bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)	m	1		
3.2	EARTHING				
	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement andwateringpipeetc with charcoal/coke and salt as required.	No	2		
4.0	CABLES				

	Supply of LT UG cable having Copper conductor PVC insulated, Sheathed ,galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)				
4.1	4Cx16 sq mm + 2x16 sq mm earth wire	m	1		
4.2	4Cx10 sq mm + 2x10 sq mm earth wire	m	6.5		
4.3	4Cx4 sq mm + 2x4 sq mm earth wire	m	15		
4.4	2Cx2.5 sq mm + 1x2.5 sq mm earth wire	m	14		
5.0	LUMINARIES, SOCKETS AND SWITCHES				
5.1	120W Gate lamp with fitting	No	2		
5.2	40W flourescent lamp	No	4		
5.3	70W MH Lamp for site lighting	No	4		
5.4	Single switched socket with multi purpose	No	2		
5.5	Switches	No	6		
	Total Cost			•	

#### 3.8 SITC of Mechanical Components at each Pumping Station

SI.No	Description	Quantity	Units	Rate	Amount
1	Manually Cleaned Bar Screen				
	The screen shall be of removable type and shall consist of a welded stainless steel (AISI410) frame with vertical flats spaced at 30 mm. The flats shall not be less than 10 mm in thickness and not less than 50 mm deep. The flats shall not have any joint. The spacing between the flats shall be uniform and preferably so maintained by adequate number of spacers, which shall be so located as not to interfere with the raking operation. To facilitate the manual cleaning of the screen the inclination of the screen shall be between 45° and 60° to the horizontal. Single piece screen width should not be more than 1.5 m.Two numbers stainless steel rollers shall be fixed on each side of frame to facilitate rolling contact with guide channel during lifting and lowering of screen.				
1.2	(500 X 1500) mm	4	Nos		
2	Providing, erecting and giving test of Non clog sewage submersible pump set with SS CF8 M impeller,CI casing,SS 316 shaft suitable for 3 Ph ,415 V , 50 Hz A.C. Supply, submersible motor having TEFC encloouser with class F insulation and IP 68 protection .The pump shall be operated at 1450 RPM .The scope shall include required accessories viz automatic coupling device,guide pipe,,chain with shakle,flat submersible cable upto starter panel through suitable GI pipe ( 30 mtr 3 Core flat copper for each pump with necessary electrical connection with the starter panel and as per specifications. (HP)				
	2 HP	4	Nos		
3	Providing Supplying erection testing and commissioning of 2 Tonne capacity Mobile Crane				
3.1	1 T Capacity for 7 m lift.	1	Nos		
	Total Cost				

4.0 I&D Nallah 3_Ajgaibinath Nala								
Item Description	Quantity	Total Amount						
Drain construction Cost	Detailes are attached							
Outfall Structure Cost	Detailes are attached							
Generator Room Cost	Detailes are attached							
Operator Quarter Cost	Detailes are attached							
Elctrical Component Cost	Detailes are attached							
DG Cost	Detailes are attached							
Rising Main Cost	Detailes are attached							
Pump and Screen Cost	Detailes are attached							
Total (								

# 4.1 Drain Construction Cost

# **Existing Drain Size**

### **Proposed Drain Size**

SI. No.	Name of Drains/ Nallah falling in Ganga River	Length of Drain (m) to be constructed		Width	Depth		effective flow area	Flow	Flow (MLD)	Width	Height	cost	Drain Cost	Width	Height	I&D
1	Ajgaibinath Nala	300	0.27	1	1	1	10%	0.03	2.35	1.00	1.00			1.00	1.50	Pumping

4.2.1 Cost Estimate for Outfall Structures						
				Rate	Amount	
SI no.	Description of Item	Unit	Quantity	(INR)	(INR)	
1	Earth work excavation in foundation trenches or drains including dressing of sides and ramming of bottoms, lift as follows, including getting out the excavated soil and disposal of surplus excavated soil as directed, with all lead and lift complete as per the specification and as directed by the Engineer.  All kinds of soils					
1.1.1	Upto1.50m depth	cum	38.10			
1.1.1	1.5 m to 3 m	cum	41.40			
2	Sand filling upto 300mm in Plinth including watering and compacting in layers of 150 mm thick as per specifications and as directed by the Engineer.	cum	7.62			
3	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level in 1:3:6 (1 Cement : 3 coarse sand : 6 granded stone)	Cum	7.30			
4	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.	Cum	26.34			
5	Centring and Shuttering including strutting, propping et	sqm	77.00			
6	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars TMTC - 500 (Quantity at 90 kg/cum)	Kg	2370.60			
	Carriage of the following materials from quarry to work site including loading, unloading and staking at work site as per specification & direction of E/I.					
7	Aggregate	Cum	55.73			
	Sand	Cum	27.87			
	Cement	MT	25.01			
8	Steel Wrought iron and mild steel welded work (using angles, square bars, tees and channel grills, grating frames, gates and tree guards of any size and design etc. including cost of screens and welding rods or bolts and nuts complete fixed in position but without the cost of excavation and concrete for fixing which will be paid separately	MT Kg	2.37			
	Erection of gates (a) 30% item NO- 8		240.00			
8.0	Centring and Shuttering including strutting, propping etc. and removal of form for Roof slab					
8.1	For roof slab	Sqm	22.00			
8.2	Weather shade,Chajjas, corbels etc. including edges	Sqm	1.20			
9.0	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete.  Thermo - Mechanically Treated bars		11.00			
	steel quantities	Kg	990.00			
10.0	Brick work with bricks of class designation 100A in foundations and plinth in :Extra for Brick work in superstructure above plinth level upto floor V cum	Cum	6.56			

SI no.	Description of Item	Unit	Quantity	Rate (INR)	Amount (INR)
11.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for Internal walls)	Sqm	28.50		
12.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for celling)		22.00		
13.0	20 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for External walls)	Sqm	29.40		
14.0	Wall painting with plastic emulsion paint of approved br	Sqm	28.50		
15.0	Wall painting with plastic emulsion paint of approved br	Sqm	28.50		
16.0	Appying one coat of cement primer of approved brand and manufacture on wall surface (for External walls)	Sqm	22.00		
17.0	Providing wood work in frames of door, window clerestory windows and other frames, wrought framed and fixed in position in local wood for Door	Cum	29.40		
18.0	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including black enameled MS butt hinges with necessary screws excluding panelling which will be paid for separately - 30 mm thick		0.50		
	For Doors	Sqm	1.80		
19.0	Providing and fixing glazing in aluminium door, window V shutters and partition etc with PVC / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer incharge. (Cost of aluminium snap bading shall be paid in basic item). With glass pans of 5.50 mm thickness (Weight not less than 13.75 kg/sqm)	Sqm	0.50		
20.0	Providing and laying Ceramic glazed floor tiles (400x400) mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS:13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent 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 grouting the joints with white cement and matching pigments etc, complete.	Sqm	22.00		
	Total Cost				

4.3 Cost estimate of Generator Room								
SI. No.	I tem description	Unit	Quantity	Rate (INR)	Amount (INR)			
	Earth work Earthwork in excavation in foundation trenches or drains (not exceeding							
1.0	1.5 m width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m including getting out the excavated soil and disposals of surplus excavated soil as directed, within a lead of 50 m.							
1.1	(For all kinds of soil) From 0 m to 1.5 m	Cum	22.54					
1.2	From 1.5 m to 3 m	Cum	1.35					
2.0	Supplying and Filling on plinth with local sand and under floors including watering, ramming consolidating and dressing complete. For Generater room	Cum	7.20					
3.0	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level In 1:3:6 (1 Cement : 3 coarse sand : 6 granded stone upto 20 mm nominal size)	Cum	7.33					
4.0	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.							
4.1	For Footings	Cum	1.44					
4.2	Column below GL up to Plinth	Cum	0.26					
4.3	Plinth beams	Cum	1.61					
4.4	For columns above Ground levels	Cum	0.87					
4.5	Lintel beams	Cum	1.43					
4.6	Roof Beams	Cum	1.33					
4.7	For roof slab	Cum	4.32					
4.8	For Sunshades over Door & Windows :	Cum	0.23					
5.0	Centring and Shuttering including strutting, propping etc. and removal of form for							
5.1	For footing – F	Sqm	4.80					
5.2	Column upto GL – C	Sqm	4.60					
5.3	Plinth beams :	Sqm	14.00					
6.0	Centring and Shuttering including strutting, propping etc. and removal of form for	Sqm						
6.1	Lintel beams	Sqm	12.40					
6.2	Roof beams	Sqm	12.40					
7.0	Centring and Shuttering including strutting, propping etc. and removal of form for							
	Column	Sqm	15.09					
8.0	Centring and Shuttering including strutting, propping etc. and removal of form for Roof slab							
8.1	For roof slab	Sqm	24.00					
8.2	Weather shade,Chajjas, corbels etc. including edges	Sqm	4.13					
9.0	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars							
	steel quantities	MT	1.34					
10.0	Brick work with bricks of class designation 100A in foundations and plinth in :Extra for Brick work in superstructure above plinth level upto floor V cum	Cum	17.53					
11.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for Internal walls)	Sqm	64.48					
12.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for ceiling)							
_	Generator room	Sqm	24.00					

13.0	20 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for External walls)	Sqm	89.54	
14.0	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work (for Internal walls)	Sqm	64.48	
15.0	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work (for ceiling)	Sqm	24.00	
16.0	Appying one coat of cement primer of approved brand and manufacture on wall surface (for External walls)	Sqm	89.54	
17.0	Providing wood work in frames of door, window clerestory windows and other frames, wrought framed and fixed in position in local wood for Door	Cum	0.16	
18.0	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including black enameled MS butt hinges with necessary screws excluding panelling which will be paid for separately - 30 mm thick			
	For Doors	Sqm	4.20	
19.0	Providing and fixing glazing in aluminium door, window V shutters and partition etc with PVC / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer incharge. (Cost of aluminium snap bading shall be paid in basic item). With glass pans of 5.50 mm thickness (Weight not less than 13.75 kg/sqm)	Sqm	4.32	
20.0	Providing and laying Ceramic glazed floor tiles (400x400) mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS:13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent 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 grouting the joints with white cement and matching pigments etc, complete.			
	Generater room	Sqm	24.00	
21.0	Cement plaster skirting (upto 30 cm height) with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement.  18 mm thick	Sqm	2.70	
22.0	Providing and laying in situ five course water proofing treatment with glass fibre tissue reinforced bitumen over roof consisting of first coat of bitumen primer @ 0.40 kg per sqm, 2nd and 4th courses of bonding material 1.60 kg per sqm which shall consist of blown type bitumen of grade 85/25 conforming to IS: 702, third layer of glass fibre tissue course as specified, fifth, the top most layer of stone grit 6 mm and down size or pea-seized gravel sprad @ 6 dm³ per sqm including preparation of surface excluding grading for slope etc. compete.	Sqm	24.00	
23.0	Providing and fixing on wall face unplastidsed-PVC (working pressure 4 kgf per sqm) rain water pipes conforming to IS: 4985 including jointing with seal ring conforming to IS: 5382 leaving 10 mm gap for thermal expansion.  110 mm diameter	m	13.50	
24.0	Filling available excavated 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 wateing lead.	Cum	14.86	
	Carriage of Materials :			
	Aggregate	Cum	16.66	
25.0	Coarse Sand Local Sand	Cum	31.07 7.20	
23.0	Cement	MT	6.01	
	Steel	MT	0.14	
	Brick (1000 Nos)		8.59	
	Total Cost			
	10.01 0031			

4.4 Cost Estimate of Operators Quarter								
SI. No	I tem description	Unit	Quantity	Rate (INR)	Amount (I NR)			
1	Earthwork in excavation in foundation trenches or drains (not exceeding 1.5 m width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m including getting out the excavated soil and disposals of surplus excavated soil as directed, within a lead of 50 m. (For all kinds of soil)							
1.1	From 0 m to 1.5 m	Cum	36.72					
1.2	From 1.5 m to 3 m	Cum	3.24					
2	Supplying and Filling on plinth with local sand and under floors including watering, ramming consolidating and dressing complete.	Cum	18.82					
3	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level in 1:3:6 (1 Cement : 3 coarse sand : 6 granded stone)	Cum	23.51					
4	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.							
4.1	For Columnn Footing	Cum	4.48					
4.2	For Column below GL up to plinth	Cum	0.74					
4.3	For Plinth beams-PB	Cum	5.08					
4.4	For columns above GL	Cum	2.45					
4.5	For lintel beams	Cum	2.04					
4.6	For Roof beams	Cum	3.59					
4.7	For Roof slab	Cum	12.03					
4.8	For Parapet	Cum	2.39					
5	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.							
5.1	Sunshade over Windows	Cum	0.89					
5.2	For Lofts & Racks	Cum	1.88					
6	Centring and Shuttering including strutting, propping etc. and removal of form for							
6.1	For Columnn Footing (C1 F1)	Sqm	10.80					
6.2	For Column below GL up to plinth	Sqm	51.36					
6.3	For Plinth beams-PB	Sqm	41.65					
6.4	For columns above GL	Sqm	42.66					
6.5	For lintel beams	Sqm	23.43					
6.6	For Roof beams	Sqm	30.97					
6.7	For Roof slab	Sqm	131.94					
6.8	For Parapet	Sqm	4.90					
0.0	Reinforcement for R. C. C work including straightening,	Sqiii	4.70					
7	cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars	MT	4.14					
8	Brick work with bricks of class designation 100A in foundations and plinth in :Extra for Brick work in superstructure above plinth level upto floor V cum	Cum	31.58					
9	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for Internal walls)	Sqm	167.68					
10	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for ceiling)	Sqm	58.41					
11	20 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for External walls)	Sqm	147.88					

				1	
12	Wall painting with plastic emulsion paint of approved brand an	Sqm	226.09		
13	Appying one coat of cement primer of approved brand and manufacture on wall surface (for External walls)	Sqm	191.98		
14	Providing wood work in frames of door, window clerestory windows and other frames, wrought framed and fixed in position in local wood	Cum	0.50		
15	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including black enameled MS butt hinges with necessary screws excluding panelling which will be paid for separately - 30 mm thick	Sqm	6.93		
16	Providing and fixing glazing in aluminium door, window ventilator shutters and partition etc with PVC / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer incharge. (Cost of aluminium snap bading shall be paid in basic item). With glass pans of 5.50 mm thickness (Weight not less than 13.75 kg/sqm)				
16.1	For Windows	Sqm	8.28		
16.2	For Ventilators	Sqm	0.72		
17	Providing and fabricating and fixing of M S grill for window protection etc ,. As per specification, drawing and as directed by the engineer				
	For Windows & Ventilators	kg	9.00		
18	Providing and laying in situ five course water proofing treatment with glass fibre tissue reinforced bitumen over roof consisting of first coat of bitumen primer @ 0.40 kg per sqm, 2nd and 4th courses of bonding material 1.60 kg per sqm which shall consist of blown type bitumen of grade 85/25 conforming to IS: 702, third layer of glass fibre tissue course as specified, fifth, the top most layer of stone grit 6 mm and down size or pea-seized gravel sprad @ 6 dm <sup>3</sup> per sqm including preparation of surface excluding grading for slope etc. compete.				
18.1	Slope concrete	Sqm	74.92		
19	Providing and laying Ceramic glazed floor tiles 400x400 mm (thickness to be specified by the manufacturer) of 1 st quality conforming to 15: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent make in colours such as white, Ivory, Grey, Fume, Red, Brown, laid on 20 mm thick cement motar 1:4 (1 cement: 4 Coarse sand) including grouting the joints with white cement and matching pigments etc, complete.				
	Total quantity		58.41		
20	Providing and fixing first quality ceramic glazed wall tiles conforming to IS 15622 (thickness to be specified by the manufacturer) of approved maike in all colours shades except burgundy, bottle green, black of any size as approved by engineer incharge in skirting risers of steps and dados over 12 mm thick bed of cement mortar (1:3) and jointing with grey cement slurry at 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete				
	Total quantity	Rmt	55.67		
21	Providing and laying Ceramic glazed floor tiles 400x400 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent make in colours except white, Ivory, Grey, Fume, Red, Brown, laid on 20 mm thick cement motar 1:4 (1 cement: 4 Coarse sand) including grouting the joints with White cement and matching pigments etc, complete.				
21.1	Tollet	Sqm	5.85		
22	Providing and laying Ceramic glazed floor tiles 400x400 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent make in colours except white, Ivory, Grey, Fume, Red, Brown, laid on 20 mm thick cement motar 1:4 (1 cement: 4 Coarse sand) including grouting the joints with White cement and matching pigments etc, complete.				
22.1	Toilet Walls	Sqm	17.54		
		-4			

	Providing and fixing on wall face unplastidsed-PVC(working			
23	pressure 4 kgf per sqm) rain water pipes conforming to IS: 4985 including jointing with seal ring conforming to IS: 5382 leaving 10 mm gap for thermal expansion	Rmt	15.60	
24	Filling available excavated 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 wateing lead.	Cum	25.88	
	Carriage of Materials :			
	Aggregate	Cum	52.34	
	Coarse Sand	Cum	68.34	
25	Local Sand	Cum	18.82	
25	Cement	MT	18.80	
	Steel	MT	0.00	
	Brick (1000 Nos)		15.48	
	Total Cost			
26.0	Plumbing work :			
26.1	Stainless steel kitchen sink - without drain board 470 mm X 420 mm bowl depth 178 mm	No.	1	
26.2	Salem Stainless steel AISI - 304 (18/8) Round basin 405 mm X 355 mm	No.	2	
26.3	PTMT - Soap Dish/Holder 138 mm X 102 mm X 75 mm	No.	3	
26.4	White vitreous china dual purpose closet (Anglo Indian W.C.) suitable for use as squatting pan or European type water closet as per manufacturer's specifications	No.	1	
26.4.1	White Vitreous china 10 lit. (full flush) capacity controlled low levelflushing cistern with all fittings	No.	1	
26.5	C.P.brass toilet paper holder of standard size	No.	3	
26.6	PTMT - Towel Rail (600 mm)	No.	3	
26.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.			
26.7.1	15 mm nominal outer dia Pipes	m	25	
26.7.2	25 mm nominal outer dia Pipes	m	25	
26.7.3	32 mm nominal outer dia Pipes	m	15	
26.8	uPVC pipes (working pressure 4 kg / cm2 ) Single socketed			
26.8.1	Pipe 75 mm	m	30	
26.8.2	110 mm	m	30	
26.9	15 mm C.P. brass tap with elbow operation lever	No.	4	
26.10	Gunmetal non-return valve-horizontal (screwed end) 25 mm Dia	No.	1	
26.11	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, ISI: 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	lit	2000	
26.12	Brass full way valve with C.I. wheel (screwed end) 40 mm dia	No	1	
26.13	Gunmetal non-return valve-horizontal (screwed end) 25 mm Dia	No	1	
26.14	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (inside plastering 12 mm thick with cement mortar 1:3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No	1	

26.15	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No	1	
26.16	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. – 35	No	1	
	Total Cost of Sanitary items			
	Total Cost			

	4.5 Cost estimate For Elec	ctrical Co	omponents	For Pump-ho	use
SI.No	Description	Unit	Quantity	Rate (INR)	Amount (I NR)
1.0	EARTHING				
1.1	Neutral Earthing - Earthing with Copper earth plate 600mmx600mmx3mm thick including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe of 2.7m long etc with charcoal/coke and salt as required.	No	2		
1.2	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	No	2		
2.0	LT PANEL BOARD (Indoor type)				
2.1	Supplying and fixing following way prewired SP&N MCB distribution board of steel sheet for 240 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size FRLS PVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc. as required. (But without MCB/ RCCB/ Isolator) 2 + 8 way/10 way, Double door	No	1		
2.2	MCCB DISTRIBUTION BOARDS				
	Providing and fixing 100A rating and 16KA breaking capacity and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as required.	No	1		
2.3	MINIATURE CIRCUIT BREAKERS				
2.4	Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and committoning etc as required.  MINIATURE CIRCUIT BREAKERS	No	2		
	Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committening etc as required.	No	1		
2.5	EARTHING				
	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	No	2		
3.0	DISTRIBUTION BOARD				
3.1	Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)	m	1		
3.2	EARTHING				
	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.	No	2		
4	CABLES				
	Supply of LT UG cable having Copper conductor PVC insulated, Sheathed ,galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)				
4.1	4Cx16 sq mm + 2x16 sq mm earth wire	m	1		
4.2	4Cx10 sq mm + 2x10 sq mm earth wire	m	6.5		
4.3	4Cx4 sq mm + 2x4 sq mm earth wire	m	15		
4.4	2Cx2.5 sq mm + 1x2.5 sq mm earth wire	m	14		
5.0	LUMINARIES, SOCKETS AND SWITCHES				
5.1	120W Gate lamp with fitting	No	2		
5.2	40W flourescent lamp	No	4		
5.3	70W MH Lamp for site lighting	No	4		
5.4	Single switched socket with multi purpose	No	2		
5.5	Switches	No	6		

	4.6.2 Ra	w water Trans	sport main form I&D to	STP		
SI. No.	Description of Item	Unit		Quantity	Rate	Amount (INR)
	Excavating trenches of required width for pipes cables, etc.,				(INR)	
	including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m including getting out					
1.0	the excavated soil, and then returning the soil as required, in ayers 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.					
1.1	0.0 to 1.5 mtr. Depth					
. 1	do - in all kindes of soil - 100%	m		3.50		
2.0	Supplying and Filling in plinth with local sand and under floors	01100		240.75		
.0	including , watering, ramming consolidation and dressing complete.	cum		349.75		
.0	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron.					
	Pipes conforming to IS: 8329:DI-K9			2742.2		
.1	100.00	m		2743.2		
4	Providing push on joints to Centifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes inculding testing of joints and the cost of rubber gasket (one at every 6m).					
.1	100.00	Joint		166		
.0	Providing and laying D.I. specials of class K-12 suitable for push-or	jointing as per	IS: 9523:			
	Bends-As per BS 4772 code					
.1	90 degree (63.5 Kg)	kg		317.50		
.2	Taper-As per BS 4772 code					
	300x200mm (34.5 Kg)	kg		34.50		
.3	Tee-As per BS 4772 code			70.50		
	300x300x300 mm (79.5 Kg) Providing and fixing C.I. sluice valves (with cap) complete	kg		79.50		
0	with bolts, nuts, rubber insertions etc.(the tail pieces if required will be paid separately)					
1	100.00	No		4.00		
0	Providing and fixing C.I. sluice valves for Scouring (with cap) complete with bolts, nuts, rubber insertions etc.(the tail pieces if required will be paid separately)					
1	100.00	No		3.00		
	Providing & Constructing masonry Chamber 1.5x1.5x1.5 m					
	inside, in brick work in cement mortar 1:3 (1 cement : 3 coarse sand) for valve, with cast insitu RCC slab with necessary reinforcment. The valve chamber shall be plastered					
0	with CM 1:4, A levelling coars of M10 shall be provided. The cost is inclusive of excavation, disposal and construction of					
	valve chamber with moduar bricks plasting with cement mortar with all lead and lift etc., as per specification & drawing.					
1	Sluice valve chambers	No		4.00		
2	Scour valve chambers	No		4.00		
	Providing and constructing of the RCC Thrust Blocks for DI bends including the excavations of soils up to the required					
.0	depth ,disposal of soils after refilling with selected available earth,providing PCC including cost of labours,materials					
	tools,curing etc., complete as per drawing and as directed by the Engineer (inclusive of cost of steel)					
	90 degree	No		2.00		
.1	Enter Total pipe length Percentage of CC Road in town	2743.16 70.00		m %		
	Percentage of Asphalt Road in town	30.00		%		
0	Dismantling and restoration of roads :					
	Dismantling of cement concrete pavement (dismantling of cement concrete pavements by mechanical means using					
0.1	oneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal	cum		259.23		
	of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable material					
	Dismantalling of flexible Pavements( dismantling of flexible					
	pavements and disposal of dismantled materials up to a lead of 1000 m, stacking serviceable and unserviseable materials					
0.2	separately)					
	Bituminous courses by mechanical means	cum		37.03		
	Granular courses by manualmeans	cum		432.05		
_						· · · · · · · · · · · · · · · · · · ·
11	Restoration of road as per the specification and as directed by the engineer					

а	Compacting original ground supporting subgrade (Loosening of the ground upto a level of 500 mm below the subgrade level, watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.) Rolling with vibratory roller	cum	1234.42		
b	Wet Mix Macadam - 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 mathod of lipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification	cum	92.58		
С	Cement Concrete Pavement (Construction of un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to 15 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and ongitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, ite rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing)	cum	259.23		
	Pavement Courses - Granular				
12	Granular Sub-base with Close graded Material (By Mix in Place Method) - Construction of Granular sub-base(GSB) by providing close graded Material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density, complete as per Technical Specification				
	Total for Grading II Matrerial ( 50% of Total)	cum	129.61		
	Total for Grading I Matrerial ( 50% of Total)	cum	129.61		
b	Wet Mix Macadam - 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 mathod of lipper to site, laying in uniform layers with paver in subbase/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification	cum	432.05		
	Pavement Courses - Bituminous				
	Prime Coat - Providing and applying primer coat with Bitumen emulsion on prepared surface of granular base including deaning of road surface and spraying primer at the rate of 0.6kg/sqm using mechnical means complete	sqm	1728.19		
С	Tack Coat - Providing and applying tack coat with Bitumen emulsion using emulsion pressure distributor at the rate of 0.2 kg per sqm on the prepared bituminous/granular surface cleaned with mechancial broom .	sqm	1728.19		
	Providing and laying Dense graded bituminous macadam with 100-120 TPH batch HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5 % by weight of total mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specifications Clause 507. (Grading II - 19mm nominal size)	cum	43.20		
	<u> </u>				

		4.7 SITC of Mechanical Com	onents at	each Pu	ımping Statio	n
SI.No		Description	Quantity	Units	Rate	Amount
1	Manually	Cleaned Bar Screen				
	welded sta 30 mm. T not less th spacing b maintained located as the manu- shall be the screen with	In shall be of removable type and shall consist of a inless steel (AISI410) frame with vertical flats spaced at he flats shall not be less than 10 mm in thickness and the flats shall not be less than 10 mm in thickness and the flats shall be uniform and preferably so do by adequate number of spacers, which shall be so not to interfere with the raking operation. To facilitate all cleaning of the screen the inclination of the screen between 45° and 60° to the horizontal. Single piece of the should not be more than 1.5 m.Two numbers steel rollers shall be fixed on each side of frame to rolling contact with guide channel during lifting and of screen.				
1.2	(500 X 15	00) mm	4	Nos		
2	pump set for 3 Ph ,, TEFC enclipump sha required pipe,,chai through st with neces per specif	erecting and giving test of Non clog sewage submersible with SS CF8 M impeller,CI casing,SS 316 shaft suitable 115 V , 50 Hz A.C. Supply, submersible motor having ocuser with class F insulation and IP 68 protection. The III be operated at 1450 RPM. The scope shall include accessories viz automatic coupling device,guide in with shakle,flat submersible cable upto starter panel uitable GI pipe (30 mtr 3 Core flat copper for each pump ssary electrical connection with the starter panel and as ications. (HP)				
	23		4	Nos		
3		Supplying erection testing and commissioning of 2 Tonne Mobile Crane				
3.1	1 T Capac	ity for 7 m lift.	1	Nos		
		Total Cost				

	4.8 Cost estimate For Electr	icai comp	Jonemes 1 of	Tumpmous	
SI.No	Description	Unit	Quantity	Rate (INR)	Amount (INR)
.0	DIESEL GENERATOR 50 KVA				
∣.1	50 KVA, 40KW, 415V, 50 Hz, comprising of Perkins Engine Coupled to Stamford make Alternator, complete with all Standard accessories and ATS with Acoustic enclosure.	No	1		
1.2	EARTHING				
1.2.1	Neutral Earthing - Earthing with Copper earth plate 600mmx600mmx3mm thick including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe of 2.7m long etc with charcoal/coke and salt as required.	No	2		
1.2.2	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement andwateringpipeetc with charcoal/coke and salt as required.	No	2		
2.0	LT PANEL BOARD (Indoor type)				
2.1	Supplying and fixing 4 ways surface/recess mounting, vertical type, 415V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, with provision of 100A TP 16KA MCCB as incommer, interconnection between incomer MCCB and bus bars (but without MCB,s /MCCB's) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required.)	No	1		
2.2	MCCB DISTRIBUTION BOARDS				
	Providing and fixing 100A rating and 16KA breaking capacity and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as required.	No	1		
2.3	MINIATURE CIRCUIT BREAKERS				
	Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and commitioning etc as required.	No	2		
2.4	MINIATURE CIRCUIT BREAKERS				
	Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and commitioning etc as required.	No	1		
2.5	EARTHING				
	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement andwateringpipeetc with charcoal/coke and salt as required.	No	2		
3.0	DISTRIBUTION BOARD				
3.1	Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)	m	1		
3 2	EARTHING				
0.2					

No

2

Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement andwateringpipeetc with charcoal/coke and salt as required.

4.0

CABLES

	Supply of LT UG cable having Copper conductor PVC insulated, Sheathed ,galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)				
4.1	4Cx16 sq mm + 2x16 sq mm earth wire	m	1		
4.2	4Cx10 sq mm + 2x10 sq mm earth wire	m	6.5		
4.3	4Cx4 sq mm + 2x4 sq mm earth wire	m	15		
4.4	2Cx2.5 sq mm + 1x2.5 sq mm earth wire	m	14		
5.0	LUMINARIES, SOCKETS AND SWITCHES				
5.1	120W Gate lamp with fitting	No	2		
5.2	40W flourescent lamp	No	4		
5.3	70W MH Lamp for site lighting	No	4		
5.4	Single switched socket with multi purpose	No	2		
5.5	Switches	No	6		
	Total Cost			•	

5.0 I&D	Nallah: Near Railway Station	1
Item Description	Quantity	Total Amount, Rs
Drain construction Cost	Detailes are attached	
Outfall Structure Cost	Detailes are attached	
Generator Room Cost	Detailes are attached	
Operator Quarter Cost	Detailes are attached	
Elctrical Component Cost	Detailes are attached	
DG Cost	Detailes are attached	
Rising Main Cost	Detailes are attached	
Pump and Screen Cost	Detailes are attached	
Total	Cost	

#### 5.1 Drain Construction Cost

									Existi	ing Drai	Orain Size Prop			posed D	d Drain Size			
SI. No.	Name of Drains/ Nallah falling in Ganga River	Length of Drain (m) to be constructed	Velocity (m/sec)	Width	Depth	Area	effective flow area	Flow	Flow (MLD)	Width	Height	Cost	Drain Cost	Width	Height	I&D	Remark	
1	Near Railway Station	200	0.15	1	1	1	10%	0.015	1.30	1.00	1.00			1.00	1.00	Pumping	TO STP	

	5.2.1 Cost	Estimate for Outfall Structure						
SI no.	Description of Item	Unit	Quantity	Rate (INR)	Amount (INR)			
1	Earth work excavation in foundation trenches or drains including dressing of sides and ramming of bottoms, lift as follows, including getting out the excavated soil and disposal of surplus excavated soil as directed, with all lead and lift complete as per the specification and as directed by the Engineer.  All kinds of soils				()			
	Upto1.50m depth	cum	38.10					
1.1.1	1.5 m to 3 m	cum	41.40					
2	Sand filling upto 300mm in Plinth including watering and compacting in layers of 150 mm thick as per specifications and as directed by the Engineer.	cum	7.62					
3	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level in 1:3:6 (1 Cement : 3 coarse sand : 6 granded stone)	Cum	7.30					
4	machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.		26.34					
5	Centring and Shuttering including strutting, propping etc. and removal of form for vertical walls	sqm	77.00					
6	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars TMTC - 500 ( Quantity at 90 kg/cum)		2370.60					
	Carriage of the following materials from quarry to work site including loading, unloading and staking at work site as per specification & direction of E/I.							
7	Aggregate	Cum	55.73					
	Sand	Cum	27.87					
	Cement	MT	25.0088					
	Steel	MT	2.3706					
8	Wrought iron and mild steel welded work (using angles, square bars, tees and channel grills, grating frames, gates and tree guards of any size and design etc. including cost of screens and welding rods or bolts and nuts complete fixed in position but without the cost of excavation and concrete for fixing which will be paid separately		240.00					
	Erection of gates (a) 30% item NO- 8		240.00					
8.0	Centring and Shuttering including strutting, propping etc. and removal of form for Roof slab							
8.1	For roof slab	Sqm	22.00					
8.2	Weather shade,Chajjas, corbels etc. including edges	Sqm	1.20					
9.0	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars		11.00					
	steel quantities	Kg	990.00	<u> </u>				
10.0	Brick work with bricks of class designation 100A in foundations and plinth in :Extra for Brick work in superstructure above plinth level upto floor V cum	Cum	6.56					

SI no.	Description of Item	Unit	Quantity	
11.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for Internal walls)	Sqm	28.50	
12.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for celling)		22.00	
13.0	20 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for External walls)	Sqm	29.40	
14.0	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work (for Internal walls)	Sqm	28.50	
15.0	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work (for celling)	Sqm	28.50	
16.0	Appying one coat of cement primer of approved brand and manufacture on wall surface (for External walls)	Sqm	22.00	
17.0	Providing wood work in frames of door, window clerestory windows and other frames, wrought framed and fixed in position in local wood for Door	Cum	29.40	
18.0	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including black enameled MS butt hinges with necessary screws excluding panelling which will be paid for separately - 30 mm thick		0.50	
	For Doors	Sqm	1.80	
19.0	Providing and fixing glazing in aluminium door, window V shutters and partition etc with PVC / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer incharge. (Cost of aluminium snap bading shall be paid in basic item). With glass pans of 5.50 mm thickness (Weight not less than 13.75 kg/sqm)	Sqm	0.50	
20.0	Providing and laying Ceramic glazed floor tiles (400x400) mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS:13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent 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 grouting the joints with white cement and matching pigments etc, complete.		22.00	
	Total Cost			

	5.3 Cost estimat	e of Gener	ator Room		
SI. No.	l tem description	Unit	Quantity	Rate (INR)	Amount (INR)
	Earth work			,	
1.0	Earthwork in excavation in foundation trenches or drains (not exceeding 1.5 m width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m including getting out the excavated soil and disposals of surplus excavated soil as directed, within a lead of 50 m.				
1.1	(For all kinds of soil) From 0 m to 1.5 m	Cum	22.54		
1.2	From 1.5 m to 3 m	Cum	1.35		
2.0	Supplying and Filling on plinth with local sand and under floors including watering, ramming consolidating and dressing complete. For Generater room	Cum	7.20		
3.0	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level In 1:3:6 (1 Cement : 3 coarse sand : 6 granded stone upto 20 mm nominal size)	Cum	7.33		
4.0	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.				
4.1	For Footings	Cum	1.44		
4.2	Column below GL up to Plinth	Cum	0.26		
4.3	Plinth beams	Cum	1.61		
4.4	For columns above Ground levels	Cum	0.87		
4.5	Lintel beams	Cum	1.43		
4.6	Roof Beams	Cum	1.33		
4.7	For roof slab	Cum	4.32		
4.8	For Sunshades over Door & Windows :	Cum	0.23		
5.0	Centring and Shuttering including strutting, propping etc. and removal of form for				
5.1	For footing – F	Sqm	4.80		
5.2	Column upto GL – C	Sqm	4.60		
5.3	Plinth beams :	Sqm	14.00		
6.0	Centring and Shuttering including strutting, propping etc. and removal of form for	Sqm			
6.1	Lintel beams	Sqm	12.40		
6.2	Roof beams	Sqm	12.40		
7.0	Centring and Shuttering including strutting, propping etc. and removal of form for				
7.0	Column	Sqm	15.09		
8.0	Centring and Shuttering including strutting, propping etc. and removal of form for Roof slab				
8.1	For roof slab	Sqm	24.00		
8.2	Weather shade,Chajjas, corbels etc. including edges	Sqm	4.13		
9.0	Reinforcement for R. C. C work including straightening, cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars				
	steel quantities	MT	1.34		
10.0	Brick work with bricks of class designation 100A in foundations and plinth in :Extra for Brick work in superstructure above plinth level upto floor V cum	Cum	17.53		
11.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for Internal walls)	Sqm	64.48		
12.0	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for ceiling)				
	Generator room	Sqm	24.00		

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13.0	20 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for External walls)	Sqm	89.54		
14.0	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work (for Internal walls)	Sqm	64.48		
15.0	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade: Two or more coats on new work (for ceiling)	Sqm	24.00		
16.0	Appying one coat of cement primer of approved brand and manufacture on wall surface (for External walls)	Sqm	89.54		
17.0	Providing wood work in frames of door, window clerestory windows and other frames, wrought framed and fixed in position in local wood for Door	Cum	0.16		
18.0	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including black enameled MS butt hinges with necessary screws excluding panelling which will be paid for separately - 30 mm thick				
	For Doors	Sqm	4.20		
19.0	Providing and fixing glazing in aluminium door, window V shutters and partition etc with PVC / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer incharge. (Cost of aluminium snap bading shall be paid in basic item). With glass pans of 5.50 mm thickness (Weight not less than 13.75 kg/sqm)	Sqm	4.32		
20.0	Providing and laying Ceramic glazed floor tiles (400x400) mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS:13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent 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 grouting the joints with white cement and matching pigments etc, complete.				
	Generater room	Sqm	24.00		
21.0	Cement plaster skirting (upto 30 cm height) with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement.  18 mm thick	Sqm	2.70		
22.0	Providing and laying in situ five course water proofing treatment with glass fibre tissue reinforced bitumen over roof consisting of first coat of bitumen primer @ 0.40 kg per sqm, 2nd and 4th courses of bonding material 1.60 kg per sqm which shall consist of blown type bitumen of grade 85/25 conforming to IS: 702, third layer of glass fibre tissue course as specified, fifth, the top most layer of stone grit 6 mm and down size or pea-seized gravel sprad @ 6 dm³ per sqm including preparation of surface excluding grading for slope etc. compete.	Sqm	24.00		
23.0	Providing and fixing on wall face unplastidsed-PVC (working pressure 4 kgf per sqm) rain water pipes conforming to IS: 4985 including jointing with seal ring conforming to IS: 5382 leaving 10 mm gap for thermal expansion.  110 mm diameter	m	13.50		
24.0	Filling available excavated 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 wateing lead.	Cum	14.86		
	Carriage of Materials :				
	Aggregate	Cum	16.66		
	Coarse Sand	Cum	31.07		
25.0	Local Sand	Cum	7.20		
	Cement	MT	6.01		
	Steel	MT	0.14		
	Brick (1000 Nos)		8.59		
	Total Cost				

	5.4 Cost Estimate of Operators Quarter					
SI. No	I tem description	Unit	Quantity	Rate (INR)	Amount (I NR)	
1	Earthwork in excavation in foundation trenches or drains (not exceeding 1.5 m width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m including getting out the excavated soil and disposals of surplus excavated soil as directed, within a lead of 50 m. (For all kinds of soil)					
1.1	From 0 m to 1.5 m	Cum	36.72			
1.2	From 1.5 m to 3 m	Cum	3.24			
2	Supplying and Filling on plinth with local sand and under floors including watering, ramming consolidating and dressing complete.	Cum	18.82			
3	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - all work upto plinth level in 1:3:6 (1 Cement : 3 coarse sand : 6 granded stone)	Cum	23.51			
4	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.					
4.1	For Columnn Footing	Cum	4.48			
4.2	For Column below GL up to plinth	Cum	0.74			
4.3	For Plinth beams-PB	Cum	5.08			
4.4	For columns above GL	Cum	2.45			
4.5	For lintel beams	Cum	2.04			
4.6	For Roof beams	Cum	3.59			
4.7	For Roof slab	Cum	12.03			
4.8	For Parapet	Cum	2.39			
5	Providing and laying in position machine batched, machine mixed, and machine vibrated design mix cement concrete of specified grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement, M-20 grade reinforced cement concrete.					
5.1	Sunshade over Windows	Cum	0.89			
5.2	For Lofts & Racks	Cum	1.88			
6	Centring and Shuttering including strutting, propping etc. and removal of form for					
6.1	For Columnn Footing (C1 F1)	Sqm	10.80			
6.2	For Column below GL up to plinth	Sqm	51.36			
6.3	For Plinth beams-PB	Sqm	41.65			
6.4	For columns above GL	Sqm	42.66			
6.5	For lintel beams	Sqm	23.43			
6.6	For Roof beams	Sqm	30.97			
6.7	For Roof slab	Sqm	131.94			
6.8	For Parapet	Sqm	4.90			
0.0	Reinforcement for R. C. C work including straightening,	Sqiii	4.70			
7	cutting, bending, placing in position and binding all complete. Thermo - Mechanically Treated bars	MT	4.14			
8	Brick work with bricks of class designation 100A in foundations and plinth in :Extra for Brick work in superstructure above plinth level upto floor V cum	Cum	31.58			
9	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for Internal walls)	Sqm	167.68			
10	12 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for ceiling)	Sqm	58.41			
11	20 mm Cement plaster in course sand in 1:3 (1 cement : 3 coarse sand) (for External walls)	Sqm	147.88			

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12	Wall painting with plastic emulsion paint of approved brand an	Sqm	226.09		
13	Appying one coat of cement primer of approved brand and manufacture on wall surface (for External walls)	Sqm	191.98		
14	Providing wood work in frames of door, window clerestory windows and other frames, wrought framed and fixed in position in local wood	Cum	0.50		
15	Providing and fixing paneled or paneled and glazed shutters for doors, windows and clerestory windows including black enameled MS butt hinges with necessary screws excluding panelling which will be paid for separately - 30 mm thick	Sqm	6.93		
16	Providing and fixing glazing in aluminium door, window ventilator shutters and partition etc with PVC / neoprene gasket etc. complete as per the architectural drawings and the directions of Engineer incharge. (Cost of aluminium snap bading shall be paid in basic item). With glass pans of 5.50 mm thickness (Weight not less than 13.75 kg/sqm)				
16.1	For Windows	Sqm	8.28		
16.2	For Ventilators	Sqm	0.72		
17	Providing and fabricating and fixing of M S grill for window protection etc ,. As per specification, drawing and as directed by the engineer				
	For Windows & Ventilators	kg	9.00		
18	Providing and laying in situ five course water proofing treatment with glass fibre tissue reinforced bitumen over roof consisting of first coat of bitumen primer @ 0.40 kg per sqm, 2nd and 4th courses of bonding material 1.60 kg per sqm which shall consist of blown type bitumen of grade 85/25 conforming to IS: 702, third layer of glass fibre tissue course as specified, fifth, the top most layer of stone grit 6 mm and down size or pea-seized gravel sprad @ 6 dm³ per sqm including preparation of surface excluding grading for slope etc. compete.				
18.1	Slope concrete	Sqm	74.92		
19	Providing and laying Ceramic glazed floor tiles 400x400 mm (thickness to be specified by the manufacturer) of 1 st quality conforming to IS: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent make in colours such as white, Ivory, Grey, Fume, Red, Brown, laid on 20 mm thick cement motar 1:4 (1 cement: 4 Coarse sand) including grouting the joints with white cement and matching pigments etc, complete.				
	Total quantity		58.41		
20	Providing and fixing first quality ceramic glazed wall tiles conforming to IS 15622 ( thickness to be specified by the manufacturer) of approved maike in all colours shades except burgundy, bottle green, black of any size as approved by engineer incharge in skirting risers of steps and dados over 12 mm thick bed of cement mortar (1:3) and jointing with grey cement slurry at 3.3 kg per sqm including pointing in white cement mixed with pigment of matching shade complete				
	Total quantity	Rmt	55.67		
21	Providing and laying Ceramic glazed floor tiles 400x400 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent make in colours except white, Ivory, Grey, Fume, Red, Brown, laid on 20 mm thick cement motar 1:4 (1 cement: 4 Coarse sand) including grouting the joints with White cement and matching pigments etc, complete.				
21.1	Tollet	Sqm	5.85		
22	Providing and laying Ceramic glazed floor tiles 400x400 mm (thickness to be specified by the manufacturer) of 1st quality conforming to 1s: 13755 of NITCO, ORIENT, SOMANY, KAJARIA or equivalent make in colours except white, Ivory, Grey, Fume, Red, Brown, laid on 20 mm thick cement motar 1:4 (1 cement: 4 Coarse sand) including grouting the joints with White cement and matching pigments etc, complete.				
22.1	Toilet Walls	Sqm	17.54	<del> </del>	
22.1	Tonot Trails	3	17.54	I	i

	Providing and fixing on wall face unplastidsed-PVC(working			
23	pressure 4 kgf per sqm) rain water pipes conforming to IS: 4985 including jointing with seal ring conforming to IS: 5382 leaving 10 mm gap for thermal expansion	Rmt	15.60	
24	Filling available excavated 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 wateing lead.	Cum	25.88	
	Carriage of Materials :			
	Aggregate	Cum	52.34	
	Coarse Sand	Cum	68.34	
25	Local Sand	Cum	18.82	
25	Cement	MT	18.80	
	Steel	MT	0.00	
	Brick (1000 Nos)		15.48	
	Total Cost			
26.0	Plumbing work :			
26.1	Stainless steel kitchen sink - without drain board 470 mm X 420 mm bowl depth 178 mm	No.	1	
26.2	Salem Stainless steel AISI - 304 (18/8) Round basin 405 mm X 355 mm	No.	2	
26.3	PTMT - Soap Dish/Holder 138 mm X 102 mm X 75 mm	No.	3	
26.4	White vitreous china dual purpose closet (Anglo Indian W.C.) suitable for use as squatting pan or European type water closet as per manufacturer's specifications	No.	1	
26.4.1	White Vitreous china 10 lit. (full flush) capacity controlled low levelflushing cistern with all fittings	No.	1	
26.5	C.P.brass toilet paper holder of standard size	No.	3	
26.6	PTMT - Towel Rail (600 mm)	No.	3	
26.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.			
26.7.1	15 mm nominal outer dia Pipes	m	25	
26.7.2	25 mm nominal outer dia Pipes	m	25	
26.7.3	32 mm nominal outer dia Pipes	m	15	
26.8	uPVC pipes (working pressure 4 kg / cm2 ) Single socketed Pipe			
26.8.1	75 mm	m	30	
26.8.2	110 mm	m	30	
26.9	15 mm C.P. brass tap with elbow operation lever	No.	4	
26.10	Gunmetal non-return valve-horizontal (screwed end) 25 mm Dia	No.	1	
26.11	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, ISI: 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	lit	2000	
26.12	Brass full way valve with C.I. wheel (screwed end) 40 mm dia	No	1	
26.13	Gunmetal non-return valve-horizontal (screwed end) 25 mm Dia	No	1	
26.14	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No	1	

26.15	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	No	1		
26.16	Circular shape 560 mm dia precast R.C.C. manhole cover with frame - H.D. – 35	No	1		
	Total Cost of Sanitary items				
	Total Cost			·	

Amount (NR)  EARTHING  Notical Earthing - Earthing with Copper earth plate software command to the command of t	5.5 Cost estimate For Electrical Components For Pump-house						
September   Content   Co		5.5 Cost estimate for Elec	andal C	Importents		1	
Neutral Earthing - Earthing with Copper earth plate colomms/comms/mm thick including accessories, and providing masonary enclosure with cover plate having locking arrangement and watering pipe of 2.7 m long ete with chroscola/coles and sail as required.  1.2 with cover plate having locking arrangement and watering pipe ete: with charcal/coles and sail as required.  2.0 LT PANEL BOARD (Indoor type) Supplying and Toing following way provided SPAN MCB distribution blood of steel briefer to 280 outs on surrace/ solve the copper conductor up to terminal blocks, tinned copper bost PER SPYC Insulted copper conductor up to terminal blocks, tinned copper bost private in the care that the copper conductor up to terminal blocks, tinned copper bost private in the care that the copper conductor up to terminal blocks, tinned copper bost private in the care that the copper conductor up to terminal blocks, tinned copper bost private in the care that the copper conductor up to terminal blocks, tinned copper bost private in the care that the copper conductor up to terminal blocks, tinned copper bost private in the care that the copper copper copper to the copper c	SI.No	Description	Unit	Quantity			
softmaxeotomms.mm thick including accesseries, and providing masonary enclosure with cover plots having locking and an arrangement and watering pipe of 2.7 in long etc. with charcoalzocke and sail as required.  1.2 illustrating - Earthing with Gi earth pipe 4.5 m long, 40mm dia including accesseries, and providing masonary enclosure with cover plots having locking arrangement and watering pipe etc. with charcoalzocke and sail as required.  2. ILT PANEL BOARD Cindoor type)  Supplying and fixing following way prewided SPAN MCB distribution board of steel sheet for 240 voits on surface/recess complete with loses wire box, terminal connectors for all incoming and outpring officials, duly prewided with subtools size PRIS PVC.  1.1 subtools size PRIS PVC.  2.2 illustrating and outpring officials, duly prewided with subtools size PRIS PVC.  2.3 in Micro Sear neutral lines, durant burst because the cooper bus are neutral lines, durant burst b	1.0	EARTHING					
1.1. providing masonary enclosure with cover plate having locking arrangement and watering ploe 4.5 m long etc. with charcosl/cake and salt as required.  2.2. doubt parthing - Earthing with Gl earth pipe 4.5 m long, 4.0 mm did including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc. with charcosl/cake and salt as required.  2.0. LT PANKE BOARD (Indeor type)  Suppring and finen following way preview SPANIMCB distribution board of steel sheet for 240 volts on surface/ recess complete with loose were box, terminal connections for all incoming and outgoing circuits, duty prowied with suitable steps FISE PVC  Insisted copper conductor up to terminal blocks, tinned copper box bar, neutral link, earth bar, distachable aerthing etc. as required. (But without MCB/ RCCB/ Isolator)  2.3. 8 weyf) lower, Double of a care that a step of the copper conductor up to terminal blocks, tinned copper box bar, neutral link, earth bar, distachable aerthing etc. as required. (But without MCB/ RCCB/ Isolator)  2.3. 8 weyf) lower, Double of the care that the care th							
1.2 dia ficulturing accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pie etc. with charcoal/coke and sail as required.  2.0 LT PANEL BOARD (Indoor type)  Supplying and fixing following way previred SPAN MCB distribution board of steel sheet for 240 volts on surfacor all incoming and outgoing circles. July prewired with surface all incoming and outgoing circles. July prewired with surface copper bus Bar, neutral link, earth bar, din bar, din bar, distribution board of steel sheet for 240 volts on surfacor of all incoming and outgoing circles. July prewired with surface copper bus Bar, neutral link, earth bar, din bar, distribution beard or steel significant part of the competition of the competitions, powder painted including defiling holes in cubicle panels, making connections, ets as required.  2.3 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 415V "C" curve, ministure circuit breaker for inductive load of triple pole and neutral in the existing MSB Bb complete with connections, testing and committed in the connections, testing and committed in the connections, testing and committed in the following masonary enclosure with cover plate having locking arrangement and watering pie etc. with charcoal/coke and sait as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4-12 vays, single door, horizontal type the pole and reutral, sheet steel, MGB Bb complete his connections, testing and committed painted including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pie etc. with charcoal/coke and sait as required.  3.1 Distribution BOARD  Supply and fixing 4-12 vays, single door, horizontal type the pole and reutral, sheet steel, MGB Bc double bar, nuetral bases, earth bar, din bar, interconnections, powdered painted including accesseries, and providing masonary enclosure with cover plate having locking	1.1	providing masonary enclosure with cover plate having locking arrangement and watering pipe of 2.7m long etc with	No	2			
Supplying and fixing following way previous SPAN MCB distribution band of steel sheet for 240 votes on surface / recess complete with bose wire box, terminal connectors for all inconning and outgoing circuits, duly preview with value of all inconning and outgoing circuits, duly preview with value of all inconning and outgoing circuits, duly preview with value of all inconning and outgoing circuits, duly preview with value of coper to substance in the connections, interconnections have been allowed by the connections, and the connections, testing and to the connections, testing and the connections, testing and committee in the connections of the connections, testing and committee in the connections of the connection of the conn	1.2	dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering	No	2			
distribution board of steel sheet for 240 volts on surface/ recess complete with loose wire box, terminal blocks, tinned all incoming and outgoing circuits, duly prewired with suitable steer RLS PVC  Insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including aborthing etc. as required. But without MKOR RCB/I stollator) Providing and fixing 100A rating and 16KA breaking capacity and pole PT MCGB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as required.  2.3 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, riple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB De complete with connections, testing and committioning etc as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the esisting MCB De complete with connections, testing and committioning at as required.  2.5 EARTHING  Body Earthing - Earthing with Gl earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with over place having becking arrangement and watering pile etc. with charcoal/coke and sall as required.  3.1 Distribution 80ARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, ruetral dia including accesseries, and providing masonary enclosure with over place having becking arrangement and watering pile etc. with charcoal/coke and sall as required.  3.1 Distribution 80ARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, certification, and the provided place of the provided place of the provided place of the provided	2.0	• • • • • • • • • • • • • • • • • • • •					
Providing and fixing 100A rating and 16KA breaking capacity and pole TP MCCB in existing cubicite panel board including drilling holes in cubicle panel, making connections, ets as required.  2.3 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing McD BC complete with connections, testing and committioning et as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing McD BC complete with connections, testing and committioning et as required.  2.5 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe et with charcoal/coke and salt as required.  DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, dib ari, interconnections, powdered painted including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering painted including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required. (but without MCD/RCB/Solators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4 CALLS sq mm + 2x16 sq mm earth wire m 15  4 CX16 sq mm + 2x16 sq mm earth wire m 15  4 CX16 sq mm +	2.1	distribution board of steel sheet for 240 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size FRLS PVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc. as required. (But without MCB/ RCCB/ Isolator)	No	1			
and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as required.  2.3 MINATURE CIRCUIT BREAKERS  Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and committioning etc as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committioning etc as required.  2.5 EARTHING  Body Earthing - Earthing with Gl earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover piate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required. (but without MCG/RCG/Boislotors)  3.2 EARTHING  Body Earthing - Earthing with Gl earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4. CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire	2.2	MCCB DISTRIBUTION BOARDS					
Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MoB Ds complete with connections, testing and committioning etc as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MoB Ds complete with connections, testing and committioning etc as required.  2.5 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/reces, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/solators)  3.1 bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/solators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap arromoved cable with PVC outer sheathing 1.1 KV class)  4.1 4CX16 sq mm + 2x16 sq mm earth wire  4.2 4CX10 sq mm + 2x10 sq mm earth wire  5.1 4CV 4CR sq mm + 2x4 sq mm earth wire  6.5 5  6.1 LUMINARIES, SOCKETS AND SWITCHES  5.1 120W Gate lamp with fitting  7. No  8.2 4  8.3 634 Single switched socket with multi purpose  8.0 7  8.0 7  8.0 7  8.0 7  8.0 8  8.0 8  8.0 8  8.0 9  8.0 9  8.0 9  8.0 9  8.0 9  8.0 9  8.0 9  8.0 9  8.0 9  8.0 9  8.0 9  8.0 9  8.0 9  8.0 9  8.0 9  8.0 9		and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as	No	1			
curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB Bc complete with connections, testing and committoning etc as required.  2.4 MINIATURE CIRCUIT BREAKERS  Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committioning etc as required.  2.5 EARTHING  3 Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/sloslators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT LIG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4CX16 sq mm + 2x16 sq mm earth wire  4.2 4CX10 sq mm + 2x16 sq mm earth wire  4.3 4CX4 sq mm + 2x4 sq mm earth wire  5.0 LUMINARIES, SOCKETS AND SWITCHES  5.1 120W Gate lamp with fitting  8.0 4 5.0 Single switched socket with multi purpose  8.0 No  2 2	2.3	MINIATURE CIRCUIT BREAKERS					
Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and committioning etc as required.  2.5 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4CX16 sq mm + 2x16 sq mm earth wire m 1.5  4.2 4CX10 sq mm + 2x45 sq mm earth wire m 15  4.3 4CX4 sq mm + 2x4 sq mm earth wire m 15  4.4 2CX2.5 sq mm + 1x2.5 sq mm earth wire m 15  5.0 LUMINARIES, SOCKETS AND SWITCHES  5.1 120W Gate lamp with fitting No 2  4.2 40W flourescent lamp No 4  5.4 Single switched socket with multi purpose No 2	2.4	curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and commitioning etc as required.	No	2			
Body Earthing - Earthing with Gl earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe et c with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/Isolators)  3.2 EARTHING  Body Earthing - Earthing with Gl earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire  4.2 4Cx10 sq mm + 2x10 sq mm earth wire  4.3 4Cx4 sq mm + 2x4 sq mm earth wire  4.4 2Cx2.5 sq mm + 1x2.5 sq mm earth wire  5.0 LUMI NARIES, SOCKETS AND SWITCHES  5.1 120W Gate lamp with fitting  No  4 Single switched socket with multi purpose  No  2 No  2	2.4	Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with	No	1			
dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  3.0 DISTRIBUTION BOARD  Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)  3.2 EARTHING  Body Earthing - Earthing with Gl earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1 1  4.2 4Cx10 sq mm + 2x10 sq mm earth wire m 6.5  4.3 4Cx4 sq mm + 2x4 sq mm earth wire m 15  5.0 LUMI NARIES, SOCKETS AND SWITCHES  5.1 120W Gate lamp with fitting No 2  4.2 4CWI Camp of the control of the provided of the provide	2.5	EARTHING					
Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 15  4.2 4Cx10 sq mm + 2x4 sq mm earth wire m 15  4.3 4Cx4 sq mm + 2x4 sq mm earth wire m 15  5.0 LUMINARIES, SOCKETS AND SWITCHES  5.1 120W Gate lamp with fitting No 4  4.2 4OW flourescent lamp No 4  5.3 70W MH Lamp for site lighting No 2  Single switched socket with multi purpose No 2		dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering	No	2			
thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)  3.2 EARTHING  Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed , galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1  4.2 4Cx10 sq mm + 2x4 sq mm earth wire m 6.5  4.3 4Cx4 sq mm + 2x4 sq mm earth wire m 15  4.4 2Cx2.5 sq mm + 1x2.5 sq mm earth wire m 14  5.0 LUMINARIES, SOCKETS AND SWITCHES  5.1 120W Gate lamp with fitting No 2  4.2 4OW flourescent lamp No 4  5.3 70W MH Lamp for site lighting No 2  Single switched socket with multi purpose No 2	3.0	DISTRIBUTION BOARD					
Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed ,galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1  4.2 4Cx10 sq mm + 2x10 sq mm earth wire m 6.5  4.3 4Cx4 sq mm + 2x4 sq mm earth wire m 15  4.4 2Cx2.5 sq mm + 1x2.5 sq mm earth wire m 14  5.0 LUMINARIES, SOCKETS AND SWITCHES  5.1 120W Gate lamp with fitting No 2  4.2 4OW flourescent lamp No 4  5.3 70W MH Lamp for site lighting No 2  Single switched socket with multi purpose No 2	3.1	thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without	m	1			
dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe etc with charcoal/coke and salt as required.  4 CABLES  Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m m m m m m m m m m m m m m m m m m m	3.2	EARTHING					
Supply of LT UG cable having Copper conductor PVC insulated, Sheathed ,galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)  4.1 4Cx16 sq mm + 2x16 sq mm earth wire m 1 4.2 4Cx10 sq mm + 2x10 sq mm earth wire m 6.5 4.3 4Cx4 sq mm + 2x4 sq mm earth wire m 15 4.4 2Cx2.5 sq mm + 1x2.5 sq mm earth wire m 14 5.0 LUMINARIES, SOCKETS AND SWITCHES 5.1 120W Gate lamp with fitting No 2 5.2 40W flourescent lamp No 4 5.3 70W MH Lamp for site lighting No 2 5.4 Single switched socket with multi purpose No 2		dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering	No	2			
insulated, Sheathed ,galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)       1         4.1       4Cx16 sq mm + 2x16 sq mm earth wire       m       1         4.2       4Cx10 sq mm + 2x10 sq mm earth wire       m       6.5         4.3       4Cx4 sq mm + 2x4 sq mm earth wire       m       15         4.4       2Cx2.5 sq mm + 1x2.5 sq mm earth wire       m       14         5.0       LUMI NARIES, SOCKETS AND SWITCHES         5.1       120W Gate lamp with fitting       No       2         5.2       40W flourescent lamp       No       4         5.3       70W MH Lamp for site lighting       No       4         5.4       Single switched socket with multi purpose       No       2	4	CABLES					
4.2 4Cx10 sq mm + 2x10 sq mm earth wire m 6.5  4.3 4Cx4 sq mm + 2x4 sq mm earth wire m 15  4.4 2Cx2.5 sq mm + 1x2.5 sq mm earth wire m 14  5.0 LUMI NARIES, SOCKETS AND SWITCHES  5.1 120W Gate lamp with fitting No 2  6.2 40W flourescent lamp No 4  6.3 70W MH Lamp for site lighting No 2  Single switched socket with multi purpose No 2		insulated,Sheathed,galvanised steel wire /steel tap					
4.3 4Cx4 sq mm + 2x4 sq mm earth wire m 15  4.4 2Cx2.5 sq mm + 1x2.5 sq mm earth wire m 14  5.0 LUMINARIES, SOCKETS AND SWITCHES  5.1 120W Gate lamp with fitting No 2  6.2 40W flourescent lamp No 4  6.3 70W MH Lamp for site lighting No 2  5.4 Single switched socket with multi purpose No 2	4.1	4Cx16 sq mm + 2x16 sq mm earth wire	m	1			
4.4       2Cx2.5 sq mm + 1x2.5 sq mm earth wire       m       14         5.0       LUMINARIES, SOCKETS AND SWITCHES          5.1       120W Gate lamp with fitting       No       2         5.2       40W flourescent lamp       No       4         5.3       70W MH Lamp for site lighting       No       4         5.4       Single switched socket with multi purpose       No       2	4.2	4Cx10 sq mm + 2x10 sq mm earth wire	m	6.5			
5.0         LUMINARIES, SOCKETS AND SWITCHES           5.1         120W Gate lamp with fitting         No         2           5.2         40W flourescent lamp         No         4           5.3         70W MH Lamp for site lighting         No         4           5.4         Single switched socket with multi purpose         No         2	4.3	4Cx4 sq mm + 2x4 sq mm earth wire	m	15			
5.1     120W Gate lamp with fitting     No     2       5.2     40W flourescent lamp     No     4       5.3     70W MH Lamp for site lighting     No     4       5.4     Single switched socket with multi purpose     No     2	4.4	2Cx2.5 sq mm + 1x2.5 sq mm earth wire	m	14			
5.2 40W flourescent lamp  No 4  5.3 70W MH Lamp for site lighting  No 4  5.4 Single switched socket with multi purpose  No 2	5.0	LUMINARIES, SOCKETS AND SWITCHES					
5.3 70W MH Lamp for site lighting No 4  5.4 Single switched socket with multi purpose No 2	5.1	120W Gate lamp with fitting	No	2			
5.4 Single switched socket with multi purpose No 2	5.2	40W flourescent lamp	No	4			
5.4 Single switched socket with multi purpose No 2	5.3	· ·	No	4		1	
	5.4						
	5.5						
Total Cost				1	<u> </u>		

5.6.2 Rising Main - Cost Estimate						
SI. No.	Description of I tem	Unit		Quantity	Rate (INR)	Amount (INR)
1.0	excavating trenches of required width for pipes cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m including getting out the excavated soil, and then returning the soil as required, in ayers 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.					
	0.0 to 1.5 mtr. Depth					
1.1	do - in all kindes of soil - 100%	m		3.30		
2.0	Supplying and Filling in plinth with local sand and under floors ncluding , watering, ramming consolidation and dressing complete.	cum		330.45		
3.0	Providing and laying S&S Centrifugally Cast (Spun) / Ductile Iron. Pipes conforming to IS: 8329: <b>DI-K9</b>					
3.1	150.00	m		2937.3		
4	Providing push on joints to Centifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes inculding testing of joints and the cost of rubber gasket (one at every 6m).					
4.1	150.00	Joint		166		
5.0	Providing and laying D.I. specials of class K-12 suitable for push-on jointing as per IS: 9523:					
5.1	Bends-As per BS 4772 code					
	90 degree (63.5 Kg)	kg		381.00		
5.2	Taper-As per BS 4772 code					
	300x200mm (34.5 Kg)	kg		34.50		
5.3	Tee-As per BS 4772 code					
	300x300x300 mm (79.5 Kg)	kg		79.50		
6.0	Providing and fixing <b>C.I. sluice valves</b> (with cap) complete with bolts, nuts, rubber insertions etc.(the tail pieces if required will be paid separately)					
6.1	150.00	No		4.00		
7.0	Providing and fixing <b>C.I. sluice valves for Scouring (</b> with cap) complete with bolts, nuts, rubber insertions etc.(the tail pieces if required will be paid separately)					
7.1	150.00	No		3.00		
8.0	Providing & Constructing masonry Chamber 1.5x1.5x1.5 m nside, in brick work in cement mortar 1:3 (1 cement: 3 coarse sand) for valve, with cast insitu RCC slab with necessary reinforcment. The valve chamber shall be plastered with CM 1:4, A levelling coars of M10 shall be provided. The cost is inclusive of excavation, disposal and construction of valve chamber with moduar bricks plasting with cement mortar with all lead and lift etc., as per specification & drawing.					
8.1	Sluice valve chambers	No		4.00		
8.2	Scour valve chambers	No		4.00		
9.0	Providing and constructing of the RCC Thrust Blocks for DI bends including the excavations of soils up to the required depth ,disposal of soils after refilling with selected available earth,providing PCC including cost of labours,materials tools,curing etc., complete as per drawing and as directed by the Engineer (inclusive of cost of steel)					
	90 degree	No		2.00		
9.1	Enter Total pipe length	2937.30		m		
	Percentage of CC Road in town	70.00		%		
	Percentage of Asphalt Road in town	30.00		%		
10	Dismantling and restoration of roads :					
10.1	Dismantling of cement concrete pavement (dismantling of cement concrete pavements by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum n volume and stock pilling at designated locations and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable material	cum		277.57485		

	Dismantalling of flexible Pavements( dismantling of flexible pavements and disposal of dismantled materials up to a lead of 1000 m, stacking serviceable and unserviseable materials separately)					
10.2	Bituminous courses by mechanical means	cum		39.65		
	Granular courses by manualmeans	cum		462.62		
11	Restoration of road as per the specification and as directed by the engineer					
11.1	Restoration of CC road					
a	Compacting original ground supporting subgrade (Loosening of the ground upto a level of 500 mm below the subgrade evel, watered, graded and compacted in layers to meet requirement of table 300-2 for subgrade construction.) Rolling with vibratory roller	cum		1321.79		
b	Wet Mix Macadam - Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at DMC in mechanical mix plant carriage of mixed mathod of tipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification	cum		99.13		
С	dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement @ 400 kg per cum, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a patching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and ongitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades ape faveney).	cum		277.57		
	Pavement Courses – Granular					
12	Granular Sub-base with Close graded Material (By Mix in Place Method) - Construction of <b>Granular sub-base(GSB)</b> by providing close graded Material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method by otavator at OMC, and compacting with vibratory power roller to achieve the desired density, complete as per Technical					
	Specification	cum				
	Total for Grading II Matrerial ( 50% of Total)	cum		138.79		
	Total for Grading I Matrerial ( 50% of Total)	cum		138.79		
b	Wet Mix Macadam - Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at DMC in mechanical mix plant carriage of mixed mathod of tipper to site, laying in uniform layers with paver in sub-base/base course on a well prepared surface and compacting with vibratory roller to achieve the desired density complete as per Specification	cum		462.62		
	Pavement Courses – Bituminous					
	Prime Coat - Providing and applying primer coat with Bitumen emulsion on prepared surface of granular base ncluding cleaning of road surface and spraying primer at the rate of 0.6kg/sqm using mechnical means complete	sqm		1850.50		
С	Tack Coat - Providing and applying tack coat with Bitumen emulsion using emulsion pressure distributor at the rate of 0.2 kg per sqm on the prepared bituminous/granular surface cleaned with mechancial broom .	sqm		1850.50		
	Providing and laying <b>Dense graded bituminous macadam</b> with 100-120 TPH batch HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5 % by weight of total mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRTH specifications Clause 507. (Grading II -19mm nominal size)	cum		46.26		
13	HDD Work for Railway Crossing @ 20,000 per m	m		50.00		
	Total Amount in INR					

5.7 SITC of Mechanical Components at each Pumping Station								
SI.No	Description	Quantity	Units	Rate	Amount			
1	Manually Cleaned Bar Screen							
	The screen shall be of removable type and shall consist of a welded stainless steel (AISI410) frame with vertical flats spaced at 30 mm. The flats shall not be less than 10 mm in hickness and not less than 50 mm deep. The flats shall not have any joint. The spacing between the flats shall be uniform and preferably so maintained by adequate number of spacers, which shall be so located as not to interfere with the raking operation. To facilitate the manual cleaning of the screen the inclination of the screen shall be between 45° and 60° to the horizontal. Single piece screen width should not be more than 1.5 m. Two numbers stainless steel rollers shall be fixed on each side of frame to facilitate rolling contact with guide channel during lifting and lowering of screen.							
1.2	(500 X 1500) mm	4	Nos					
2	Providing, erecting and giving test of Non clog sewage submersible pump set with SS CF8 M impeller, Cl casing, SS 316 shaft suitable for 3 Ph. 415 V., 50 Hz AC. Supply, submersible motor having TEFC encloouser with class F insulation and IP 68 protection. The pump shall be operated at 1450 RPM. The scope shall include required accessories viz automatic coupling device, guide pipe, chain with shakle, flat submersible cable upto starter panel through suitable Clipie (30 nrt 3 Core flat copper for each pump with necessary electrical connection with the starter panel and as per specifications. (HP)							
	4 HP	4	Nos					
3	Providing Supplying erection testing and commissioning of 2 Tonne capacity Mobile Crane							
3.1	1 T Capacity for 7 m lift.	1	Nos					
	Total Cost							

5.8 Cost estimate For Electrical Components For Pumphouse						
SI.No	Description	Unit	Quantity	Rate (INR)	Amount (INR)	
1.0	DIESEL GENERATOR 50 KVA					
1.1	50 KVA, 40KW, 415V, 50 Hz, comprising of Perkins Engine Coupled to Stamford make Alternator, complete with all Standard accessories and ATS with Acoustic enclosure.	No	1			
1.2	EARTHING					
1.2.1	Neutral Earthing - Earthing with Copper earth plate 600mmx600mmx3mm thick including accesseries, and providing masonary enclosure with cover plate having locking arrangement and watering pipe of 2.7m long etc with charcoal/coke and salt as required.	No	2			
1.2.2	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement andwateringpipeetc with charcoal/coke and salt as required.	No	2			
2.0	LT PANEL BOARD (Indoor type)					
2.1	Supplying and fixing 4 ways surface/recess mounting, vertical type, 415V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, with provision of 100A TP 16KA MCCB as incommer, interconnection between incomer MCCB and bus bars (but without MCB,s /MCCB's) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required.)	No	1			
2.2	MCCB DISTRIBUTION BOARDS					
	Providing and fixing 100A rating and 16KA breaking capacity and pole TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, ets as required.	No	1			
2.3	MINIATURE CIRCUIT BREAKERS					
	Supplying and fixing 32A, triple pole and neutral, 415V, "C" curve, miniature circuit breaker for inductive load of triple pole and neutral in the existing MCB DB complete with connections, testing and committoning etc as required.		2			
2.4	MINIATURE CIRCUIT BREAKERS					
	Supplying and fixing 32A, single pole and neutral, 240V, "C" curve, miniature circuit breaker for inductive load of single pole and neutral in the existing MCB DB complete with connections, testing and commitioning etc as required.	No	1			
2.5	EARTHING					
	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement andwateringpipeetc with charcoal/coke and salt as required.	No	2			
3.0	DISTRIBUTION BOARD					
3.1	Supply and fixing 4+12 way, single door, horizontal type thee pole and neutral, sheet steel, MCB DB, 415V, on surface/recess, complete with tinned copper bus bar, nuetral bus bar, earth bar, din bar, interconnections, powdered painted including earthing etc as required. (but without MCB/RCCB/isolators)	m	1			
3.2	EARTHING					
	Body Earthing - Earthing with Gi earth pipe 4.5m long, 40mm dia including accesseries, and providing masonary enclosure with cover plate having locking arrangement andwateringpipeetc with charcoal/coke and salt as required.	No	2			
4.0	CABLES					
	Supply of LT UG cable having Copper conductor PVC insulated, Sheathed, galvanised steel wire /steel tap armoured cable with PVC outer sheathing 1.1 KV class)					
4.1	4Cx16 sq mm + 2x16 sq mm earth wire	m	1			
4.2	4Cx10 sq mm + 2x10 sq mm earth wire	m	6.5			

4.3	4Cx4 sq mm + 2x4 sq mm earth wire	m	15	
4.4	2Cx2.5 sq mm + 1x2.5 sq mm earth wire	М	14	
5.0	LUMINARIES, SOCKETS AND SWITCHES			
5.1	120W Gate lamp with fitting	No	2	
5.2	40W flourescent lamp	No	4	
5.3	70W MH Lamp for site lighting	No	4	
5.4	Single switched socket with multi purpose	No	2	
5.5	Switches	No	6	
	Total Cost			

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